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Policy of agricultural and rural development in Poland

**(Report to the Food and Agriculture Organization World
Conference on Agrarian Reforms and Rural Development)**

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In the successive supplement to „Problems of Agricultural Economics” we are publishing report elaborated by the team of scientists from Institute of Agricultural Economics on the subject of agrarian reforms and rural development for FAO World Conference titled: „Policy of Agricultural and Rural Development in Poland”.

The previous supplement to number 2, 1976 issue of Problems of Agricultural Economics in English version contained a set of articles titled: „Socio-economic Problems of the Development of the Polish Agriculture”.

A. THE SOCIAL AND ECONOMIC SITUATION AND PROBLEMS OF DEVELOPMENT

1. General Information on Poland and Polish Agriculture

Poland — a country of central Europe — occupies a territory of 312.7 thousand square kilometers, from the Carpathien Mountains in the South to the Baltic Sea in the North. Poland's Western border goes along the Odra and Nysa Łużycka rivers, the Eastern border — in a large part — along the Bug river.

Poland is a lowland country: over 54% of the country's surface lies below 150 meters above sea level. Higher than 300 meters above sea level lies only 8.8% of the total area. The average elevation above sea level is 173 meters.

The total area of Poland is 31.267.7 thousand hectares, in this agriculturally used land represents 19.151 thousand hectares (61.2%), forests 8.631 thousand hectares (27.6%), the remaining 3.485 thousand hectares of land is used for industrial purposes, communication, and settlements. Waters and unused areas (11.2% of the total area) are also included here.

The total area of agriculturally used land is composed of: arable land — 14.764 thousand hectares, orchards — 274 thousand hectares, meadows — 2.556 thousand hectares and pastures 1.557 thousand hectares.

Calculated per one inhabitant the area of agriculturally used land is presently 0.56 hectare, in this arable land and orchards — 0.45 hectare.

Climatic conditions in Poland may be described as typical for the temperate climate zone. There are significant differences in the length

of the vegetation period between the northern part of the country (about 180 days), and the southern part (about 200 days). Also the sums of temperatures during the vegetation period are higher in the southern and western parts of the country, and lower in the northern and eastern. The average temperatures of the air and sums of precipitation allow cultivation in the whole country of a majority of agricultural plants of the temperate zone.

The climate does not favour, however, growing such crops like soybean, maize or more demanding varieties of hard wheat, it is not possible to grow rice. Good results are obtained under Polish conditions in the case of potatoes, sugar beet, wheat, barley, winter rape, various papilionaceous and fodder plants and certain kinds of vegetables and plantations of berry plants.

Soils in Poland are poor, little fertile and require good agrotechnics and intensive fertilization. About 60% of the total area of agriculturally used lands are light sandy soils, not very suitable to grow more demanding cultures, like wheat, barley, sugar beet, etc. A result of this is a large share of rye (21—23%), potatoes (18%) and oats (8%) in the total area under cultivation. These are crops, which on light soils are relatively least risky and give good yields. Poland belongs to the group of the three greatest world producers of potatoes, while rye is the principal grain used for consumption and for feed.

Poland is a socialist country. The social and economic system of the state is based on social ownership of the basic means of production. In all the sectors of the national economy — except agriculture — social ownership is the absolutely dominating form and it defines the character of the economic system. The economic and social basis for exploitation and class antagonisms have been liquidated. The whole national economy is subject to a system of social and economic planning, and the development of the individual sectors and branches is subordinated to the general interest of the society.

A decisive role in the process of modernization of Poland's economy and in the basic reconstruction of the social system was played by the industrialization. 90% of employment in industry was created after 1945, and almost 10 million out of the total 11.7 million people employed in the socialized economy — gained qualifications and began working in People's Poland. During the past 30 years Poland has changed from a backward, poorly developed agricultural-industrial country into a modern and rapidly developing country, definitely industrial-agricultural in character. Before the Second World War 60% of the population obtained income from agricultural sources, presently this figure is 25% and is decreasing. Industrialization, then, made it possible to liquidate agricultural over-population, which existed in Poland before the last war, creating employment for over 5 million people, who have gone to non-agricultural occupations.

The development of industry also exerts decisive influence on the evolution of agriculture, creating a basis for production of means, necessary for a modern agricultural economy, as well as a large market for the agricultural products and supplying jobs for labour outflowing from agriculture. The development of industry was also the principal

factor of rapid national income growth. The level of national income per capita places Poland in the group of averagely developed countries of the world. One should stress here that Poland is characterized by a very high rate of production and national income growth. During the last few years (1971—1976) the national income increased at an average rate of 9.8 per cent annually, which places Poland in this respect among the leading countries of the world. Synthetic information on Poland's social and economic development and the place of agriculture is presented in Table 1.

Table 1

**Basic statistic on social and economic development
of Poland and Polish agriculture in the years
1950—1976**

Specification	Units	1950	1960	1965	1970	1976
1	2	3	4	5	6	7
Population total	million					
	persons	25.0	29.8	31.6	32.7	34.5
urban	„	9.2	14.4	15.7	17.1	19.5
rural	„	15.8	15.4	15.9	15.6	15.0
Share of population earning livelihood from non-agri- cultural sources	%	52.9	61.6	×	70.2	75.2
Professionally active in the national economy	million persons	10.2	12.4	13.5	15.2	17.0
National income (constant prices, 1950 = 100)	%	100	208	280	374	638
Share in the national income						
— of industry	%	31.8	39.5	45.0	49.8	54.4
— of agriculture	%	47.9	27.3	22.6	15.8	9.1
Consumption fund (1950 = 100)	%	100	204	260	340	560
Accumulation fund (1950 = 100)	%	100	243	363	499	12 fold
in this: investment outlays (1950 = 100)	%	100	274	410	635	17 fold
Industrial global production (1950 = 100)	%	100	317	474	707	13 fold
Agricultural global produc- tion (1950 = 100)	%	100	132	152	166	198

1	2	3	4	5	6	7
Area sown to crops	million hectares	15.0	15.3	15.1	15.0	14.7
Yields of the four grains	quintals per hectars	12.7	16.1	19.2	19.6	26.8
Yields of potatoes	"	138	132	154	184	203
Yields of sugar beet	"	222	256	259	312	272
Number of animals per 100 hectares of agriculturally used land — cattle	head	35.2	42.6	50.7	55.5	67.2
— swine	"	45.7	61.8	70.2	68.8	93.4
Meat production	thousand tons	1323	1756	2015	2187	2902
Milk production	billion litres	7.8	12.1	12.9	14.5	16.0
Agricultural tractors (without horticultural) in 15 HP units	thousand	25.5	77.2	154.3	278.9	434.0
Use of mineral fertilizers per one hectare of area sown (pure component)	kilograms	24.1	48.6	73.1	161.5	244.1

a The four basic grains in Poland are: rye, wheat, barley and oats.

Agriculture plays a significant role in the social and economic development of the country, even though its share in total social production and produced national income has decreased prominently. Presently agriculture produces 16% of the global production and 10% of the national income.

The significance of agriculture for the development of the national economy lies in supplying food products and raw materials for food production, on which the population spend about 37% of its personal incomes.

Agriculture also supplies industries with raw materials and developing non-agricultural sectors with the necessary labour force. It is also an important source of obtaining foreign currencies from exports of agricultural products and activates Poland's economic cooperation with other countries.

Despite not very favorable climatic and soil conditions Polish farmers obtain relatively high yields of the basic crops. During the last five years (1971—1976) the average yields were as follows (in quintals per hectare): wheat — 28.2, rye — 23.1, barley — 28.6, oats — 24.5, potatoes — 177, sugar beet — 309, rapeseed and agrimony — 18.3 fodder root crops — 315 and meadow hay — 59.

Calculated per one inhabitant over 600 kilograms of grains are harvested in Poland, that is twice as much as the world average. In this domain Poland ranks thirteenth in the world and yet it is not completely self-sufficient. Poland imports some quantities of grains and high-protein feeds, principally as an effect of relatively high animal production.

In the field of animal production in the years 1946—1976 great progress was made. This concerns especially swine breeding and poultry. Poland produces about 4 million tons of slaughter animals, which gives about 3 million tons of meat (including fats). Presently, 159 kilograms of meat 8370 liters of milk and 4190 eggs are produced per each hectare of agriculturally used land. In meat production the dominating position is that of pork (58%) and this meat is decisive in both level and structure of consumption, and also in export possibilities. About 15% of the domestic meat production is intended for exports.

For some time now, animal production has been growing more rapidly than plant production which caused the necessity of concentrate feeds imports. Poland is a renowned and valued the world over exporter of hams, meat products and canned meats, and also of some quantities of live animals to be used for breeding.

Significant progress has been achieved in dairy production. The average yield of milk per one cow has increased in the years 1950—1976 over 1.6 times and presently is 2.687 liters annually. The milk production per one inhabitant is over 460 liters, giving Poland a place among the world's leading countries in this field.

An important achievement is also that all the mass diseases of animals have been liquidated.

As a result of the domination of private farms and a dispersed agrarian structure — the number of horses in Poland is relatively large (2.1 mln head). The number of horses is decreasing systematically, though slowly, (from 13.7 head per 100 hectares in 1950 to 11.2 in 1976). The decrease rate of number of horses depends principally on two factors: structural changes in agriculture and rate of growth of supply of technical means especially agricultural tractors.

Employment in agriculture is still high despite the deep structural changes in the national economy.

In the private farm sector we have 4.246 thousand persons employed in full-time, which means 28 persons per 100 hectares of agriculturally used land.

In 1976 the socialized economy sector (state farms, production co-operatives, agricultural circles' cooperatives) employed 558 thousand persons, and if the persons employed in direct technical and production services for agriculture were taken into consideration — altogether 989 thousand persons. In the socialized sector there are about 12 persons employed per each 100 hectares of agriculturally used land.

The directions of change in agricultural employment are clearly set. As the socialized sector is going to expand its area and technical equipment of agriculture will increase — the employment will decrease. It is foreseen that by 1990 the employment in Polish agriculture will decrease by 40 to 50%.

Polish agriculture is on the way to rapid modernization of techniques and methods of production. A proof of this is growing use of industrial means of production for agriculture, especially agricultural machinery, fertilizers, plant protection chemicals. An important factor is also agricultural progress and the sphere of agricultural science.

There are 14 scientific and research institutes, belonging to the Ministry of Agriculture working for agriculture, as well as many institutes and departments in university — level schools and Polish Academy of Sciences units. Specialists for agriculture are educated principally by university-type schools. Presently there are 9 Agricultural Universities in Poland, educating specialists in many fields. There are over 50 thousand students in these schools, with about 7 thousand graduates annually. In addition specialists in agriculture are educated in some faculties of economic schools and universities. A well developed network of specialized agricultural middle level schools exists. In these schools of various types about 180 thousand young people are educated with 50—53 thousand graduates per year.

The rural population in Poland has a rich tradition of cooperative movement in commerce, dairy, horticulture, apiculture and savings-banking. These traditions are maintained and developed, adapted to the new conditions and needs of the planned economy. The cooperatives not only play an important economic role but also are a form of the farmers' selfgovernment and participation in rural management.

In Poland there exists a two-level system of State administration. The basic administrative unit is the „gmina”, (commune). Presently¹ in Poland there are 2.070 „gimnas”; out of this 1.533 are rural „gimnas” and 537 urban-rural. A representative of executive state authority is the head of the „gmina” who has the authority to decide in most matters concerning the development of agriculture in the given region and the local community. At the same time he is responsible to the superior state authorities, to the „gmina” council and the population of the community for the overall conditions of administrative, economic and social matters entrusted to him. The control and legislative authority on the „gmina” level is the „gmina” council, chosen in universal, direct elections. The head of the commune performs his functions through the commune office.

The second level of the local administration is the voivodship (region). There are presently 49 voivodships in Poland.

The executive authority of the State rests in the hands of the voivode who is aided by the voivode office. The voivode performs supervision functions over heads of „gminas”, however, at the same time he has many important prerogatives, especially in the field of programs, planning and organization of economic activities. Similarly as in the „gmina” — the legislative authority is the voivodship council, elected in universal and direct elections.

Both levels of the local state administration play an extremely important role in steering of agriculture development. They are ways of vertical integration and coordination of activities of all enterprises as well as social and economic organizations, which exist in a given region and are linked with rural life and development of agriculture.

¹ The state for. 1.11.1977.

2. Human Resources

The number of population in Poland increased from 23.6 million in 1946 to 35.1 million in 1978, that is above 11 million. This means a growth of 46%. Such large growth was a result of high birth-rate².

Immediately after the Second World War the number of births increased rapidly. This coincided with a decrease of infant mortality, which resulted in an emphasized demographic effect.

A result of this was that for many years the number of live births per one thousand inhabitants was over 30, so it was significantly higher than in the other European countries. Under Polish conditions the demographic top contains the generation of persons born in the years 1946—1960. The birth-rate in the above mentioned period was over 15 per one thousand persons, and it reached its highest point in 1953 — 19.5 per one thousand persons.

Just to demonstrate the dimensions of social and economic problems resulting from irregular structure of population age, it is enough to say that in the year 1974 the five birth cohorts (born during the Second World War in the years 1940—1944) numbered 1.9 million persons, while another five birth cohorts, born in the years of the great population growth (1955—1959) numbered 3.25 million, that is 82% more. The significant differentiation of birth cohorts' numbers within a short period of time caused great changes in the field of education requirements and in employment.

The rapid increase of population in the group of children and teenagers required the solving of many problems in the domain of education, bringing up and nutrition. The first two problems were of importance in production activity of this population group in the coming years, the latter problem being a difficult one as in the period of rapid industrialization of the country and while searching for all internal reserves to be used to carry it out, the population of production age suffering from war losses had to provide for and feed a considerable number of children and teenagers, as well as a population of retired persons and war invalids.

During the post — war period large internal migrations took place. The total population of the country increased by almost 11 million, the rural population decreased by 0.6 million, and as a result of this the share of urban population grew from 32% to 56%. The development of urban centers, then, absorbed more persons than the total population increase. At the same time rate of industrialization was ahead of the urbanization rate, as a result of which the share of non-agricultural population living in the country increased from 23% in 1950 to 43% in 1970, and 46% in 1974. The industrialization of the country not only absorbed the birth-rate of labour force but also diminished resources of the labour force in agriculture. In the ten years period from 1950 to 1960 the size of the population earning its living from agriculture fell by 2.7%, in the next ten years by 13.7% and in the years 1970—1974 by a further 6.3%. It is worth emphasizing that the growing rate of population movement from agriculture to the other sectors of national economy

² Birth-rate = difference between birth and death rate.

coincided in time with the numerous post-war generations finishing schools and looking for jobs.

It is estimated that during the years after 1945 a net total of 5.1 millions of people have migrated from the country to cities. Only in the years 1965—1975 net migration from the country was over 1.5 million.

As a result of internal migrations and urbanization of the country (an increase of the number of cities, growth of size of towns by including the neighbouring villages) the share of the rural population in the total population number fell significantly, from 68.2% in 1946 to 43.7% in 1976, and by 1980 — according to prognosis — this share should be 41.7%. In absolute figures the rural population in the above mentioned period decreased by 600 thousand and urban population increased by 11.5 million.

In 1966 the urban population for the first time equalled rural population. Since 1966 to 1976 rural population decreased by about 900 thousand, while the urban population grew by 3.6 million.

The migration movements have a different intensity depending on the part of the country. Absorption centers for the rural migrants are big industrial centers and those cities where large investment projects are under way.

The migration from rural settlements takes place in two forms: family and individual. About 30% of the people migrating from the country are persons moving with the whole family. These are, as a rule, families liquidating farms of the smallest area. 70% of the migrants are people from rural families, in the dominating majority farmers' children. Almost 90% of the rural family migrants are children (or their spouse) of the person described as the head of the farmer family.

As a result of selection mechanisms they are principally young people who leave the countryside: 50% percent of the migrants are persons in the age group 15—29 years, the strongest migrancy trend being among women in the age group 17—27 years, and among men 20—25 years old.

Migrants from the countryside represent a young population, with an education structure better than that of the identical age population remaining in the country.

It is worth stressing here that migrants from the countryside constitute not only a large share of the working class living in the cities but also they represent a significant share of the working intelligentsia. Also high is the participation of persons coming from the country in state and political authorities, economic administration, science, culture, arts etc.

The migrants contribution to national development — also in the sphere outside of material production — is without doubt important.

Migrants leaving towns for the countryside rarely go into private farming. Most of them find employment in the socialized agriculture sector and the sphere of services for agriculture and rural population. As a result of a better education structure in this group than in the whole rural population — a large part of them finds work as white-collar workers. In connection with the state policy of development of social services for farmers and equaling standards of living of the rural and

Table 2

**The Population^a of Poland According to Place
of Residence and Principal Source of Income**

Years	Total Population (in millions)	Population with Source of Income (%):	
		in Agriculture	Outside of Agriculture
Total			
1950	25.0	47.1	52.9
1960	29.3	38.4	61.6
1970	32.6	29.8	70.2
1974	33.6	27.1	72.9
1976	34.5	24.8	75.2
Cities			
1950	10.6	7.1	92.9
1960	14.2	5.6	94.4
1970	17.1	5.0	95.0
1974	18.2	4.4	95.6
Countryside			
1950	14.0	77.3	22.7
1960	15.2	69.1	30.9
1970	15.5	57.0	43.0
1974	15.4	53.9	46.1

^a For the years 1950, 1960 and 1970 — data according to National Censuses, for 1974 — data from a Representation Census, for 1976 — estimates.

urban population, the demand for highly qualified specialists (doctors, teachers, agronomists, mechanization experts etc.) in the country is growing. These specialists constitute a large part of the migrants from urban centers to rural.

The migration processes are accompanied by phenomena which require constant control in order to prevent from unfavourable deformations of demographic structures. As a result of migrations the age structure of the rural population has grown worse.

One of the important characteristics of the Polish society is its high professional activity. In the years 1960—1974 this activity has increased (Table 3).

Especially high is the professional activity of women in agriculture and of the rural population in the post-productive age. For instance in 1974 the coefficient of professional activity for this last population group (women — over 60 years and men — over 65 years) was 78.9% (outside of agriculture — 7.1%) in this in the male population — 87.8% (outside of agriculture — 11.5%) and in the female population — 74.1% (outside of agriculture — 5.3%).

Table 3

**Coefficients of professional activity ^a
of the population**

Sex	Total		In agriculture		Outside of agriculture	
	1960	1974	1960	1974	1960	1974
Total	47.5	52.0	58.1	62.1	40.8	48.0
Men	55.4	57.8	57.8	62.8	50.4	55.9
Women	40.3	46.7	58.3	61.5	27.9	40.3

^a Number of people professionally active per 100 persons in a given social group.

The high coefficient of the rural population's professional activity especially of women and persons past the production age, calls for an active social policy. In this field a number of legislative regulations has appeared lately, the most important one being the law on universal pensions for private farmers and members of their families.

The high professional activity is a result of demand for manpower in non-agricultural sectors. Although employment has been growing significantly, many sectors of the national economy especially industry and construction experience presently lack of manpower.

Further decrease of employment in agriculture and moving part of the agricultural population to non-agricultural professions will in a large degree be a result of changes in the demographical situation of the country. The increase of the birth rate in the 1950's was 1.8% per year, in the 1960's and 1970's it came down to 1.0% per year, and in the 1980's it will be below 1%.

The high birth rate of the 1950's is the cause of unequally high growth of the production — age population group in the present decade (1971—1980), a total of 3.1 million persons. The growth of the labour force will be slightly smaller, because of a foreseen increment of the number of young people studying and because of the possibility to go on pension earlier for some professional groups, and as a result of lengthening of paid and possibility of going on longer unpaid material leaves. Aside from that despite the constantly growing professional activity of women especially of the young generation (presently outside the private farms sector out of each one hundred women of production age 63 are working professionally), part of this group does not work professionally. This concerns especially wives of workers of the professions like: mining industry, metallurgy and some others, where it is a tradition that women do not work but run a house. The strength of this tradition is weakend but nevertheless it still exists.

As a result of the large increment of labour force in the national economy in the current decade the drop in employment in agriculture will be relatively small. In the next decade, however, (1981—1990) the

increment of production-age population in the whole country shall be only 1.1 million persons which will create conditions for accelerated outflow of the population from agriculture to the remaining sectors of the national economy. Regardless of what the rate of employment decrease in agriculture is going to be, it will be uncomparably higher than has been until now.

3. Agricultural population and employment in agriculture

The historically shaped distinction between rural and urban populations since a long time does not suit the differentiation between agricultural and non — agricultural population. Before 1939 over 80% of the Second World War this percentage continuously decreased and in 1970 came to 57%, and in 1974 — 54%. An influence on structure of rural population employment is exerted both by the development of non — agricultural sectors of the national economy, and by the progressing division of labour in agriculture itself.

The agricultural population in Poland is grouped principally in private farms. Nevertheless the share of the rural population in socialized farms is increasing, and the share of the population employed in private farms is decreasing. This is true also in the case of the professionally active in agriculture. The share of persons employed in socialized farms as related to the total number of professionally active in agriculture is growing. In 1960 this share was 5.6%, in 1970 — 10.8% and in 1974 — 12.5%.

Among the professionally active an especially high share is that of women and older persons, which is connected with the character of the family farming. Higher incomes in the non — agricultural sectors and dispersed agrarian structure of private farming result frequently in combining an agricultural and non — agricultural sources of income. Men more frequently than women and young people more frequently than old ones seek employment outside the farm. A consequence of these phenomena is a feminization of the labour force in agriculture and relative „old age” of the agricultural population as compared to other social groups.

The population living in the country but not connected with agricultural production may be divided into three groups: persons travelling regularly to work in town, persons employed in widely understood services for agriculture and rural settlements and workers of plants placed in the countryside, not connected with agriculture and services for the agricultural population. It is estimated that for 100 inhabitants of rural settlements not employed in agricultural production, 60 travel to work to towns, 30 are employed in widely understood services for agriculture and rural population and 10 persons work in the rural settlement where they live but in plants not connected with agriculture and services of the rural population. An insignificant percentage of the rural population is engaged in handicraft, production of folk art article and service of tourist traffic.

Table 4

Agricultural Population ^a in Poland

Year	Total	Economy sector	
		socialized	private
Total in thousands			
1960	11243.6	1069.6	10174.0
1970	9732.3	1601.9	8130.4
1974	9118.8	1647.6	7471.2
Workers ^b in thousands			
1960	6545.9	379.2	6166.7
1970	6069.5	657.6	5438.9
1974	5642.0	705.5	4936.4
Percentage of women in the working population ^b			
1960	55.2	24.8	57.1
1970	56.4	25.6	60.2
1974	54.4	26.4	58.4

^a Population earning its living principally from work in agriculture.

^b Workers and those having a non-income source of livelihood.

Population not having farms in 1974 represented 27% of the total rural population, and families earning their livelihood from non-agricultural sources 29% of all rural families. Research conducted point to a rapid increase of importance of this population group. It is characterized by a higher level of education than the agricultural population and a more favorable age structure.

The population having its principal or sole source of livelihood outside the farm, and remaining in farmers' families can be divided into three groups, depending on the functions performed in the family and farm: farming, aiding in farming and working exclusively outside the farm.

In the period 1970—1974 the population group having the principal or sole source of livelihood outside the farm has increased by 41.6 thousand persons, that is by 1.7%, however, as in the same time the number of persons professionally active in farmers' agriculture decreased, this resulted in the share of income earners growing from 31 to 34%.

Among the persons included in the groups having the principal or sole source of livelihood outside the farm in 1974, 60% were young people, in the age group 18—24 years. This is the time in life most favourable for migration from the country.

Table 5

**Population from agricultural families having the principal
or sole source of livelihood outside the farm**

Specification	1970	1974
Total (in thousand persons)	2419.3	2460.9
in this (in per cent):		
working on the farm and outside it	49.4	51.9
in this: farming	19.4	26.3
aiding	30.0	25.6
having sole source of livelihood outside the farm	50.6	48.1

The combining of work in a farm and outside it is most frequent in farms small in area. Work on a small farm does not bring such a profit that would ensure those families a proper standard of living.

According to research done in 1973, 1.636 thousand persons travelled from the country everyday to work in towns. As much as 48% of these people were people younger than 29 years of age, and in the case of travelling women this age group made 64%.

Of all people travelling regularly 49% were employed in industry, 13% in construction, 15% in transport and 7% in trade.

Especially low is the percentage of this group employed in sectors requiring a high level of education (sciences, education, culture, health service — 5% of the travelling people).

Earning a living outside the family farm comprises over half of all farmer families, it is then a mass phenomenon. Families with mixed sources of income have, however, much less land than would appear from the percentage of families earning a living outside the farm. These are principally farms small in area.

Table 6

**Percentage of families with mixed sources of income
in groups of farms by area**

Year	Total	0.5—2 hectares	2—5 hectares	5—10 hectares	10 hectares and more
1960	36.0	63.2	37.1	19.8	13.4
1970	55.7	83.2	59.5	40.5	30.1
1974	56.4	84.2	61.5	42.9	30.8

In the period since 1945 the number of people earning their livelihood from agriculture decreased systematically. This was the result of a rapid increment of employment in non-agricultural sectors of the national economy, and — although in a lesser degree — the result of a drop in employment in agriculture itself.

Along the decreasing trend of employment in agriculture, which found its expression in a significant drop of agriculture's share in the total employment in the national economy (from 43.3% in 1960 to 30% in 1976, calculated in full-time workers) also transfers of labour force had place from private farms to the socialized sector. This is illustrated by the data in Table 7.

Table 7

**Professionally active in agriculture, calculated
in full-time workers, in thousand persons in the years 1950—1976**

Specification	1950	1960	1965	1970	1976
A. In agricultural production	5419.1	5297.6	5493.8	4895.0	4843.0
1. private farms sector	5040.7	4871.2	5027.0	4408.9	4246.0
2. socialized farm sector	403.4	345.6	459.5	487.0	597.0
in this:					
state farming enterprises	276.3	302.2	344.8	393.0	454.0
agricultural cooperatives	27.1	43.4	47.5	42.0	82.0
agricultural circles	—	—	—	3.0	22.0
B. In agricultural services			195.2	310.0	392.0
in this agricultural circles	—	—	67.2	129.0	182.0

It must be pointed out here that statistics of the employment in Polish agriculture are not directly comparable to statistics of other countries, where the employed in agriculture include mainly fully-capable male man power (both owners and hired workers). In Poland the employment statistics in agriculture include also women. Aside from that also persons in post — productive age are included in the group professionally active in private farms. This means persons who are past the retirement age (men 65 years and women 60 years), and which, in a larger or smaller degree, do work. The number of full-time workers in production — age in private farms is then about 24 persons per 100 hectares of agriculturally used land, in this 10 men and 14 women.

Despite the fact that number of people employed in private farms is statistically relatively high (it is decreasing at the rate of 0.2% annually), considering quality characteristic, the total resources of the labour force are not excessively high. As the result of the introduction starting with January 1st 1980 of an universal retirement system for private farmers, persons in retirement age from that moment will not be inclu-

ded in the group of active professionally in private farming. The employment situation in agriculture will change radically in the decade 1981—1990. It is foreseen that the number of persons employed in agriculture, calculated in full-time workers figures (without the services sphere) will decrease from 4.8 million persons in 1976 to about 2.6—2.9 million persons in 1990, partly as the result of dropping out of persons in post-production age (about 600 thousand persons), partly as a result of migration movement to non — agricultural professions (1.3—1.6 million persons).

4. Consumption of food articles

The present level of food consumption in Poland should be recognized as good (B Standard) from the point of view of international comparative classifications. The level of food consumption, especially animal protein, has grown significantly, especially in the years 1971—1976 (Table 8).

Table 8

**Consumption of selected food articles per one inhabitant
(in kilograms) in the years 1950—1976
and projections for 1990**

Specification	1950	1960	1965	1970	1976	1990 ^a
Grains, calculated in grain products	166	145	141	131	124	90
Potatoes	270	223	215	190	173	110
Meat and meat products and giblets	36.5	42.5	49.2	53.0	70.0	85—90
Fish and fish products ^b	1.7	4.5	5.0	6.3	7.7	11—12
Edible fats, total ^c	9.7	13.6	15.1	18.0	20.4	26
in this: animal	5.5	6.6	6.1	7.3	7.2	7.5
plant	1.5	3.1	4.9	5.7	6.8	8.5
butter	2.7	3.9	4.1	5.0	6.4	10
Milk and milk products ^d						
— in litres ^d	206	227	233	262	263	340
Hens eggs	116	143	162	186	214	270
Sugar	21.0	27.9	32.6	39.2	43.9	49

^a Plan.

^b Commercial weight.

^c Calculated in 100% fat.

^d Without milk used for butter.

A comparison of food consumption in Poland and highly developed countries in Europe shows that the distance between Poland and those countries in the discussed field is relatively small, significantly smaller than would appear from the level of economic development.

The solution of the food problem in Poland was possible thanks to the growth of agricultural production. Since 1945 Poland has been a self-sufficient country in food products. Although always certain amounts of grains, agricultural raw materials, tropical climate fruits, coffee, tea, etc. were imported, but on the other hand, large quantities of agricultural products were exported (slaughter animals, meat and meat products, some fruits and fruit products, spirits, sugar, etc.). The foreign trade balance in agricultural products was positive. During the past years a level of food articles market supply has been achieved which ensures covering the basic caloric needs and the food consumption proportions recommended by science on human nutrition as rational have been approached. Data for the year 1976 show that the energy value of an average daily diet in workers' families was 2.938 kilo calories, which consisted (in grams) of: protein — 80, in this animal protein — 50, fats — 124, carbohydrates — 376. One should stress that great progress in this field has been made since 1970, with — what is especially important — a freeze imposed on retail prices of the basic food articles and a simultaneous growth of population income (in the years 1970—1976 the real incomes of the population, resulting from labour payments and social benefits increased by 79.2% and calculated per one person employed — by 47%).

Despite the higher level and improvement of consumption structure these changes are still evaluated as unsatisfactory. In the economic development forecasts until 1990 a further growth of per capita consumption is foreseen (see last column of Table 8).

Such a considerable increase of meat consumption per one inhabitant by 1990 means an even greater — taking into consideration population growth — growth of the total domestic meat consumption, that is from 2.4 million tons in 1975 to 3.4—3.6 million tons in 1990. The average rate of meat consumption growth is to be 2.4—2.7% annually. Resulting from the necessity to increase exports of meat and meat products in order to cover foreign currency expenses for imports of feeds, slaughter animals production should grow at a higher rate than the consumption of meat by the domestic population.

Thus, agriculture faces difficult tasks. The realization of these tasks will be of special importance considering the disequilibrium on the meat market and still high share of food products in the population's total consumption.

Despite its downwards trend that share is still high. In 1965 the share of food in the total consumption by the population of material goods and services was 42.3%, in 1970 — 38.5% and in 1976 — 32.2% (in current prices). The share of food expenditures in the population's total expenditures from personal incomes is a few per cent higher. For instance in 1976 it was 36.7%.

The population's demand for food results also from the high rate of its income growth and the high income elasticity of demand for food products. The 10 percent increase of the income of the population causes 5.3 per cent growth of the demand for food.

As the Table 8 shows, in the years 1965—1976 important changes in the level and structure of food articles consumption had place, in

accordance to general rules in this field. This found its expression in a decrease of plant products consumption (grains and potatoes) and a growth of animal origin products consumption. A sign of improvement of the quality of the diet is an increase in fruit and vegetables consumption. Presently the level of vegetable consumption (without processed vegetables) is 90—100 kilograms and of fruits consumption without processed and tropical fruits 30 kilograms per one inhabitant.

In the sphere of food articles consumption there are some understandable enough — differences between population groups, depending on the income level, number of persons in a family, etc. There are, however, no groups of population which would experience absolute deficiency in nourishment.

Differences also appear between the so-called workers' households (i.e. those employed in units of the socialized economy by contract) and the farmers' households. Two remarks are important here. First, these differences concern primarily the structure of consumption. In farmers' households consumption of flour, bread, potatoes, edible animal fats, milk, cheeses, eggs is higher, lower is the consumption of meat, fish and fish products, butter, fruits and fruit products and of some flour products (macaroni for instance). Secondly, these differences are slowly disappearing with changes in the direction of consumption structures in farmers' households becoming more alike those in workers' households. For instance in the years 1970—1976 these changes took the following shape: Table 9.

Table 9

**Average annual consumption of the most important food products
per one person in workers' and in farmers' households ^a
(in kilograms)**

Specification	Workers' households			Farmers' households		
	1970	1976	$\frac{1976}{1970}$	1970	1976	$\frac{1976}{1970}$
Flour	15.5	13.1	84.5	71.0	34.1	48.0
Potatoes	124.1	109.3	88.1	204.0	174.6	85.6
Meat	46.1	63.0	136.7	40.4	58.7	145.3
Fish and fish products	6.5	6.3	96.9	2.2	4.2	190.0
Butter	7.3	8.3	113.7	6.3	6.0	95.2
Milk (in litres)	108.4	116.8	107.8	244.0	190.9	78.2
Cheeses	7.8	9.2	118.0	9.0	11.2	124.4
Eggs (quantity)	179.7	190.7	106.1	299.0	256.0	85.6

^a The statistics do not include food products consumed in restaurants, cafeterias, workers' eating places.

In 1976 the average daily consumption of energy units (in kilo calories) in workers' households was 2,938, while in farmers' ones it was 3,398, as calculated per one person. In farmers' households also the consumption of the basic nourishment components was higher: (in grams): protein (respectively 80 and 91), fats (124 and 126) and carbohydrates (376 and 476).

5. Incomes of the rural population and social conditions in the country

During the post-war period great progress has been made in work and living conditions of the rural population as well as in payment of farmers' work. Progress in this domain is more significant than would appear from changes in agricultural production. Nevertheless also here the situation is not fully satisfactory and there still are many problems to be solved.

The slight decrease of employment in agriculture has caused that the productivity growth per one person employed was too small to ensure for the rural population a correspondent — in comparison to the non — agricultural population — rate of income growth. This concerns principally the population working in peasant farms, whose incomes — in contrast to incomes of employees of state farming enterprises and non — agricultural sectors — depend directly and completely on production results.

The incomes of the private farms, aside from the fact that they determine the level of consumption, also perform an important production function. Part of the incomes is devoted to expanded reproduction, i.e. to the next year production inputs increase as well as to the new production investment.

The absolute level of incomes per one person employed in farmers' economy and in other sectors (income parity) is not directly comparable as a result, among others, of a higher average level of professional qualifications and education in the non — agricultural sectors. It is possible however to compare the rates of income growth per one person employed. The rate of income growth of the agricultural population should not in longer periods differ from the rate of income growth of the non — agricultural population, what is justified not only by social considerations but also by production reasons.

Under conditions of not — fully met demand for agricultural products, which grows as rapidly as the non-agricultural population's incomes do, the lower rate of the agricultural population incomes growth would not favor increased expenditures for expanded reproduction, it would limit the rate of agricultural production growth and thus deepen the gap between demand and supply of agricultural products.

In Poland the rule of maintaining an equal rate of growth of incomes of the rural and urban populations has been accepted and is being presently realized. It is the only right and rational policy of encouraging of the agricultural production growth in the interest of the whole society.

The actualization of the policy of equal rates of income growth for the rural and non — rural populations is not a simple matter because of the unavoidable fluctuations in agricultural production.

The necessity for the economic policy to equalize the income level of the agricultural population through corrections in distribution of national income, in favor of agriculture, realized principally through raising procurement prices of agricultural products, comes about as a result mainly of a lower rate of productivity growth in agriculture than in the other sectors of the national economy. And so in the years 1950—76 the average rate of growth of national income, produced by one person employed in the non-agricultural sectors of material production was 5.8% annually, while in agriculture it was only 2.0% annually.

The relatively high level of employment in the farmers' sector of agriculture was one of the main reasons of only small changes in agrarian structures, which of course exerted a decisive influence on the rate of growth of income produced, calculated per one person employed. Agricultural production per one hectare of agricultural land increased in the years 1961—1975 by an average of 3.2% per year but the financial outlays for production grew by about 8.4%, as effect of which the income produced grew annually by only 1.5%, calculated per one hectare. In this situation, with the aim of adjusting the rate of growth of agricultural population incomes in relation to the non-agricultural population corrections were made in the division of national income, in favor of agriculture. A proof of the dimensions of these corrections is the index which shows what part of the agricultural incomes' growth is due to the agricultural production increase and due to the favorable, from the agricultural economy point of view, changes of the agricultural commodities prices. The shares of the above mentioned sources of farmers' incomes are different, depending on the period of time and results mainly from the rate of the country's economic growth, and in this way also from the rate of growth of real incomes per one person employed in the non-agricultural sectors. On the average in the years between 1961 and 1975 the increase of agricultural production was responsible for about 67% of the incomes growth while about 37% of the general increment of the agricultural population's incomes growth resulted from agricultural prices changes, favorable for agriculture. This means that the development of private farming, which finds its expression in growth of outlays for expanded reproduction and in the growth of labour payment — is financed in two thirds by the growth of productivity in agriculture itself, but in one third by productivity growth in the non-agricultural sectors. In practice this finds expression in a more rapid growth of prices for agricultural products than of prices for the means of production for agriculture.

It is necessary to remark here that in Poland the growth of procurement prices for agricultural products does not automatically influence the retail food prices. Retail prices of the basic food articles (bread, flour, meat, milk, butter and sugar) have been constant for many years now. The difference between procurement prices of agricultural products and the retail prices of food products is covered by allocations from the state budget in the sphere of commerce or food processing.

This is, according to the goals, to act against inflation processes. This however, causes an intensified pressure of demand on the food market.

Further deepening of the gap between procurement prices of agricultural products and retail prices of food products is not possible to maintain in the longer period. This dilemma may be solved through creating such conditions of productivity growth in the farmers' economy, which would ensure a proper growth of population incomes due to production growth. This is possible only under the conditions of the decreasing employment in agriculture and improvement of agrarian structure of the farmers' economy.

The next problem in income policy is the differentiation of incomes.

The differentiation of agricultural population incomes is present principally in two sections: according to the sector of agriculture and to the size of farm. The comparison of incomes in different sectors of agriculture calls for certain precautions, because there are significant differences in functions of income in a private farm (which have already been discussed), and the category of wages, typical for the state farms. Also differences in professional qualifications and education level of those employed in the private sector and the socialized sector have to be taken into consideration.

During the last ten years the growth of incomes in the socialized sector was more rapid than in the farmers' economy. In 1965 the consumption fund per one person employed in private farms was 18,8 thousand zlotys, in 1976 — 29.9 thousand zlotys, that means the 59% increase. In the same time the average net wages per one person employed in state farms increased from 18.1 thousand zlotys to 39.9 thousand zlotys, that is by 119.9%.

When considering income differentiation according to the criterion of area, statistical data from selected private farms which conduct special book-keeping, (a research project carried out for many years by the Institute of Agricultural Economics of the Polish Ministry of Agriculture) will be useful (Table 10).

The statistics in Table 10 show that, while the difference in size of net production between the largest farms and the smallest ones is four-fold, the difference in size of the consumption fund is only two-fold. This is a result of state policy in three fields: creating work possibilities outside the farms, progression in financial charges and encouraging investment. The differences in consumption fund per one person in farms of different area are even smaller, because the families from large-area groups number more people than the families owning small-area farms.

The growth of agricultural population incomes was accompanied not only by a higher level of food articles consumption, but also by its structure improvement as well as by a significant improvement of the housing conditions, health care, infra-structure, etc. The standard of the country houses' equipment with modern installations has improved significantly.

Significant progress has been made in the equipping of rural dwellings with installations and appliances important for the standard

Table 10

**sources and division of income in selected private farms conducting
agricultural book-keeping in the year 1975/76
(in thousand zlotys per one farm)**

Specification	Total	Farms with a total area (in hectares)				
		below 3	3—7	7—10	10—15	15 and more
Net production	93.2	50.0	78.0	109.2	150.2	203.2
Charges ^a	11.2	4.5	8.9	13.4	19.0	31.5
Income from the farm	82.0	45.5	69.9	95.8	131.2	171.7
Income from outside the farm	15.7	23.4	15.7	12.0	10.0	9.9
Personal income	97.7	68.9	85.6	107.8	141.2	181.6
Consumption	74.1	56.7	67.6	83.4	97.8	112.5
Accumulation	23.6	12.2	18.0	24.4	43.4	69.1

^a These charges include: taxes, insurance, lease charges and interest.

of living. In the years 1967—1975 the share of rural families having the dwellings equipped with bathroom increased from 3.5% to 21.4%, with television sets — from 18.5% to 69.4%, with washers — from 49.2% to 82.7% and with refrigerators, respectively from 3.6% to 34.3%.

The present equipment of farmers' households with durable appliances is still lower than of workers' households. Statistics in Table 11 prove this.

There is no doubt, however, that the differences in living conditions and equipment of households in the country and in the cities are becoming smaller. This is especially true of equipping the households with certain durable appliances. However, the modernization of rural houses, so that their standard equals that of city apartments, is much more difficult, not only because of the costs of such an undertaking but also because of the general condition of part of the buildings. On the average, 63% of houses in the country is built from bricks, 32.5% of wood.

While analyzing the degree of differentiation between population groups as regards the standard of dwelling and its equipment, one should remark that these differences appear not only between the country and urban populations, but also between specific groups of the rural population itself. In general, one may state that the differentiation of rural families as regards living standards is influenced in an important way by: region of the country, size of farm, distance between the farm and nearest urban center, principal source of income, age and education, of person performing functions of the head of the family.

Table 11

**Shares of households equipped with some
durable appliances in 1976**

Specification	Farmers' households	Workers' households
Radio receivers	62.5	75.3
Television sets	62.9	95.2
Electric washers and centrifugal machines	81.3	92.7
Refrigerators and freezers	26.7	77.4
Electric vacuum cleaners	14.9	70.8
Sewing machines	59.8	47.1
Photographic cameras	8.6	41.9
Bicycles	92.0	57.9
Motorcycles and scooters	21.1	12.0
Automobiles	4.1	10.3

Considerable progress has been made in the countryside in the field of health care. In the years 1965—1976 the number of health centers has increased from 2.022 to 3.130, which means that statistically for each „gmina” there is almost 1.5 health center. Also the number of stomatology units has grown (from 2.165 in 1965 to 2.743 in 1973).

In the years 1965—1973 the number of doctors working in the countryside has increased from 2.400 to 3.218, and the number of dentists from 1.764 to 2.438. In the years 1965—1976 the number of people per each health center has decreased from 7.8 thousand to 4.1 thousand. The number of doctors and dentists treatments grew from 9.3 million to 39.5 million (of which dentists treatments amount 10.8 million).

In the typical health center the medical personnel consists of: one general practitioner, one dentist, two nurses, one midwife, one dentist assistant.

Aside from the health centers additional medical units operate: doctors', nurses' and surgeons' units. They operate in villages located far from the health centres. About 2.000 such units are in operation.

Of great importance to rural population health care was, including the private farmers and their families in the national free medical care system in 1972. The rural population as effect of this medical care has a right to:

- free medical care in health centers, specialized units, hospitals, sanatoria and health resorts, free additional medical examinations, free house visits for children and adults,
- medical first aid provided by the first aid stations and ambulances, to a large degree free of charge,

- medicine in state pharmacies for only 30% of the price, some medicine in case of long illness — for only 10% of the price and free medicine for people retired and on pensions,
- free supply of auxiliary means like eye — glasses, hearing aids, dentures and orthopedic aids; the repair of such means is also free of charge.

Children and pregnant women are a subject of special medical care. Since 1962 medical care for pregnant women is free, as well as for children up to one year of age and children in school age.

Generally speaking the state of the health of the rural population is constantly improving. For instance, in the years 1950—1975 the average time of life for men lengthened from 58 to 67 years and for women from 63 to 74 years. The infant mortality which in 1965 in the countryside was still 43.4 deaths per 1000 live births, in 1976 fell to only 24.4.

6. Education of the rural population

One of the first reforms carried out in People's Poland after liberation from Nazi occupation was a reform of the schooling system. Elementary school of seven classes was made compulsory, with an identical program for urban and rural children. At the same time an organization effort was made in order to permit adults to complete their education. The matter of raising the population's education level was in this period an important social problem. One has to take into consideration the fact that one fifth of the population before the war (this concerns persons over 6 years of age) did not know how to read and write, in addition, a large number of persons with university type education had been killed during the Second World War, as a result of deliberate actions of the Nazi occupants, aimed at destroying Polish intelligentsia. During the thirty-three years of People's Poland a four-fold increase of education extension was achieved, measured only by the number of issued graduate certificates and diplomas, compared to the pre-war period.

The postulate of universal education of all levels accessible for everyone was achieved step by step. One of the most difficult problems was to ensure the necessary cadres of teachers and schooling equipment for rural schools.

The rule of „school closer to the rural pupil” was accepted as a guideline in the 1960's. Decentralization of the school network made it difficult to realize the postulate of providing full value elementary school to the rural population, which would result in rural graduates representing the same level of knowledge as their counterparts in the cities.

The concept of a school district based on the possible distance pupils could cover on foot, going to school everyday, was an obstacle in creating a network of strong schools, with well prepared cadres of teachers

and properly equipped technically. As effect of this, at least one third of schools did not fulfil the conditions of a modern school.

An urgent necessity for modernization of rural schools arose. Work on this was undertaken in the 1970's. The concept of a school network in rural conditions was modernized and a model of consolidated „gmina” (community) school, to which pupils are transported was being realized.

The proper functioning of the centralized school network depends on fulfilment of many additional conditions (good roads, convenient communication), but only such an education system will secure an adequate number of highly qualified teachers for rural schools, as well as the development of education based on a system of workshops, laboratories etc.

As a result of realization of the concept of consolidated „gmina” (commune) schools, in 1976 there was 1.512 such schools (that is in about 70% of the „gminas”) with 5.109 schools subordinated to them (branch schools). As a result of this reform the number of rural schools decreased from 22 thousand to 11 thousand. About 80% of all pupils in rural schools are educated presently in schools organized along the new consolidated school rules.

Realization of the concept of a consolidated „gmina” school should be seen as creating conditions for introduction in the coming years of universal ten — year education. As long ago as in 1961 compulsory education was lengthened to eight years of elementary school.

The effort to equalize the level of education and knowledge of graduates of rural schools and urban schools is not limited only to organization of good elementary schools in the countryside. In order to even the social and regional disproportion in access to education, a number of preferences have been created for rural youth when taking up high school and further education. A result of the state's efforts, aimed at extension of education is visible progress in level of rural population education.

The shares of the rural population 15 years of age and more, considering its education were as follows;

	1965	1975
uncompleted elementary education	38.3	31.7
elementary education	46.1	32.8
higher than elementary education	15.6	30.1

The largest differences appear in the rural population group with more than elementary education. This group consists first of all of young inhabitants of the countryside who have received their education during the last twenty years. Unfortunately, not many of them have school agricultural training but in the group of young farmers, up to thirty years of age, about thirty per cent does have school training for work in agriculture. This is great progress not only in comparison with the education of the older farmers but also in comparison with the situation of ten years ago, when only less than three per cent of the young farmers had school agricultural training.

In Poland conditions were achieved that most young people in the age group 15 to 18 years attend schools. In 1970 61% of persons in the age group 15 to 18 years in the countryside and 86% of the analogous group in cities attended schools. In the school year 1974/75 87% of elementary schools graduates, farmers' children, continued education in high schools, in this 22% in gymnasium — type and technical high schools, ending with a final examination. For comparison, from among graduates of elementary schools, workers' children almost 100% continued education in high schools; in this 38% in gymnasium — type and technical schools. This shows that certain disproportions are maintained in the division into countryside and cities and between children from rural peasant families, rural intelligentsia families, workers' etc. It is foreseen that the introduction of a universal ten years elementary school will reduce these differences to minimum.

Every year agricultural courses are organized intended principally for older farmers (about 13% of the rural population has attended such courses), and aside from this new training centres are created for educating cadres for agriculture.

In the school year 1976/77 agricultural education has at its disposal for non — working students 586 technical schools and 1.103 basic — level agricultural schools or equal. Students numbering 139 thousand were being educated in these schools. In addition 62 thousand persons were receiving education in 341 technical schools and 21 basic — level schools for working persons.

The scope of non — school forms of professional training is also widening. In the years 1971—1975 the qualification titles of agricultural worker and master of agricultural professions were obtained annually by about 60 thousand farmers. This is still too little, considering that every year about 120 thousand farms change owners as a result of generations rotation, but the progress is visible.

Aside from the organization of agricultural education a separate matter is educating teachers for agricultural schools, especially providing a sufficient number of agricultural engineers with teachers qualifications. Presently there are four main day — time and correspondent centers for education of agricultural teachers. Also a part of the people employed in the system of agricultural extension are included in this training. There is an extension unit, providing professional advise at the level of each „gmina”. The persons employed there have as their task agro-technical and zootechnical extension services for the farmers in their area.

Despite the efforts aimed at raising the level of education of agricultural producers, the professional training of the agricultural population is not yet satisfactory. The distance between the agricultural and non-agricultural populations considering education standard is still large, although in the younger age groups these difference have been reduced in a large degree.

The situation in the field of education of the employed in agriculture is more favourable in socialized agriculture as compared to private agriculture, although here also it is not yet fully satisfactory. Statistics in this field are presented in Table 13 for the year 1974.

Table 12

**Population 15 years of age and more, according to level
of education (calculated per 1000 inhabitants)**

Years	More than elementary	Elementary	Incomplete elementary
Non-agricultural population			
1960	289	434	277
1970	386	467	147
1974	438	441	121
Agricultural population			
1960	35	245	720
1970	84	444	472
1974	107	495	397

Table 13

**Structure of the professionally active in agriculture
and in the non-agricultural socialized economy, according to education
(in per cent)**

Specification	Private agriculture	Socialized agriculture	Socialized non-agricultural economy
More than elementary	6.9	36.4	47.7
in this:			
— university level	0.1	3.7	5.8
— high school and incomplete university-level	1.5	16.4	20.9
— basic professional	5.3	16.3	21.0
Elementary and less	93.1	63.6	52.3

7. The social and economic structure of agriculture-evolution and the present state

A dominating influence was exerted on the social and economic structure of agriculture during the whole post war period in Poland by two processes: industrialization of the country and socialization of agriculture. The developing industry had a far reaching influence both on agricultural production and on structural changes in agriculture.

Before the war in Poland a rapid dispersion of peasant farms was taking place as an effect of family inheritances and no outflow of the rural population to non-agricultural occupations.

After the war, in going over of agricultural population to industry some rural families were getting rid of some lands trying to fit the size of the farm to the amount of possessed labour force. For others, a piece of land became only a plot, while the principal income was obtained outside the farm. In this way a type of supplementary farms came about. This is a group of biprofessional rural population, about which we have spoken previously.

In Polish agriculture there are three forms of ownership of the production means: private, cooperative and state. In effect of this there are three types of farms. Forms of ownership are not exactly identical with the ways of using, as part of the land being property of the state (about 1 million hectares) is used by production cooperatives, agricultural circles, private farms and the non-agricultural population.³ In the years 1950—1976 considerable changes have taken place in the structure of agricultural land use by the respective types of farms. Changes in this field are illustrated by statistics in Table 14.

Table 15

**Use of agricultural land in Poland in the years
1950—1976**

Years	Agriculturally used land, total in thousand hectares	In this land used by (in per cent)			
		state farms ^a	particular production cooperatives	agricultural circles	private farms
1950	20.440	9.9	0.8	—	89.6
1960	20.403	11.9	1.2	—	86.9
1965	19.637	13.5	1.1	0.6	84.8
1970	19.543	14.8	1.3	0.4	83.4
1976	19.151	18.5	2.0	1.8	77.7

^a Together with state and social lands not being a part of farms; state farms in 1976 used in 1976 17.7% of the total agriculturally used area.

Changes in land use structure come about as a result of land turnover between the state and private farmers and between private farmers themselves. The growth of the socialized economy sector takes place principally through the State Land Fund. This Fund was created in 1944 and performs an important role in structural changes of peasant farms. It has begun the process of creating the socialized economy in Polish agriculture. As a result of the agrarian reform about 10.6 million hectares of land were taken over and included into the State Land Fund. Out of this 6.9 million

³ The non-agricultural population uses the so called workers' gardens. These are lands set aside near cities, divided into plots of 300 to 400 square meters in area. The total area of these plots in the country is 23 thousand hectares, and the number of plots is about 500 thousand. These gardens perform recreational and production function, being used by the urban population for growing vegetables, fruits and flowers.

hectares was allocated to private farmers and 3.7 million hectares to the state economy. Presently, the Fund is composed principally of land given up by aged farmerse (without successors) to the state (in exchange for a pension) or of land taken over by the state when are no successors qualified to take over the farm (heirs not being farmers have not the right to inherit land in Poland). These lands are given to state farms or cooperatives and agricultural circles and also sold or leased to private farmers. The latter ones use presently — on basis of leases — about 600 thousand hectares of land from the State Land Fund.

Presently, there are in Poland 3.145,6 thousand private farms (over 0.5 hectares). The share of these farms in final and commercial agricultural production is slightly smaller than their share in agriculturally used land. These changes are illustrated by the statistics in Table 15.

The figure quoted point to the fact that the private sector is diminishing in size and economic importance. These processes have strengthened during the last few years.

The average size of the private farm (omitting farms with an area of less than 0.5 hectare) is 4.8 hectares of agricultural land. The dominating part of farms from 0.5 to 2 hectares in size are supplementary farms of the biprofessional population) that is farms of the so called farmers — workers), except for the small share of highly intensive vegetable farms. Farms of less than two hectares are not treated as normal agricultural workshops. If they would be ommitted, then the average size of a farm would be about 6.7 hectares of agricultural land. Table 16 contains statistics on the structure of private farms in 1960 and 1976.

Table 15

**Share of private farms, state farms and agricultural production
cooperatives in final and commercial agricultural production
(in per cent)**

Years	State farms	Production cooperatives	Private farms
Final production			
1950	6.1	0.5	93.4
1960	10.1	1.2	88.7
1965	12.7	1.1	86.0
1970	14.7	1.5	83.6
1976	20.0	3.3	74.8
Commercial production			
1950	7.8	0.4	91.8
1960	12.8	1.3	85.9
1965	16.2	1.3	82.2
1970	17.9	1.9	80.0
1976	21.8	3.4	72.8

Table 16

Number and structure^a of private farms

Area of farm in hectares	Number of farms in thousands		Structure of farms in per cent	
	1960	1976	1960	1976
0.5—2	801.7	921.8	24.9	29.3
2—5	1091.9	969.0	33.9	30.8
5—7	475.7	418.5	14.8	13.3
7—10	462.0	412.2	14.4	13.1
10—15	283.6	292.6	8.8	9.3
15 and more	101.1	132.1	3.2	4.2
Total	3216.0	3146.2	100.0	100.0

^a Data for 1960 from National Census, for 1976 estimate.

As these statistics show, presently only slightly over 400 thousand farms (13.5%) have more than 10 hectares of land, that is an area which in Polish conditions secures full employment for the family's labour force as well as a proper level of income. Also some of the farms, smaller in area, specializing in vegetable, fruit, tobacco, poultry or swine production are intensive economy farms. During the past few years the state has created very favourable conditions for specialization of farms, by providing credits for investment on convenient terms.

Almost two thirds of all private farms in Poland have two sources of income. The dimension of the phenomena of dual-profession in respective area groups are described by the statistics in Table 17 concerning the number of people working only or mainly on a farm, especially the number of men in general and in production age.

The development of the dual-profession phenomena among the agricultural population performed so far a positive role in agriculture. The work outside of agriculture employed the surplus of labour force and provided additional income for the agricultural population. However, at the present moment the negative effects of this dual-profession phenomena are beginning to appear as well, finding their expression in lower dynamics of production growth in biprofessional farms as compared to farms purely agricultural. One of the tasks of economic policy is influencing the polarization of biprofessional farms either in the direction of decreasing the size of the farm and leaving only a supplementary plot or to increase the area and run a typically agricultural farm.

The dispersed farmers' economy in Poland remain in growing conflict with development of the national economy, it is an obstacle to technical modernization of agriculture and limits possibilities of social labour productivity growth. The economic policy is faced with an important task of adapting the farmers' economy to changing technical as well as economic and social, conditions of the national economy.

Table 17

**Number of persons working only or mainly
on a farm in respective area groups of private farms ^a**

Area groups of farms in hectares	Women		Men		Total	
	total	in production age	total	in production age	total	in production age
0.5—1	0.57	0.42	0.10	0.07	0.67	0.48
1—2	0.80	0.57	0.22	0.16	1.02	0.72
2—3	0.97	0.69	0.42	0.30	1.39	0.99
3—4	1.07	0.77	0.62	0.46	1.69	1.23
4—5	1.13	0.83	0.78	0.60	1.91	1.42
5—7	1.18	0.88	0.93	0.74	2.12	1.62
7—10	1.23	0.95	1.10	0.90	2.33	1.84
10—15	1.29	1.01	1.26	1.05	2.55	2.07
15—20	1.33	1.05	1.39	1.16	2.72	2.21
over 20	1.35	1.04	1.45	1.20	2.80	2.24
0.5—2	0.69	0.49	0.17	0.12	0.86	0.61
2—10	1.13	0.83	0.79	0.62	1.92	1.45
over 10	1.31	1.02	1.30	1.09	2.61	2.11

^a Data according to the National Census of 1970.

The socialized sector in Polish agriculture is represented principally by the 3.070 state farms and 1.267 production cooperatives.

In 1976 state farms contained an area of 3.383 thousand hectares of agricultural land. Since 1960 this area has increased by 958 thousand hectares and presently is growing by 70 to 80 thousand hectares annually. It is foreseen that in the years 1977—1980 the area of state farms will increase by over 120 thousand hectares per year. State farms will take over land given up by private farmers, if this land is in their vicinity.

State farms belonging to the Ministry of Agriculture include:

- production farms, grouped in 16 regional unions,
- farms producing reproduction material for the whole agriculture, grouped in two national unions: Union of Agricultural and Horticultural Seed Production and Animal Breeding and Frading Board,
- inland fishery farms grouped in one national union,
- regional agricultural progress extension centers,
- farms run by scientific institutes of the Ministry of Agriculture,
- agricultural — industrial unions: during the past few years two such unions have been organized (with an area respectively of 61 and 88 thousand hectares), which, aside from agricultural enterprises, comprise enterprises of agricultural services and agricultural industries plants in their region of activity.

At present in the whole country there are 1.111 state enterprises belonging to the Ministry of Agriculture, with an average area of 3.430 hectares, from 300 to over 10 thousand hectares in size. On the average one enterprise compares 4.2 farms (production units). There are, however, also one unit enterprises as well as ones of ten units.

The one unit enterprises are found principally in regions where there are not many state farms and where they are far away from each other.

Combining farms into larger farming enterprises has as a goal creating better conditions for specialization within a farm and increasing the size of production.

The role of state farms in Polish agriculture comes down to three fields of operations:

- producing agricultural means of production for the whole agriculture,
- participation in reshaping the agricultural system,
- production of commercial articles.

The first field of activity of the state farms, especially important in conditions of the existing agrarian structure, is production of seed and reproduction material. Qualified seed material and breeding animals produced in state farms are sold to farmers at prices lower than actual costs of their production (they are subsidized by the state). It is not the financial effect of these means of production but their effectiveness in universal use in agriculture which is the superior goal here. State farms are practically the only producer of qualified grains and other plants seed material and of breeding animals (they produce over 90% of the total national seed production).

The second domain of state farms activities is the reshaping of the agricultural system.

In the present agrarian structure state farming enterprises are principal representatives of the socialist big scale commercial production. The development of the socialist sector is a result of processes going on inside the private economy, leading to dropping out of land from private farmers' holdings. It is then the land which becomes socialized, not the farm as such. To start agricultural production on this land is connected with additional costs in order to restore soil culture, supply means of production, set up the farming area. It is then, an expensive undertaking for the national economy, but a necessary one, not only for the reconstruction of the system but also for continuation of the necessary agricultural production growth.

The developing forms of production cooperation between private farms and state farms may lead in the future to private farmers joining state farms, with which they have been cooperating, with mutual benefits for some time. Regardless of future decisions of private farmers, the present cooperation of state farms with private farms represents, even today, a form of expanding production possibilities of both partners — the state farms production is growing without the necessity of increasing their area and without expensive investment, while for private farms possibilities are secured for permanent specialization, based on the demand and requirements of their bigger partner.

Finally, the forms of activities of state farms with the aim of reconstructing the agricultural system are developing, that is research and experiments in organizational forms of agriculture in the macroeconomic sense — that is, forms of agricultural and service enterprises, settlements, social and living infra-structure, administration etc.

The third field of state farms activity is commercial agricultural production. In 1976 state farms, with a 17.7% share in the total agricultural land, supplied 21.8% of commercial agricultural production (in constant 1971 prices). Calculated per one hectare of agriculturally used land, the commercial production of state farms was 13.5% higher than that of private farms. Especially important is the role played by state farms in commercial grain production. In 1976 state farms supplied 39.3% of the national commercial grain production. State farms are also a principal supplier of young slaughter cattle for exports.

The second socialized sector in agriculture are production cooperatives. In 1976 there existed in Poland 1.267 cooperative farms, managing 433 thousand hectares of agriculturally used land. Each family in such a cooperative has a right to keep a small plot by their house, up to 0.5 hectare in size, and a right to keep livestock, that is swine, poultry, sheep, cattle. The number of cattle is usually limited by statute to two cows, with young ones (this depends on the resolution of members of the cooperative).

In most of the cooperatives with high incomes from collective production the members voluntarily give up the breeding of their own livestock, as it becomes too troublesome for them and does not bring profit. In 1960 per one family in a cooperative there were on the average 1.5 cows bred privately but in 1976 the figure was only 0.4. This means that 60% of the families in cooperatives already do not have cows.

On the average, the share of animals in private breeding by cooperative members shows a systematic decrease. If in 1960 63% of the whole livestock in cooperatives was in members' private breeding, then in 1976 this figure was only 9%.

As statistics in Table 18 show the number of cooperatives has decreased from 1.668 in 1960 to 1.267 in 1976, which is connected with merging of small cooperatives and setting up bigger farms. The average agricultural land area in one cooperative grew during this time from 117 to 341 hectares, while the number of families in one cooperative grew from 13.4 to 39.2.

The quoted figures show a dynamic increase of the number of animals per unit of area and grain yields, which found its expression in growth of agricultural production and income increment, calculated per one family.

In 1976 there were 8.4 hectares of agriculturally used land per one family, joined in cooperatives. The area of land per one family is, however, very much differentiated in respective cooperatives and varies from 5 to more than 15 hectares. Because the area of a farm per one family is too small, incomes from agricultural production only are not sufficient. For this reason in a large number of cooperatives different kinds of non-agricultural activities are conducted, such as fruits and

Table 18

**Some indexes of development of agricultural production cooperatives
(cooperatives distributing income)**

Contents	1960	1965	1970	1976
Number of cooperatives	1668	1229	1071	1267
Area of cooperatives' agricultural land (in thousand hectares)	195	196	238	433
Area of one cooperative (hectares of agricultural land)	117	159	222	341
Number of families in cooperatives in thousands	22.4	21.1	24.8	49.7
Number of families in one cooperative	13.4	17.2	23.3	39.2
Number of animals per 100 hectares of agricultural land (head) cattle	40.3	46.4	54.4	67.4
in this: cows	25.5	24.4	20.8	15.6
swine	62.5	59.4	48.0	103.7
in this bred privately by members cattle	23.7	14.8	8.4	3.4
in this: cows	16.9	11.5	6.4	2.7
swine	41.9	34.9	25.6	13.5
Yields of grains in quintals per hectare	18.0	22.1	22.2	31.3
Income per family for distribution in thousand zlotys ^a	17.7	28.7	36.0	81.6

^a Current prices.

vegetables processing (plants cooperatives buy raw materials on contract also from private farmers), construction materials production, various kinds of services (mechanization, transport), and even small industrial plants. On the average, 34% of cooperatives' income comes from outside agriculture operations and in cooperatives with a small land area per one family this figure is even over 60%. The development of non-agricultural operations is not, however, a solution for the future with the number of cooperative farms growing.

Until 1972 there existed in Poland two types of cooperatives: the superior type — with full socialization of plant and animal production (except for the mentioned private livestock) and the second type of cooperatives — with only partial socialization of production, usually of plant production. Animal production was done individually, which of course did not exclude gradual development of collective animal production.

The changes introduced in 1973 to the statute rules (for instance the minimum admittance of ten members instead of ten families) allow organization of cooperative farms even by five families, leaving wide choice of directions and field of collective and individual activities. According to the new rules a farmer may bring into the collective farm only a part of his land, correspondingly to the needs of collective operations. The rules concerning land use allow, in certain situations, even in cooperatives with full socialization of means of production, leaving some land in farms' private use. In addition, as universal rule, payments have been introduced for land brought into the cooperative, thus securing additional advantage as a result of land contributions. These are cooperatives of the so-called second type, that is in which the production has not been fully socialized. They give an opportunity for cooperative operations without changing the situation of the private farm. The statutes of these cooperatives anticipate only financial contributions. The members are not obliged to bring in land nor livestock nor other means of production. The cooperatives may take over lands from the State Land Fund or may buy them from private farmers. In collective units operated by the cooperatives, a permanent crew may be employed, paid according to previously set wages. Labour inputs by the members of the cooperative are not anticipated, as the principal place of their work are to remain their private farms. These cooperatives then, exist beside private farms and are complementary to them. Of course it is foreseen that they will evolve towards the direction of the superior forms, based on increasingly fuller socialization of all the basic means of production.

Recently agricultural production cooperatives have been intensively developing cooperation with private farmers. This cooperation includes most often deliveries of fruits and vegetables to cooperative processing plants, deliveries of piglets and young cattle to collective fattening facilities and exchange or sales of qualified grains seeds and seed potatoes. This cooperation is advantageous for both sides. The cooperating private farmers receive from the cooperative starting material, services and specialistic advice, instruction, and first of all contract, guaranteed prices. The cooperative, in turn, has guaranteed supply of the required raw materials. It is also extremely important that the production cooperation, which is a factor in deepening links between the farmer and the cooperative, is one of the most important elements of system changes in the countryside.

If one was to try to characterize synthetically the progress, which has been achieved lately by production cooperatives, attention should be brought to the following facts:

1. The share of production cooperatives in the total commercial production of agriculture increased from 1.5% to 3.4% presently (in 1971 constant prices), while their share of agricultural land is 2.0%. The cooperatives have a high and growing productivity and effectiveness of outlays, which is a proof of the superiority of the collective economy. Despite the relatively small area which is occupied by production cooperatives, their place in the food economy (especially in poultry production, young slaughter cattle and fruit and vegetables) is significant.

2. The cooperatives represent an active attitude towards individual farmers. Symptoms of this are as follows:

- a) new members join cooperatives already existing, especially families with land,
- b) new production cooperatives are being called to life, this process becoming animated more lately,
- c) the cooperatives realize with success cooperation with private farmers, which brings material benefit to both sides and encourages further economic expansion of cooperatives in the future,
- d) they adapt their statute rules and organizational forms to requirements and perception possibilities of local farmers, of which the most illustrative example are the recently started branch cooperatives.

There are in Poland 35.6 thousand agricultural circles (operating in 89% of all villages) and 1.880 cooperatives of agricultural circles, which employ 198 thousand persons and have at their disposal a great social wealth. The agricultural circles are a traditional farmers' cooperative and communal organization. The agricultural circles use only 1.8% of agricultural land and they are the owner of 43% of the total number of tractors, outside the socialized sector and of a large part of other agricultural machines. The production facilities and means owned by agricultural circles, which represent social property and serve the intensification of agricultural production of all farms in respective villages, presently exceed the value of 56 milliard zlotys. This is considerable potential, representing an important factor of social ownership of means of production in agriculture. In addition agricultural circles conduct collective operations in agricultural production.

In 1976 farms run by agricultural circles included an area of 341 thousand hectares of agricultural land. So far these agricultural circles' farms were run by hired workers, engaged by the management of the agricultural circle. In 1974 the legal status of these farms was changed; they have been transformed into collective farms of cooperatives of agricultural circles — a form closer to cooperative. They are presently an open form, that is private farmers may join them, bringing into the collective farms their lands. Presently about 10% of the land used comes from farmers' contributions. These farms differ from the conventional cooperative form because they are not independent legal units, but are subordinated to the commune („gmina”) cooperative of agricultural circles.

Cooperatives of agricultural circles — as it has been said before — are a new organization, introduced gradually since 1973. This is an enterprise of cooperative character, its region of activity being limited to one „gmina” unit. Members (share-holders) of these enterprises are rural organizations of agricultural circles. The operations of this enterprise include aside from mechanization and chemicalization services for farmers, also repairs of agricultural equipment, construction service, organization and management of farms on land given up by private farmers and on State Land Fund areas.

Aside from state farms, agricultural production cooperatives and cooperatives of agricultural circles, an important element of development

of whole agriculture are state machinery centres and their branches, numerous agricultural unions and branch associations, state enterprises for electrification of agriculture, veterinary and insemination centres, enterprises for conservation and management of water economy facilities and many other specialized enterprises, supplying production services for agriculture. All of them have at their disposal a considerable social wealth.

One should mention here also the rural cooperatives of provision and sales, which — through trade channels — integrate farmers' agriculture with the national economy and socialize the sphere of agricultural products turnover. This organization is also responsible for supplying agriculture with means of production and the rural population with the necessary consumption goods. The rural cooperatives of provision and sales, aside from enterprise of agricultural and food processing, create effective channels of vertical integration of farmers' agriculture with the rest of the national economy.

8. Agricultural institutions and organizations in Poland

Within the framework of the agricultural economy and rural environment as its social foundation, operates a large number of institutions and organizations. Four basic types may be distinguished:

1. production institutions (farms and agricultural enterprises),
2. institutions of direct and indirect services for farm and persons employed in agriculture,
3. Institutions governing and managing agriculture,
4. social and professional organizations and communal organs. They create the institutional framework of citizens' participation in the executive activity in agriculture and inspiration and control of operations of the professional institutions (production, service and management).

In Poland, operates a great number of different units connected with agriculture. The activities of these units are important both for the development of agriculture, and for the social development of the countryside. The production and economic effects achieved in agriculture are in an increasing degree dependent on the level of work of institutions and organizations linked with agriculture. In turn, for social changes in the countryside of considerable importance are the social and professional organizations.

In the presentation of the most important institutions and organizations in agriculture we omit here the production organizations (state farms, agricultural production cooperatives) which we have discussed in the previous chapter.

As concerns the sphere of agricultural services, this field, directly connected with agricultural production comprises: trade services (supply with means of production and procurement of agricultural products), mechanization, transport, construction and repairs, workshop services, financial, instruction and advisory, veterinary services, as well as in-

stallation of mechanical equipment, electrification, melioration works, etc.). If one was to look at these matters, for the past ten years' period, the great development in this field is visible, which contributes to growth of agricultural production, to progress in specialization of agriculture and improvement of living and work conditions of farmers.

The most important institution considering the size and field of agricultural and rural services is the cooperative organization of supply and sales. It has a many year tradition in Poland. Until 1976 there were there separate cooperative organizations in the field of production and trade services for farmers' agriculture, these being: the cooperative „Samopomoc Chłopska” (Farmers' Self-help), responsible for supply and sales, dairy cooperatives and horticulture — apiculture cooperatives. In 1976 these organizations combined into the Central Union of Farmers' Cooperatives „Samopomoc Chłopska” (CZSR). In the present organizational structure there are following members of the CZSR: commune cooperatives „Samopomoc Chłopska”, voivodship dairy enterprises, voivodship horticultural and horticultural — apicultural cooperatives and regional apiculture cooperatives, cooperatives of rural transport, voivodship unions of agricultural cooperatives „Samopomoc Chłopska”, as well as the National Tourist Cooperative „Gromada”. The united cooperative movement has at its disposal a large commercial and material — technical potential. Cooperatives and their unions employ about 650 thousand persons. They have over 175 thousand shops, restaurants and cafeterias and procurement units, as well as almost 13 thousand storage facilities for agricultural production, they govern over 34 thousand production and service units, have at their disposal 47 thousand mechanical vehicles.

The total of commercial operations in trade services, transport and other fields exceeds 800 milliard zlotys annually.

The production and service potential and size of agricultural cooperatives activities has been growing rapidly.

For example, in the supply and sales cooperatives, during the past ten years changes were as follows:

	1965	1975
employment (in thousand persons)	286.5	504.3
economic units (in thousand)	148.8	171.2
value of fixed assets (in milliard zlotys)	11.7	40.5
value of circulating (in milliard zlotys)	38.5	73.1
value of retail sales (in milliard zlotys)	85.2	224.6
value of agricultural products procurement (in milliard zlotys)	41.7	97.0

These phenomena of activity development were accompanied by a simultaneous process of concentration of the basic organizational units, that is of the commune („gmina”) cooperatives. When in 1965 there were 2,586 commune cooperatives (the „Gminna Spółdzielnia — GS”), in 1970 their number of 1,747 in 1976.

The basic tasks of the cooperatives and unions associated in the Central Union of Farmers, Cooperatives „Samopomoc Chłopska” are production and commercial operations for agriculture and commercial as well as consumption services for the rural population. As regards the peasant farms the basic tasks of the cooperatives remain: supply with the means of production as well as the procurement and contraction of agricultural products. Sales of production and investment articles for agriculture reached the value of 69.7 milliard zlotys in 1975.

A rapid growth rate of supply of articles for agricultural production was noted. The share of these articles in the total sales was: in 1955 — 16.7%, in 1960 — 22.4%, in 1965 — 28.2%, in 1970 — 31.5%, in 1975 — about 31%. The retail turnover realized by agricultural cooperatives represented 37% of total sales on the domestic market. In the organizational domain of production means supply to agriculture certain organization changes are introduced, aimed at strengthening contacts of the trade units with production plants and at limiting to the necessary minimum, middleman operations, performed by sales centrals, between trade units and industrial plants.

The second basic direction of cooperative agricultural turnover is the procurement of agricultural products. The share of agricultural cooperatives in agricultural products procurement from private farmers is about 70%.

An important place in the social organization of agriculture and rural life is occupied by agricultural circles, the oldest social and economic farmers' organization, started over 110 years ago. It was an association representing farmers and defending their interests, aimed at introducing multiform progress in the countryside and in agriculture, in the field of economy, education, social matters, culture. Agricultural circles, organized at the farmers own initiative, in respective villages, became little by little a great movement of social activity of the farmers — in this being an exceptional phenomena perhaps even in the world. However, despite the great engagement of the members and circles' activities, with very limited material possibilities in the countryside and lack of outside aid — the civilization and material effects of the circles' activities were necessarily limited.

In People's Poland the agricultural circles were started up again in 1957. Very soon they became a universal social and economic farmers' organization, a partner for the state in the task of modernization of agriculture and the countryside, especially through extension of agricultural progress and education, in this first of all collective mechanization of agricultural operations. The mechanization activity of the agricultural circles in the form of services offered to private farmers has been intensified in 1959 with the creation of the Agricultural Development Fund (Fundusz Rozwoju Rolnictwa the FRR) which was made of means obtained in the private farms economy. The Agricultural Development Fund secured financial means for tractors and agricultural machines and other agricultural and rural requirements. The form of agricultural circles, mechanization proved to be an excellent solution to the inability of the farmers' agriculture to solve independently pro-

blems of technical and technological progress. It secured the most effective employment of the growing financial, material and organizational state aid, intended for these aims.

The economic potential of agricultural circles grew rapidly. In 1965 they had 45.6 thousand tractors and in 1976 already 137.2 thousand tractors (in physical units). The gross value of fixed assets at the disposal of the circles' organization reached the amount of 56 milliard zlotys in 1976 in this: buildings and constructions — 11.3 milliard zlotys, machinery and technical equipment — 24.1 milliard zlotys and means of transport — 20.6 milliard zlotys. Employment grew from 114 thousand in 1965 to 204.4 thousand persons in 1976. The area of agricultural land used by collective farms of agricultural circles grew from 121.5 thousand hectares in 1965 to 341 thousand hectares in 1976 (1.8 per cent of the total agriculturally used land in Poland). The agricultural circles' share in value of global production and services in the sphere of agricultural services is increasing systematically. For instance, in 1970 it was 31% and grew to 43% in 1976. The development of agricultural circles economic activities was accompanied by processes of professionalization and concentration of these activities and changes of their organizational and institutional forms. Until the beginning of the 1960's all of the economic activity, as well as non-economic was organized by respective agricultural circles, using the social potential and means of the villages where the agricultural circles were operating. Next, until half of the 1960's some concentration of facilities and operations was done, in the leading agricultural circles. In 1965 25.5 thousand agricultural circles were conducting economic operations, which constituted 78% of the total number of agricultural circles. In this very year 4.4 thousand agricultural circles managed collective farming on State Land Fund lands.

The financial services for agriculture are provided by cooperative banks. In respect to cooperative banks the rôle of the central union is performed by the Bank of Food Economy (Bank Gospodarki Żywnościowej — the BGŻ), which has its offices in respective voivodship. The Food Economy Bank is a state and cooperative bank created for the purpose of providing financial and credit services for agriculture, agricultural and food industries and forestry. It was called to life in July 1975 as a result of union of the Agricultural Bank and the Central Union of Savings and Credit Cooperatives. Cooperatives Banks, founded on basis of the previously operating savings and credit cooperatives deal with:

- 1) accumulating the populations money savings,
- 2) providing credits to persons operating farms in the region of the banks activity or to persons conducting economic activity in the non-socialized economy outside agriculture,
- 3) cashier and accounting services for institutions conducting economic operations, in the bank's region of activity, in the field of contraction and procurement of agricultural production, in supply and services for the countryside and cashier services for the commune („gmina”) national councils and their units and budget plants.

In the countryside there operates a network of financial services comprising 1.664 banks, 887 of their branches and 3 thousand permanent cashier units. The size of credits provided by the banks reaches the

level of 35 milliard zlotys, in this for agricultural purposes 27 milliard zlotys. During the past five years the credit aid has been doubled, which allowed private farmers to increase considerably outlays on production investment and current production. The development of cashier and accounting service provided by cooperative banks contributes to saving of farmers' time, as it makes possible for the farmers to settle all the payments in the bank. This is also a reason of concentration of the credit aid for farmers in the banks. Even in the beginning of the 1970's there were four institutions responsible for providing credits to the private farmers: the Agricultural Bank, savings and credit cooperatives, the sugar industry as well as supply and sales cooperatives⁴).

Savings and credit cooperatives have started over a 100 years ago. After the war they operated since 1945 (962 savings and credit cooperatives). In 1950 the savings and credit cooperatives, were transformed into commune („gmina”) cooperative banks and in this way operated until 1957 when the savings and credit cooperatives were called again into life and their union was created.

Aside from the above discussed institutions and organizations an important role in widely comprehended services for agriculture, is performed by the agricultural extension service, which is responsible for advisory, instruction and organization functions. The hundred years tradition of agricultural extension in Poland was referred to when in 1957 agricultural extension services were called into life.

During the first period it was linked organizationally with agricultural circles, later (in 1968) with the commune („gmina”) people's council. Since 1973 the agricultural extension service is subordinated to the „gmina”.

The agricultural extension services in 1975 employed about 16 thousand agricultural instructors, instructors of agricultural construction and instructors of rural house keeping. These instructors conduct their work in assigned regions of activity within the „gmina” (commune). The commune extension service combines advisory and instruction functions for farmers with certain tasks of administrative nature, as it is an auxiliary organ for the head of the commune. Advisory and instruction services are also operated by voivodship agricultural progress centres (700 persons), by the union of agricultural circles (1.650 persons), by voivodship dairy cooperatives (about two thousand persons) and voivodship horticultural cooperatives (750 persons). There are services of other types: veterinary (employing a total of 7.000 doctors, technicians, aids and inseminators), zootechnical control of animal quality (2.000 persons), dairy (2.600 persons), seed economy (3.000 Seed Central instructors). About 4.300 persons are employed in the so-called raw materials services of different branches of industry, which use agricultural products as production material. Within the commune cooperatives about 1800 organizers of agricultural services are at work, dealing principally with agricultural products contractation. A large number of agricultural specialists is employed in economic and management units of agricultural

⁴ Commune cooperatives „Samopomoc Chlopska” still provide farmers with commercial fertilizer credits.

circles' organizations. The total number of workers of agricultural services, working first of all in services for private agriculture is about 50.000 thousand persons.

Agriculture is a complex part of the economy, that is why its management institutions and the services sector are of special importance. Among them are institutions shaping agricultural policy, state administration, institutions organizing agricultural production and the scientific — advisory units. These are both central institutions and local organizations of various levels. The present system of institutions managing agriculture was shaped in the major part during the years 1972—75 as an effect of changes in the territorial division of the country and the division of tasks among the respective authorities, also as a result of change in structure and functioning of these organs. The shaping of agricultural policy and agriculture management, understood as setting goals, allocating necessary means and control of execution of planned undertakings is a responsibility of the central and local authorities.

The basic level organ of authority is the Commune People's Council (the „Gminna Rada Narodowa"). It is made up of councilmen, elected in universal, direct and secret elections. In the Council represented are all political, social youth organizations, as well as people not belonging to political parties, representatives of various professions and religions, etc.

As regards agriculture, an important role in the process of shaping and realization of agricultural policy is performed by the activities of the Polish United Workers' Party and the United Peasants' Party. In creation of agricultural policy — and also in activities outside agriculture — these parties cooperate directly with each other and also within the National Unity Front, which concentrates political, social and youth organizations in a common program of social and economic development of the nation, progress and socialism. The management of agriculture, understood as decision — making, aimed at actualization of agricultural tasks, in a given region and control of their execution is divided between the state administration and economic administration, managing agriculture economic units and its services.

The review of agricultural institutions and organizations would not be complete if social and communal organizations were omitted. These are first of all institutions of rural self — government (first of all Gmina People's Councils), the self-government of rural cooperatives, social and economic organizations and social and political forms of self-government.

The basic institutions of rural self-government are: rural meetings and the institution of village-mayor (the „sołtys"). The rural meeting in which all adult inhabitants of a given village may take part and make decisions has obligatory powers in matters concerning village life and beside that is a forum, where all important matters for the inhabitants of the village may be discussed. The village mayor calls the meetings and presides over them. The mayor's election takes place at a rural meeting called by the head of the „gmina" (commune). The village-mayors perform a dual function: social worker, representative of the village and plenipotentiary of state authority.

Communal („gmina”) trade and agricultural cooperatives, cooperatives of agricultural circles, cooperative banks or agricultural production cooperatives are all organizations of dual character, each one of them is both an enterprise (and from this side they were all presented in our report), and social organizations. The supply and trade cooperatives have 4.5 million members, dairy cooperatives 1.2 million members, horticultural cooperatives 0.4 million, savings and credit cooperatives 3.4 million, agricultural circles number about 2.5 million members.

These organizations perform inspiration and control functions in respect to different economic institutions through various supervisory boards. Numerous unions and associations are linked with agricultural circles. Organizations of the water company type also operate. The People's Councils in their self-government capacity also join the widely understood social and self-government movement as well as social and political organizations — contributing to social and economic changes of the countryside and of agriculture.

B. AGRICULTURAL POLICY: AIMS, MEANS AND RESULTS

1. The starting point

For proper understanding of the realized agricultural policy, of accomplished social and economic change and achieved results, of unique importance — especially under conditions of Poland — is the social and economic situation which had place at the moment of beginning a new stage of development of our country: development under new social system conditions. For these reasons we shall shortly recall the situation in the period before the Second World War and during the first years of people's power, that is in the years 1945—1949.

Polish agriculture, analogically as the whole national economy, has undergone during the post-war thirty three years basic social and economic and structural changes. From a socially backward and technically primitive it has become in this period one of the more important branches of a rapidly developing, modern economy.

The structure of Polish agriculture before the Second World War was outstandingly unfavourable. Peasants without land constituted a big social group, seeking for a work at large landowners' or rich farmers'. Among the 3.2 million peasants' farms, 1.9 million were farms with an area of less than 5 hectares, the owners of which, together with one million land-less families and agricultural workers, were dependent upon 15 thousand landowner families and about 200 thousand rich farmers.

The starting point of Poland's agriculture after the war in the years 1944/45 was then very unfavourable. Respectively greater is the success achieved after the war.

The process of deep social and economic changes in the Polish countryside was started by the agrarian reform, announced September 6th 1944. The decree on agrarian reform was one of the first and fundamental legislation acts of the people's power, established July 22nd 1944. The

basic task of the agrarian reform was the liquidation of the system of big landowners and of landowners as a social class, transfer of the landowners' land directly to the farmers or to the state. This brought, then, the liquidation of remains of the feudal system in Poland. The agrarian reform actualized at the same time economic and social and political aims. All farms over 50 hectares in area, located in central and eastern parts of Poland and over 100 hectares of land in western and northern Poland were divided into smaller plots. The farms of persons who have left Poland were taken over by the state.

The reform was carried out without compensation. The former landowners were, however, secured jobs in agriculture or in other professions (according to their capacities and qualifications) and possibilities were created for obtaining pensions.

On the foundation of the decree on agrarian reform the State Land Fund was formed, accumulating land and means for the aims of agrarian reforms. As a rule it was accepted, that newly created or enlarged as a result of agrarian reform farms will not have more than 5 hectares of average quality land.

The decree forbid the division, sales, leasing or using as security farms created by the agrarian reform. The payment for land was symbolic and equalled the value of an average yearly yield of rye from one hectare, it was then 5—10 times lower than the price paid for land sold before the war under the capitalist agrarian reform.

They were the land-less peasants, agricultural workers, small land tenants and owners of small farmers who benefited from the agricultural reform. As a result of the reform and settlements 814 thousand new farms were created and the area of 254 thousand farms was increased. Altogether for these purposes in the years 1945—49 over 6.1 million hectares of land were used that is about 30% of agricultural land in the country. As a result of the land reform the area of small-sized farms increased on the average by 1.9 hectares. Over 1.1 million rural families benefited from it.

Due to the agrarian reform a process of agrarian structure improvement was started. The pre-war trend of growing differences in farms' size was checked and reversed. This found its expression in the decrease of the number of farms with smallest area — up to two hectares (by 10%) and of the farms largest in area — over 20 hectares (by more than two thirds) and in increase of number of farms in the 2—20 hectares group. The group of land-less population existed no more, as well as part of the formerly hired agricultural workers became private farmers.

One of the most far-sighted decisions made in connection with the agricultural reform was the creation of a state economy sector in agriculture. Due to this the agrarian reform under Polish conditions, analogically as in other socialist countries, became the first stage of socialist evolution in the countryside. Already in 1948 state farms occupied about 3% of agricultural land in the country. The agrarian reform, liquidating feudal relics and the capitalist system in agriculture, strengthened the commercial — type farmers' economy, but at the same time created foundations of a socialist sector.

The agrarian reform had basic influence on development of agriculture in the whole post war period. It contributed to establishing new social

and economic relations in the countryside, to the liquidation of the parasite landowners class and removed the fundamental structural obstacles to development of agricultural production. The reform removed the basic antagonisms in the countryside, strengthened the role of the middle sized farms. The changes resulting from the agrarian reform for many years shaped and determined the social and economic structure of Polish agriculture.

The state of agriculture after the war and the great social needs in the domain of feeding the country, caused reconstruction of agriculture and feeding the nation to be recognized as primary tasks in the years 1946—49. In 1946 the three-year plan of national economic reconstruction was elaborated. In agriculture this plan anticipated exceeding by 10% the pre-war level of production per inhabitant, management of fallows, reconstruction of livestock, increasing yields of crops and animal productivity and growth of supply of production means from industry for agriculture. Despite great difficulties, caused by war losses, already in the first years agriculture achieved considerable results, first of all in the field of fallows management and starting production in the western parts of Poland.

During the first years the war self-sufficiency in food production was not yet achieved. The tasks of the three-year plan in plant production were fulfilled rather easily but losses in animal production were much more difficult to make up and to achieve the pre-war level of production required some years. Thanks to increase of state investment outlays, credits, rural electrification, development of schools and agricultural education — the production goals of the three-year plan were basically achieved. The rate of agricultural production growth was very quick, reaching 25% annually (the absolute level was rather low).

Already in the first years of economic reconstruction the new socialist sector in agriculture began to take shape. The state farms created as a result of the conducted agrarian reform were developed and strengthened. Cooperative organizations were also established. The social and professional farmers' movement was very active. The Union of Farmers' Self-Aid was called to life, which dealt with extension of agricultural knowledge as well as the organization of production. In 1947—49 over three thousand cooperative machinery centers were started, which partly took over production services for private farmers. This was of considerable importance for the small farmers, who were unable to purchase, on their own, machinery and agricultural equipment. Even though the number of these machinery centres was not great, they presented a beginning of a new form of cooperative enterprises in the countryside and paved the way for technical progress.

Other forms of cooperatives were developing as well, those having a long tradition in Poland, especially trade and sales cooperatives (serving the countryside until today in the field of trade), credit cooperative, dairy, horticultural and others. In those years a new form of production links between private farms and state and cooperative organizations was shaped as well that was contractation of agricultural products, which soon became the principal form of the agricultural market organization, of planned shaping of production and state influence on the farmers' economy.

2. Agricultural policy during the industrialization of the economy

After the period of post-war reconstruction Poland entered a period of industrialization. The six-year plan (1950—1955) began. This was a special period in the development of the country and of agriculture. It exerted the greatest — so far — influence on the structure of the whole economy, changed fundamentally the direction of economic development and set before agriculture many new, difficult problems. The six-year plan anticipated, first of all, a rapid rate of industrial potential growth, rapid development of construction and great population flow, from agriculture to other professions. The investment effort connected with building the basic industries was intensified which had to exert negative influence on the size and rate of agricultural investment growth, and as a consequence also the rate of agricultural production growth. During the first stage of industrialization the main effort was directed at building and enlarging these branches of industry, which increased national economic potential and would allow the country to depart from the state of backwardness. This meant a necessity of investment concentration in mining, metallurgy, machinery and chemical industries. After these investments, means were directed to development of light industries, food and agricultural production.

Migrations from countryside to cities played an important role in Poland's post-war development, especially in the period of rapid industrialization. During the first years after the war the development of industry was extensive in character. The growth of production came about principally as an effect of employment growth, in a smaller degree as an effect of labour productivity growth. It is estimated that during the early period of development (the years 1946—50) about 70% of production growth was achieved as an effect of employment growth, and only 30% as an effect of labour productivity growth.

The population's migration from the countryside to cities was doubly profitable. First of all from the countryside migrated persons not necessary there, who did not find full employment in agriculture and achieving very low labour productivity. Not rarely they produced less than they required for their own livelihood. In this situation the movement of these people from branches with low labour productivity (agriculture) to branches with a higher productivity (industries) meant profit for the national economy. Secondly, the migrations resulted in many positive phenomena in agriculture itself, as it permitted better use of the remaining labour force and increase of agricultural production and sales.

The principal channel of population outflow from the countryside in Poland after the war was settled migration (definite). It is estimated that during the past 30 years through this channel flowed from the countryside about 5.1 million persons, with 35.6% of this outflow (1.816 thousand persons) taking place in the ten years between 1950 and 1960. This was an extremely important contribution of agriculture to development of industry.

A second source of rural labour force for the developing industries and a specific form of migration was — and still is — a group of rural

biprofessional population, the core of which are farmers-workers (oscillatory migration). The scale of this phenomena in Poland in the whole post-war period and presently is still great, which was discussed in part A of this report.

One should underline here, that the existence of a large group of biprofessional rural population was very favourable for the national economy, especially during its preliminary stage of accelerated development. As the farmers-workers lived in the countryside, the national economy was in a way released expensive housing construction and social undertakings. It is true that the farmer-workers travelling to work everyday were an extra burden for the public transportation system, but in a period of sharp deficits of materials, this solution was cheaper and easier to actualize. Not less important was the fact that farmer-worker families had their own source of food supply, which lessened the pressure on the consumption goods market and relieved the little then developed retail trade. The farmerworkers did, then, contribute immensely to the development of Poland's economy.

Agriculture's important contribution to the development of the national economy, especially industry, was the supplying of a part of the means for accumulation. The countryside bears part of the costs of industrialization, especially during the first period of accelerated development. It was the same in Poland.

In order to secure the countryside's participation in the national effort for socialist industrialization, during the first years of this undertaking a system of obligatory deliveries by the private farmers of basic agricultural products was established (grains, livestock and milk) at constant prices, much lower than market prices and prices paid by the state in the so called over-obligatory procurement. This was a certain kind of tax, in natural form, for purposes of the whole national economy and accelerated industrialization of the country.

During the first years the share of obligatory deliveries in the global production of agriculture was about 20% in grains, 10% of potatoes, 25% of livestock production and 10% of milk production. Prices paid for products included in the obligatory deliveries were at the level of 50% of prices paid for these products in the contractation system or on the free market. They did cover the material costs of production but did not fully compensate the farmer's work outlays. This part of the farmer's work, not paid for by the prices, was a charge in favour of national accumulation. The remaining part of the production farmers could sell at higher prices — closer to the value of products. The system of obligatory deliveries, modified a number of times, lasted in Poland until 1971, when it was abrogated.

Through the system of obligatory deliveries the state solved at the time two problems:

- 1) accumulation of means for national economy development,
- 2) full disposal was secured of a large part of agricultural production, which had then significant importance in supplying cities with food. At the same time this system counteracted against excessive, speculation-

-type growth of food prices in conditions of lack of market equilibrium. The system of obligatory deliveries had however a number of important faults: it lowered the profitability of agricultural production and decreased incomes of peasants' farms, maintained the present structure of agricultural production and reduced the effects of incentives to increase production.

The system of obligatory deliveries was the principal but not the only form of the countryside's participation in costs of industrialization. The second form were savings on agricultural investments. The investment program in agriculture in those years was very small, thanks to this a part of investment means, in a way „released” from agriculture, could be used for development of non-agricultural branches of the national economy.

Another form of agriculture's participation in costs of industrialization were direct payments and financial charges paid by the agricultural population to the state budget (taxes, obligatory payments, charges). It never played in Poland a significant role and has never become the main instrument of fiscal policy, as for instance in capitalist countries. In Poland there exists a system of land tax, but farmers do not pay income tax. This system encourages growth of production and intensive use of agricultural land.

A certain role was performed by various indirect taxes realized principally through the price system of state industry products. Their practical significance in Poland was not great however.

We have devoted some attention to these forms of agriculture's contribution to the industrialization and general economic development of Poland, because they constitute an important element of realized economic policy. From today's perspective they have proved to be effective forms. They made possible the concentration of human and material resources by the state and directing them at development of especially important branches. The development of industry became in the later years a solid foundation for the development of agriculture and its technical modernization.

The experience of Poland shows distinctly, the state's capacity to concentrate the means even if at the beginning they are not large, and also the ability of their employment, constitute a fundamental condition of the whole strategy of accelerated development. In this actualization agriculture may and must perform a very important role. This is especially true for countries where the share of agriculture in the national economy is considerable. The example of Poland is emphatical confirmation of this.

What has been said here should not lead to conclusions that the process of industrialization in Poland was done principally with means coming from agriculture. Agriculture was too weak sector of the national economy for financing of the great program of industrial investment from its own accumulation. The development of the economy was the result of the whole society's effort and all professional groups brought into this work their contribution. All the sectors of the national economy were

then burdened with large accumulation for purposes of accelerating the industrialization of the country. A great role was performed here by the accumulation of industry itself, which from year to year became a stronger part of our economy (its share in creation of national income grew from 31.8% in 1950 to 36.3% in 1955, and global production increased twice in these years, with net production growing by 78%).

During the years of intensive industrialization it was necessary to use a large part of national income for investment, especially in mining and heavy industries. This had to find negative reflection on growth of agricultural production. During the first years of the six year plan agricultural production grew at the average rate of 2.5% per year, which accompanied by significant natural increase of the population and large migrations from the countryside to cities resulted in supply difficulties. In the years 1951—1955 the value of peasants, farms production increased when compared with 1950 only by 5%, and in the whole six year period it grew at the average rate of 1.8% per year. As a result of drop of outlays in agriculture the rate of production growth fell significantly. This caused in effect the disruption of equilibrium between the growth of demand for agricultural products and the rate of growth of production and supply of food articles. This fact appeared in the form of periodic lack of food products on the domestic market, especially of animal products and in the form of a worsening of the foreign trade balance in the field of food and agricultural products. These negative phenomena were counteracted by temporary means. Incentives were then introduced (generally with good results) through linking the farmers' economy with the state through direct engagement of state means into production of private farms. This was done principally through contractation, which had as its goal intensification of agricultural production at the lowest possible cost, without engagement of additional investment means. The limiting of investment outlays for agriculture had to, in the end, cause lasting effects, which found its expression in checking agricultural production growth.

The drop in agricultural production rate of growth during the period of accelerated industrialization was the price which had to be paid for development of the national economy.

Although the production results of agriculture in the years 1950—55 were not great, one should stress that in the countryside many positive changes took place, among which the following are worth to be mentioned: the rural population was given access to work and jobs, exploitation was abolished, rural youth was given advancement chances, through extending education and schooling possibilities of all types to them and privileged access of this youth to schools.

3. Agricultural policy during the years 1956—1970

Growing disproportions between the increasing demand for agricultural products and their supply made a revision of the economic policy imperative. The revision aimed at increasing outlays for sectors product-

ing consumption means, agriculture included. Decisions were made on increasing investment outlays for agriculture, on increasing production of agricultural machines and equipment, of fertilizers, and on improvement of the organization of agricultural mechanization.

The following lines were assumed in particular:

1) considerable increase of supplying agriculture with industrial production means, primarily fertilizers, agricultural tools and machines as well as building materials; for this purpose certain shifts were done in the industrial investment programme to the advantage of branches servicing agriculture;

2) improvement of profitability of peasant farms, which was achieved by reduction of burdens of compulsory deliveries, and also by raising government purchasing prices for agricultural products; economic relations between agriculture and the whole national economy were based, primarily, on contracting system;

3) stimulating the development of animal production through increased imports of grains and feeds, and reduced grain purchases from farmers, which was to be favourable to the animal production growth and, especially, meat production;

4) settling up the problems of land ownership;

5) introduction of new principles of state farm organization aiming at making individual farm independent, and introduction of self-financing system as a stimulus for productivity growth.

This move helped to activate farmers and their self management social and professional organizations. The interest in agricultural production and its increase has grown. The rate of growth of agricultural production rose from 1.8 per cent average in the years 1950—56 to 3.1 per cent in the years 1957—60, and in the next five years (1961—65) even to 3.7 per cent average yearly.

In the sixties bigger supplies of production means could be ensured to agriculture, including fertilizers, designated primarily for cultivation of industrial plants and for plants under contract. That brought a considerable increase of crops, which covered domestic demand for raw materials needed by food and agricultural industry and gave some surpluses for export. This concerned the articles like: sugar beets, rape-seed, grass seeds, and others. At the period of fertilizer shortage a policy of using fertilizers primarily for cultivation of plants considered to be of vital importance and best reacting to intensified fertilization. The contracting system served the implementation of that policy (a farmer who signed a supply contract was entitled to purchase a defined quantity of fertilizers). Later on, with the growth of domestic production and supply of fertilizers they became easily accessible, and protectionist policy in their distribution was abandoned. Equilibrium on the fertilizer market was achieved in Poland in the years 1965—68.

In the years 1965—70 the rate of growth of plant production was intensified as a result of widespread application of a more rational seed economy, and of modernized overcoming of diseases, pests and weeds in field crops and in horticulture. The role of seed production in it was great. Cultivation of many new varieties of grains and other plants, which had been grown by Polish scientists and growers, was initiated.

4. Agricultural policy in conditions of the new strategy of Poland's social and economic development after 1970

On the turn of 1970/71 an essential change of strategy for the country's economic development took place. It was expressed, primarily, in providing strong economic incentives for growth of labour productivity. The so-far existing limitations in wages' increase in production enterprises were abolished, and wages became conditioned on growth of labour productivity and on economic results of the enterprise. Priorities have changed in economic development. Raising of material welfare of the society and, as far as possible, full satisfying of people's needs were considered to be the main development target.

It was acknowledged that creating an opportunity for steady and considerable income growth and for satisfying thus of increasing needs is one of the essential factors of economic growth as it releases initiative of single workers and of all collectives, and make possible better work organization and increase of labour productivity.

The result of the new economic policy is a considerable acceleration of national economic development, which is confirmed by the rate of growth of national income (Table 19).

Table 19

Average yearly rate of growth of national income
(in %)

Periods	Total	Per 1 inhabitant
1951—55	8.6	6.5
1956—60	6.6	4.9
1961—65	6.1	4.9
1966—70	6.0	5.2
1971—75	9.8	8.7

Accelerated development of national economy in recent years was accompanied by simultaneous increase of wages and incomes of the population. In the years 1966—70 the consumption fund from people's personal income calculated per capita, increased on the average by 4.3 per cent yearly, while in the years 1971—75 by 6.4 per cent yearly.

High dynamics of growth of the national income allowed to raise the rate of growth of population's incomes with simultaneous reduction of the share of consumption fund in national income. A considerable acceleration of the rate of investment growth took place. This forms the basis for maintaining of the hitherto rate of economic growth in the nearest future. It was necessary for agriculture also to become adjusted to the changes in socio-economic policy. Change of priorities in economic development, moving to the fore of problems of satisfying people's material needs set great production tasks to agriculture.

Agrarian policy shaped after 1970 implements three main goals. Priority is definitely given to production goals. Increasing of agricultural production up to the level which would ensure covering ever growing demands of the domestic market, of agricultural-food industry and of exports became the most vital issue. Fast growth of agricultural production was acknowledged in the new programme to be the strategic task of the entire national economy. It became strongly linked with the implementation of the programme of raising the living standard and of improvement of material conditions of the whole society. Agricultural production problems have never ranked so high as they do in the new programme. It is a new element in all the postwar history of Poland.

It was assumed that agricultural-food exports should at least cover costs of imports of production means for agriculture and of agricultural products for the domestic market which are not produced in our climatic zone. The significance of exports of refined agricultural products is great since these articles became stable items in trade with some economically high developed countries. Increase of agricultural production is, at present, of essential importance for a harmonious economic development, for ensuring social conditions of this development, and for maintaining permanent market balance. Numerous undertakings of the agrarian policy of recent years have been subjected to those production goals.

Another vital target of agrarian policy is the improvement of conditions for continuation of structural changes of agriculture, for its technical reconstruction and socialist transformations. Since the agricultural structure is backward and not in line with present-day stage of scientific and technical revolution, and since it does not ensure possibilities of a fast production growth in a long-range perspective, conditions are created for gradual land concentration, for many-sided production co-operation in agriculture, for increase of production scale, as well as for shaping of new, socialist production relations.

Achieving of the production goals (increase of agricultural production by about 90 per cent in the years 1970—1990 with reduction of agricultural employment to half of the present state) and the technical and social reconstruction of agriculture will not be implementable if social problems of rural inhabitants are not solved simultaneously. Therefore, the third main goal of the present-day agrarian policy is a marked increase of individual incomes, of rural population, improvement of working and social conditions of peasant families, giving the rural population access to cultural achievements, and thus, equalling working and living standards in town and country. This is a long-range and very expensive programme but it has to be carried out consistently. We assume that the place of birth and of work should not be a reason for social and cultural discrimination of any member of society.

After 1970 important changes have been made in economic policy in relation to agriculture. In particular, the rank of economic steering instruments and of agricultural management was raised (these are: prices, conditions of rentability of agriculture, credit and other economic incentives). The basic assumption of agrarian policy is the rule that socially needed production must be profitable for every producer. Following this

rule, important changes have been made in fixing prices for agricultural produce. Profitable prices were established primarily for livestock products for meat and milk in the first place. In this way, objective conditions were created for intensification of fodder production, paid in the price of final product. This fact is of a great significance from the viewpoint of plant production intensification.

While providing conditions for intensification of agricultural production the following measures were taken in particular:

1. Beginning with January 1st 1972 compulsory deliveries of live cattle, grains and potatoes were abolished, and the range of contracting agricultural products at higher, more profitable prices was expanded. Consequently, purchasing prices for agricultural products increased and financial burdening of farmers was reduced. Prices for live cattle, live pigs, milk and other agricultural products were raised on the average by over 30 per cent. It was an exceptional period in this respect. So far, purchasing prices for agricultural produce have never risen so markedly during five years. Raising of prices and of production rentability brought about high production stimulation in all sectors and farm groups.

2. The rules of setting-up of the Agricultural Development Fund, the main source of social accumulation in peasant farming, were changed. This Fund is now made of a part of land tax (till now it was connected with compulsory deliveries).

3. The taxation system of the individual farmers was changed. In order to improve the income situation of the farmers owned poor lands tax progression was reduced, and tax facilities for small farms were introduced on a bigger scale.

4. Supplies of production means for agriculture were increased, particularly, supplies of agricultural machines and equipment, fertilizers, building materials, fuels, and transportation means.

5. Steps were taken to improve trade service to rural areas and agriculture, eliminating waste of time of farmers in selling agricultural products. Investment outlays for development of agricultural and food industry, as well as for technical services to agriculture have grown markedly.

6. Living and working standards of individual farmers and of agricultural workers have been improved, among others, by introduction of health insurance and by expanding the range of medical care in rural areas.

7. Social, political and material conditions were provided for further advance of peasant self-management, communities were set-up and the scope their operations was expanded.

Peasants clearly realized the improvement of economic production conditions. As a result of general price increase for agricultural products and rentability of production, as well as of bringing into operation of a whole set of economic factors, the agricultural production has grown considerably. During 5 years (1971—75) it increased by 19.1 per cent (in stable prices), and reached the rate of growth equal to 3.5 per cent yearly.

Especially animal production kept growing fast in those years. The number of heads of pigs increased from 13.5 million in 1970 to 21.2

million in 1975, i.e. by 58 per cent, and the number to heads of cattle increased respectively from 10.8 to 13.2 million.

Price decisions made and fast growth of agricultural commercial production brought in effect a considerable increase of incomes of agricultural population, and an increase of its purchasing power. Total income from agricultural production per one employee in a peasant farm increased from 26.9 thous. zlotys (in stable prices) in 1970 to 34.2 thous. zlotys in 1975, i.e. by 27.1 per cent, and one third of the income increase resulted from price changes favourable for agriculture. At that time prices for agricultural products grew by 35.8 per cent, whereas prices for production means purchased by agriculture grew only by 14.5 per cent.

High increase of incomes in agriculture was accompanied by a slight growth of fiscal charges (by 11 per cent), consequently, the income at farms disposal increased to a higher degree than total income, namely by 29.5 per cent (from 23.4 to 30.3 thous. zlotys per one employee), which means it kept growing yearly on the average by 5.3 per cent.

Beside the improvement of economic situation of peasant farms, the introduction in 1972 of social insurance (medical treatment) for individual farmers was of essential significance.

Fast growth of farmers' demand for production means is a characteristic of recent years. This demand considerably exceeds the growth of demand for consumption goods and proves clearly the willingness of farmers to increase outlays for production. There has also growth the interest of farmers in land use, which, in all, created a good business trend in agriculture.

As far as fertilizing is concerned, a true revolution took place in Poland after 1965. Fertilizer use increased at that time over threefold (from 56.4 kg NPK in 1965 to 182 kg NPK in 1975 per 1 ha of agricultural land). The supply of agricultural machines has also grown considerably.

Agrarian policy is deliberately aimed at bringing into operation and using of all kinds of reserves and opportunities for agricultural production growth. Owing to investments and other state outlays scattered peasant reserves are mobilized, and effective forms of social accumulation for production purposes are created that stimulate activity and initiative of peasants themselves and of their socio-professional organizations. Production growth is also furthered by reasonably applied administrative measures such as plant protection by use of pesticides, exchange of sowing material, postmelioration land development, ban on calf slaughter, etc. These measures are understood and supported by leading farmers, as they are a factor accelerating progress and overcoming of conservatism, and they subject farmers at large to a defined agrotechnical discipline based on scientific assumptions.

The more and more essential factors of production growth in peasant farms are services performed by specialized socialized enterprises (state, co-operative ones, and agricultural circles). Services, particularly the mechanization of field work and transportation, vitally contribute to modernization of production within the traditional structure of peasant farming.

Moreover, they constitute a permanent element of the future changing of the farm economy. Bigger and bigger reserves of the most up-to-date agricultural technique and a highly qualified staff become concentrated in the field of services. This is, simultaneously, one of the ways of socializing of production process in agriculture.

The crucial element of a complex programme of production growth and intensification of agriculture is land policy, aimed at rational land economy. In Poland no wastelands are available which would provide a land reserve for agricultural development. Thus, the only way to increase production is to intensify the use of the land available. Increase of land productivity is practically an even more important problem nowadays than labour productivity of persons employed in agriculture (labour productivity in agriculture keeps growing owing to the decrease of agricultural employment and growth of land and farm animals productivity).

Agrarian policy attaches great importance to rational land use. According to the standing rule of land policy, the land as a production means is a nation-wide property and, regardless of the ownership form, must be fully used for the benefit of the whole society. Meanwhile, a part of the land is not properly used by a certain number of farms which are economically weak and have not adequate conditions for production development and intensification.

In 1974 the law on pensions for farmers was revised and expanded. It allows a farmer, who has no legitimate successor, to obtain a life annuity from the state against land transferred voluntarily. Land taken over by the state adds to the State Land Fund. The next and most essential step of the policy in this respect is the Law on common retirement system for individual farmers, decreed by the Parliament (Sejm) in 1977.

It should be emphasized that retirement legislation has not only production and economic aspects. Actually, it is also of great social and humanitarian significance since it allows many old people a well deserved retirement under good life conditions ensured. In the system of peasant farming it solves an extremely difficult problem of securing peaceful old age for people of agricultural toil.

The developing of land taken over from peasants by the state against pension becomes an essential problem. Priority in taking over and developing of this land is given to state farms, production co-operatives and agricultural circles' co-operatives, that is to say, units of socialized economy in agriculture. However, in view of the fact that territorial range of those farms is not big, and land taken over by the state against pension is scattered, there is often no possibility to join it with a state or co-operative farm. Then this land is given by the state for agricultural use or sold to individual farmers who provide a guarantee of using it rationally. Thus, production criteria are decisive in this policy. It is in the interest of agriculture and of the entire society that land must be transferred for use to the farms that can exploit it most effectively.

The transfer of land to the state, which is based on voluntary decisions of farmers, creates a form of gradual though slow transformation of pri-

vate land property into socialist one (in the range in which socialized farms take it over). The scale of this process keeps growing constantly.

Another process furthering rational land use is consolidation of land plots. In a part of the country there occurs both a considerable comminution of farms and a scattering of plots (fields) within single farms (the so-called split-up plots) which makes farming difficult, raises its costs and, sometimes, rules out a chance for modernization of field works. In order to eliminate this drawback in agricultural development, land consolidation was taken up on a wider scale in 1968, on the basis of a new consolidation law. This law simplifies and accelerates the consolidation process and, simultaneously, facilitates portioning out of close complexes of land from State Land Fund, and from farms, the land of which is being transferred to the state against pension. Thus, conditions were provided for gradual overcoming of one of the factors slowing-down and hindering agricultural intensification, which may cause inadequate exploitation of a part of land cultivated by aged farmers without successors available, as well as of split-up plots.

Another element of land policy are laws and measures connected with agricultural land protection, aiming at counteracting the land dropping out of agricultural use. Recently, regulations were introduced also, which elasticize land turnover and settle matters connected with land holding. The particular aim is to intensify free land flow from farms, which are unable to use it, to those having such possibilities. These flows take place either on the basis of purchase and sale or, ever more frequently, in form of long-term-leases.

Investments are playing a decisive role in long-term shaping of effective agricultural intensification. The prior principle of agrarian policy is to associate agricultural production growth with the process of socialist changes in rural areas. Investment policy is also subjected to this principle. This policy gives preference to socialized investment forms (at present, socialized investments form about 60 per cent of the total investment outlays for agricultural development).

It practically means a faster growth of socialist ownership of production means than of individual ownership. These investments are financed out of state means, of Agricultural Development Fund, of the own means of agricultural circles, and of means accumulated in production co-operatives. The investments under discussion further the production increase in both socialized agriculture and individual farms. Individual farmers are also interested in the growth of investments of socialized enterprises, particularly of agricultural circles. If a farmer can use machines owned by an agricultural circle, he does not have to buy those machines himself, which allows him to reduce his investment effort. A major part of this effort is taken over by the state or by self-management peasant organizations. It is an effective solution from the social viewpoint, as it reduces social costs of mechanization of agriculture and of exploitation of expensive, specialistic equipment.

State policy in relation to agriculture is of a complex nature. It provides both a considerable increase of outlays coming from non-agricultural sectors (agricultural machines, fertilizers, pesticides, building materials, fuel, energy, etc.) and mobilization of farmers' own resources, as well as

stimulating of their initiative and professional activity. Attitude of farmers themselves, their knowledge, skills and involvement determine, in the final account, the effectiveness of all material undertakings started by the state. A particular feature of the present policy is the fact that it appeals to farmers taking their economic interest at the starting point. Those are then economic instruments influencing agriculture, and their range is very wide. It is a policy which respects interests and aspirations of good farmers, who wish to produce more and more, as well as to raise their incomes and living standard.

5. Synthetic results in the fields of agricultural production growth

As a result of the pursued agrarian policy, aimed chiefly at intensification of agriculture, Poland had reached in the postwar period a relatively high rate of growth of agricultural production. As it is known, the development of agricultural production of a country depends on increase of cultivated plant crops, on changes of agriculturally productive area, and, as far as animal production is concerned, also on the increase of fodder imports.

In the years 1950—75 average crops of all cultivated plants in Poland grew by 94 per cent, which gives a rate of growth of 2.7 per cent yearly on the average. At that time, the fastest was the growth of oil plant crops (by 5.2 per cent) and of grains (by 3.6 per cent), and the slowest was that of potatoes (only by 2 per cent yearly). In consequence of the fact that in those years the area under cultivation decreased by almost 8 per cent (from 20.4 to 19.2 million ha), total crops of all cultivated plants were increasing by 2.5 per cent yearly. It was possible to maintain the crop rate of growth on the level of 2.7 per cent yearly on the average owing to increase of fertilization (from 17.7 kg NPK in pure component per 1 ha of agricultural land under crops in 1950 to 133.3 kg NPK under crops in 1976), to introduction of new more and more intensive varieties, and to application of pesticides (the demand for which is now fully satisfied in Poland).

At the period under discussion, animal production kept growing faster than plant production namely, by 3.1 per cent yearly. Higher rate of growth of animal production could be achieved owing to growing share of plant products destined for fodder for the production stock (following the decrease of the share of plant products destined for human consumption, seeds, and fodder for horses), and owing to higher imports of grains and high-protein feeds. Those imports increased from 2—3 million tons yearly in the sixties to about 7 million tons yearly in the years 1976—77. Poor crops of grains and fodder which occurred in Poland in four successive years (1974—1977) accounted, to a high degree, for the growth of imports.

Growth of value of agricultural final production⁵ at the time under study (total and per capita) is the following:

⁵ Agricultural final production includes commodity production, self-providing of agricultural population, and value increase of herd and reserves; it does not include own production used in the farm (fodder and seeds).

Year	Total (milliard zlotys)	Per capita (thous. zlotys)
1950	117.3	4.7
1960	154.0	5.2
1970	198.3	6.1
1975	239.0	7.0

The average yearly rate of growth of agricultural production total and per capita was as follows in single periods (in per cent):

Year	Total	Per capita
1951—1960	2.8	1.1
1961—1970	2.6	1.6
1971—1975	3.8	2.8
1951—1975	2.9	1.6

Polish agriculture has been and still is under high pressure of demand for food. Great demand for food on the domestic market results from economic and social changes which influence the raising of general living standard of the population, particularly numerous low-income groups, which, with their income rising, increase the food consumption in the first place. Moreover, the demand is a consequence of absolute increase of demand for food following intensification of migration processes from agriculture to non-agricultural sectors of economy.

In general, Polish agriculture, in spite of some fluctuations in production level, successfully implements its tasks in this field, which is confirmed primarily by the evolution of food consumption.

Agriculture adjusted both the absolute level of production and its structure to social needs. The share of animal production in final agricultural production increased from 58.5 per cent in 1950 to 72.5 per cent in 1975, and in commercial production from 57.6 to 69.3 per cent respectively. As far as the production level is concerned, total agricultural production in the years 1950—1975 increased by 98.9 per cent, and final production by 92.9 per cent (stable prices). Accounting per one hectare, total production at that time increased by 111.6 per cent, and final production by 105.2 per cent.

Commercial production kept growing still faster. In the years 1950—1975 it grew by 183.7 per cent. The main factor of high dynamics of agricultural production growth was the increased use of material outlays and purchased services as well as the increase of technical equipment for agriculture. In the years 1965—1975 material outlays and purchased services increased from 224 zlotys to 416 zlotys per 1000 zlotys value of gross final production. Analogous data for fixed assets outlays (measured by sinking) amount to 110 and 131 zlotys. At the same period, on the other hand, direct labour expenditure decreased from 750 zlotys in 1965 to 530 zlotys in 1975.

Crops, livestock number and production of the most important agricultural articles, total and per capita, at the time from 1950—55 to 1971—75^a

Table 20

Specification	1950—1955	1956—1960	1961—1965	1966—1970	1971—1975	1976	Yearly rate of growth in % • 1971—75 1950—55
Crops in q per ha							
Grains total	12.6	15.0	17.3	20.1	25.6	26.9	3.6
of which: wheat	13.1	16.1	19.7	23.2	28.2	31.4	3.6
Potatoes	117	131	154	176	177	203	2.0
Sugar beets	187	211	267	324	314	272	2.6
Oil plants	6.5	9.5	13.9	17.5	18.0	24.2	5.2
Livestock number in million heads							
Cattle total	7.4	8.4	9.7	10.8	12.3	12.9	2.6
of which: cows	5.2	5.8	6.0	6.1	6.1	6.0	0.8
Pigs	9.5	11.9	13.1	14.0	19.1	18.9	3.6
Production of staple agricultural articles in mln tons							
Grains	11.8	14.0	15.0	17.0	20.9	20.9	2.9
Potatoes	30.8	36.3	43.6	47.9	47.1	50.0	2.1
Sugar beets	6.5	7.7	11.4	13.6	13.8	15.1	3.8
Milk	8.9	11.3	12.5	14.2	15.6	16.0	2.8
Live animals	1.6	2.2	2.6	3.0	3.7	4.0	4.3
Meat, fats and giblets ^b	1.2	1.6	1.9	2.2	2.7	2.9	4.1
Production of staple agricultural articles per capita							
Grains (kg)	436	469	471	505	628	608	1.8
Potatoes (q)	11.9	12.6	14.2	14.9	14.1	14.5	0.8
Sugar beets (kg)	250	268	372	422	412	439	2.5
Milk (litres)	341	291	406	440	466	466	1.5
Meat, fats and giblets ^b (kg)	45.5	55.7	57.9	62.3	80.7	84.4	2.9

^a Average for 5 years (except data for 1976).

^b In post-slaughter weight.

6. Principal instruments of planned management of agricultural production

The management of agriculture with so complicated and complex structure that exists in Poland now is a very difficult matter. We have to deal with a great number of individual and socialized farms, of a very differentiated social, economic and professional structure.

The existence of state enterprises along with co-operative and individual ones, creates a complicated structure of production management and steering mechanisms. State farms are managed directly within the central plan, whereas in relation to co-operative and individual farms methods of indirect influencing are applied. The state influences peasant farming mainly by making use of a set of economic instruments but it cannot steer its development directly. In this case, planning is not of the nature of a command. We rather note a planned influence exerted by a socialist state on peasant farming than planning of its development. This does not mean that production of the individual sector is not a subject of central planning but that the plan is not obligatory for single farmers as it is for state administration and for enterprises servicing agriculture. The directive part of agricultural development plan is that which concerns the following:

- 1) supplying the agriculture with production means of industrial origin, and carrying out basic investments in agriculture,

- 2) charges of agriculture for the benefit of the state, in connection of which directive planning covers tasks of the economic apparatus in the field of purchase of agricultural products and their processing by agricultural-food industry.

Three essential instruments are available, with the aid of which the state influences peasant farming namely; 1) prices for agricultural produce and production means for agriculture (along with interest and land rent), 2) contracting, 3) investments. An important role in the process of influence on peasant farming is also played by the distribution system of some limited production means (such as concentrated feeds, tractors, building materials, etc.), and the legal system which regulates many agricultural problems.

Plan tasks reach the agricultural producer the fastest and most directly through prices, i.e. changes of their level and their correlations. Both the purchasing prices and prices for production means bought by farmers are fixed by the state and are valid in law. Prices include the state's preferences with respect to production directions, dynamics and structure.

Poland follows the policy of stable prices, which does not mean, of course, that prices are absolutely unchangeable. The state changes purchasing prices and prices for production means fairly rarely, when conditions of production and market balance are changing essentially, and when the state must achieve goals which are vital from the social viewpoint. Price stability is of essential significance for farmers; when they know the general price level and price relations, they can plan both production and investment as well as distribute the available reserves

with full awareness. Thus, price stability means stability of economic conditions for production, and of the material situation of the farmer.

With the aid of price policy the state is implementing two main goals in relation to agriculture namely, 1) production and allocation goals, and 2) income goals. In their first function prices are a fairly effective, though not exclusive, instrument for shaping the level and structure of agricultural production and of allocation of reserves (including investment outlays in peasant farming). In their second function prices are an almost exclusive instrument for shaping incomes of agricultural population. For production and allocation decisions there are used mainly price relations among single agricultural products whereas in income policy changes of the absolute price level are used, particularly the relation of prices for agricultural produce and those for production means for agriculture.

The role of credit as an instrument for steering agricultural production and as a source for financing production and investments keeps growing systematically in Polish agriculture. It results from the concept of financing reproduction process expanded in agriculture, which concept is adopted in economic policy. The growing role of credit is also an effect of favourable evolution of peasant farms' economics.

With the ensured stable development of production and its rentability, farmers are more and more willing to use credit as the source of means for satisfying of both current and investment needs. Credits are granted for production investments, particularly for construction of farm buildings and their renovation, for purchase of production working assets (fertilizers, production services), purchase of agricultural machines and tools, for home-building, etc.

The use of credits in Poland is of a markedly production nature. Over 80 per cent of credits are designated for financing of agricultural production development. The rule of low interest on credits (1—6 per cent) is obligatory. The interest is, as a rule, lower than, or equal to, the rate of interest for savings deposited at the bank. About 15 per cent of credits bear no interest. Farms producing on contract basis have priority in obtaining credits.

Price instruments and credit, although most effective, are not sufficient for steering agriculture. As it appears from economic practice, if we want to increase production it is not enough to raise purchasing prices. What agriculture needs in the first place is an adequate stream of production means and services. Then, the non-price mechanisms such as investment policy, direct regulation of the stream of production means flowing to agriculture, organization of production process, marketing, etc. acquire decisive significance.

In practical management and steering of peasant farming in Poland this very mixed system had been developed with coexisting indirect instruments (prices ones) and direct instruments, among which system of supply contracts and investments should be mentioned primarily.

The contracting is a system, which allowed to include effectively millions of individual farms in the socialized, planned economy. Nearly 80 per cent of animal and plant commercial production are ordered and purchased by the state. The non-socialized market plays a slight role

now, and is of a marginal and complementary character. It is of more significance only as far as vegetables and fruit, dairy products, animal breeding material (piglets, horses), etc. markets are concerned.

The system of supply contracts has been greatly expanded in Poland. It covers nearly 100% of crops and animal products. Through these channels the state is purchasing from peasants 70 per cent of their commercial production, including: 45 per cent of grains, 52 per cent of potatoes, 91 per cent of pigs, and 100 per cent of industrial plant (sugar beets, tobacco, hop, endive, herbs, seeds, rape-seed, flax, hemp, etc.).

The system of supply contracts is a tested form of involving agriculture in the implementation of economic plans. It ensures to the farmer independence in making economic decisions according to his economic interest, includes the farm in the system of planned economy, and connects it with the central plan, as well as maintains relations of a trade character along the lines of rentability of turnover. In this way, contracting allows to combine social interest with current material interest of agricultural producers.

Contracting is the main channel of vertical integration of agriculture with national economy, particularly with the agricultural and food industry. It allows to maintain the necessary connection between means of influencing agriculture and price policy, as well as to connect economic non-price incentives (credit, agrotechnical and zootechnical instruction, seed help, etc.) with direct influencing the agricultural production. It eliminates direct management of production only with the aid of prices and their relations because it consists in combining price policy with the elements of direct organizational activities of specialized state and co-operative enterprises.

The system of supply contracts covers, in the first place, industrial plants, agricultural products being exported (thus requiring observation of determined qualitative standards and punctual deliveries), and plants which should be particularly stimulated under consideration of social interest. The next item covered by contracting was seed production, and, finally, the mass-produced commodities which are grains and potatoes in Poland. At present, the system of supply contracts became common in Poland, both as for assortment and the volume of purchasing.

Yearly there are concluded in Poland nowadays 13 to 14 million supply contracts with individual farms for production and delivery of various articles. Considering that commercial production comes from almost 3 million farms, it means that, on the average, 4 to 5 contracts are concluded by the state with each farm yearly. Thus, it becomes a great organizational problem. The contracting enterprises, however, have in their disposal a specialized apparatus, which keeps this complex problem under full control.

Supply contracts regulate the general relations between agricultural producer and receiver. Contracts are of a fully voluntary nature. The producer undertakes the obligation to produce and deliver a defined quantity of products of a defined quality in a fixed place and at the time agreed by both sides. The contracting enterprises, on the other hand, undertakes the obligation to: 1) collect the contracted quantity of the product, 2) pay the amount according to the price fixed in advance,

3) grant the agricultural producer a credit for purchase of production means, 4) supply the producer with defined production means (sowing or breeding material, pesticides, some specialized tools, building materials, etc.), 5) grant the producer agro- and zootechnical help in form of free instructions.

The final receiver of the agricultural product is mainly the agricultural-food industry. Some of the industries such as sugar, tobacco, brewery, herb, fruit and vegetable, potato and poultry industries have their own contracting services and start direct cooperation with the agricultural producer. Interests of other industries and foreign trade enterprises are represented in relation to the farmer by multi-line trade cooperatives which, on order of industries, carry out purchases and contracting. Agricultural-trade cooperatives and their interference in the production process is much lesser than in case of contracts concluded directly by industry. However, if the production process is not too complicated, expert instructions are not of decisive significance for the farmer.

The contracting performs a very important role in the field of modernization of agricultural production methods, and of diffusion of technical advance around traditional peasant farms. At present, we observe in Poland a consolidation of production contracting elements, although many factors such as comminution of farms, small receptivity of some farmers to technical innovations, comminution of supply, etc., slow down advance in this field.

In spite of many advantages of contracting, it should not be overestimated, however. The system of supply contracts does not play an independent role and does not automatically solve the problem of balance between supply and demand for agricultural products. The ensuring of this balance depends on overall conditions of economic development and requires application of many measures influencing agriculture. If a fast growth of demand for agricultural products, which is noted at present, calls for acceleration of the rate of growth of their production and supply, neither good prices nor an effective system of supply contracts will do this. There are needed then investments in agriculture and in spheres servicing agriculture, intensive introduction of technical advance, increased outlays for infrastructure, etc.

Under the conditions of a multi-sectoral economy, which exists in Polish agriculture, the steering of investment process is very complex. Investment decisions must be made by all economic subjects, that is, by the state, co-operatives and individual farmers. A rule of partnership of the socialist state and of farmers has been developed in Poland in the investment process. The state participates, first of all, in the investments desired from social viewpoint, development and basic investments, as well as in outlays for infrastructure. Peasants, on the other hand, effect investments which are of direct interest to them, as well as minor investments. A particular function of state investments is the mobilizing and bringing into operation of comminuted peasant means. For example, 50 to 60 per cent of investment outlays for melioration are borne by the state, the rest is covered by peasants, who finance detailed investments (out of state credits, for the most part). A similar situation occurs in electrification, road construction, and in setting-up of other elements of in-

frastructure. Investment help of the state can be useful only if it mobilizes peasants' own effort and not by substituting this effort. Peasant investment outlays often make an essential and indispensable, however modest quantitatively, link in the chain of such state investment undertakings as meliorations, electrification, road construction, without which the state effort cannot bring the planned results.

In the total sum of investment outlays for agriculture in Poland the peasant means make now about 30 per cent, Agricultural Development Fund — 10 per cent, and state means — about 60 per cent. The state takes over the major investment effort, owing to which it acquires the possibility of direct influence on peasant farming, shaping directions for technical advance and for modernization of production processes.

Summing up the information on management and steering of peasant farming, it should be said that although individual agriculture cannot be subjected to straight directive planning, it must be, however, steered indirectly by the socialist state. The concept of steering achieved in Poland is based on the belief that knowing the way of response, typical for peasant farms, to market incentives, the desired changes in production can be accomplished through these incentives, without resorting to administrative measures. This concept does not deny the significance of non-price means of economic policy, on the contrary, it assumes the need for other instruments, with organization of production process and of sale as well as investment policy in the fore.

Nowadays, in steering agricultural development process, they exceed ever more the traditional agriculture, which covered production process of raw materials and of agricultural articles alone. That former approach to the problems of agricultural development planning becomes insufficient and too narrow at present. Agriculture does not exist or develop in isolation from other sectors of national economy; it is an element of the whole economic organism and must be strongly linked with both streams of material goods and services flowing from one branch to another (inter-branch flow) and with the system of production managing and steering.

In Poland there are being formulated now scientific bases for complex development planning for the entire food economy, not only for agriculture. In this meaning the term „food economy complex” is used. It covers the following elements:

1) industries manufacturing production means for agriculture and for food industry, i.e. machine and equipment industry for agriculture and food industry, fertilizer and pesticide industry, building materials industry, and all other sectors and branches of national economy which prepare material and technical conditions for food production (the share of each of these sectors in food economy complex is proportional to the volume of its total production flows to food producing branches);

2) the virtual agriculture, understood as agricultural production, excluding, however, non-food agricultural products (raw materials for textile, leather industries, etc.);

3) agricultural and food processing, the main function of which is to process agricultural raw materials in final food products;

4) services, in the broad sense of the word, linked with production of food and its delivery to the consumer (food trade included). Services also include qualification improvement of persons employed in the entire food economy.

Food economy complex in Poland has no formal organizational structure. It is, however, a vital element of the whole national economy, singled out, among others, for planning purposes, from the viewpoint of food production process. Thus, what integrates various sectors and branches of national economy is the food production process in a broad sense.

Food complex provides an extremely vital element of Polish economy. As it appears from recent research, it employs 48 per cent of the total number of professionally active persons, has in its disposal 40 per cent of the total value of productive fixed capital functioning in the whole national economy, makes 37 per cent of total domestic production and 38 per cent of national income. As can be seen from these indices, the food complex is one of the major and most significant elements of Polish economy.

The main problem is that this complex food production process, with nearly all sectors and branches of national economy participating, though in various degrees, must be considered and programmed in a comprehensive way. All parts of the food complex must be developed harmoniously. There is also set up a uniform, internally coherent mechanism for steering of this complex. These links are complicated and require a new approach and methodology of economic planning. The first comprehensive, perspective development programme of the entire food economy, covering the years 1975—90, was elaborated and approved by supreme state authorities (the Parliament included) in November 1974. It is being implemented consistently. The programme provides a considerable increase of investment outlays for food economy development, it also changes and modernizes its inside structure, and it anticipates the development of weak links that slow down the advance of the whole complex.

As it was said before, the food economy complex means great changes in the system of economic planning. The scale of agriculture becomes too narrow and now, in this connection, the agricultural development plan is now being prepared and approved as a part of the total development plan of the whole food economy. Steering of the food economy complex includes, primarily:

- 1) shaping of proportions between the extent and the development rate of the food complex and the whole national economy as well as the needs of foreign trade;

- 2) shaping (optimalization) of the inside structure of the complex, in particular, of material proportions between single parts of the complex (sector and branch structure), and shaping of spatial organization of food economy;

- 3) selection of adequate food production techniques and their introduction;

4) changes of social and economic structure in the food complex (property forms of production means and respective social forms of production organization);

5) production processes, i.e. shaping of the volume and structure of the final product made in the complex;

6) settling social issues of workers employed in the complex (income and social policy, working and living conditions).

The above named scopes of operation determine, simultaneously, the contents of the food complex plan, which is implemented by use of various methods and instruments according to the sector and character of single subjects. The complexity of the steering process of food economy development in Poland consists in having about 3.5 million economic subjects, including over 3 million individual producers.

A comprehensive approach to food production problems allows a priori to consider, foresee and plan operations furthering a harmonious development of the entire food economy. Adjusting of the programme of agricultural production growth to supplies of production means for agriculture, and receiver of raw materials of agricultural origin, is of particular significance.

7. Policy of social and economic reconstruction of agriculture

Poland is a country which, with regard of historical conditions entered on the path of industrialization relatively late, what has essential influence on the character of agricultural intensification, on changes in employment and in the agrarian structure.

At the postwar period we have been gradually going over from labour-intensive to capital-intensive agriculture, based, to higher and higher degree, on modern technique.

The process of production intensification ran differently in state farms than in individual peasant farms. In state farms, since the beginning of their existence, industrial production means substituted manpower reserves, which were lower compared with individual farming. The process of capital-consuming production intensification in state farms took place gradually, with increasing supply of fixed and working production means. At present, in connection with the introduction of comprehensive mechanization based on a new generation of more effective machines conditions are provided for going over to a new stage of capital-consuming intensification consisting in gradual reduction of employment per area unit, as well as going over from traditional to new production technologies.

In individual farming the process of capital-consuming intensification started only in the second half of the fifties, and till approximately, mid seventies, it was going on under conditions of only a slight reduction of employment per area unit (only 0.2 per cent yearly).

In spite of fast industrialization of the country and of employment increase in socialized economy outside the agriculture from 4.8 million persons in 1950 to 11.8 million persons in 1976, in consequence of growth of the total number of population at that time from 25.0 to 34.5 million

persons, the number of people directly employed in agriculture decreased only by 17 per cent (from 5.8 to 4.8 million persons in terms of full-time employees). If we consider the sphere of production services for agriculture, which employs almost 400 thous. persons, we can see that total employment in the whole agriculture has decreased only by 10 per cent.

Individual peasant farming is entering only now the second stage of capital-consuming intensification of agricultural production. According to assumptions of the perspective plan, this process will occur at an accelerated rate in the next decade.

The basic factors, which determined the strategy of agricultural development in Poland, were, on one hand, the country's demographic situation, and, on the other, the necessity of industrialization. Demographic situation imposed such investment directions in agriculture, which aimed, primarily, at the increase of agricultural production, and, to a lower degree, at employment reduction. A more considerable employment reduction in agriculture would require higher investment outlays under Polish conditions. That would limit investment possibilities in other sectors of national economy, as well as providing of new working places outside agriculture, which, with increased outflow of manpower from agriculture, would cause serious difficulties in ensuring full employment to manpower. For these reasons it was justified and necessary to maintain a relatively high employment in agriculture.

In this connection, investments influencing crop growth of cultivated plants and, consequently, animal production growth were preferred at that time. An ambitious development programme of fertilizer and pesticide industry was taken up as well as large-scale melioration investments.

The latter, of course, required expansion of industries producing machines, tools and materials for melioration. Outlays borne then allowed an increase of fertilizer use from 18 kg pure compound per 1 ha in 1950 to 193 kg in 1976, and melioration of 6 million ha of land, i.e. 60 per cent of all land requiring melioration, including building of irrigation facilities on 0.5 million ha of meadows and pastures. The productive effect of those investments was a two-fold increase of cultivated plant crops in the course of 26 years.

Another direction for investments were outlays for construction of new buildings for animals, and renovation and modernization of the old ones. In consequence, the cattle number increased from 7 to over 13 million heads. Investments for animal buildings and housing construction in rural areas, with dynamically developing housing construction as a result of constant improvement of people's living standard, required, primarily, expansion of industries producing building materials and technical equipment for farm buildings and living quarters.

Except investments which directly influenced agricultural production growth, a preferred direction was electrification of rural areas. These preferences resulted not only from productive respects but also from civilization ones, since before the war only 4 per cent of villages were electrified in Poland. During 25 postwar years 100 per cent of villages and nearly all farms have been electrified.

Although investment outlays for meechanization of agriculture kept

growing in proportion to the total amount of investments, but till the late sixties they were not the preferred investment direction, particularly in individual peasant farms, which had sizable manpower reserves per area unit. The outlays covered mainly machines and tools of horse traction as well as electric and motor machines and equipment, while tractors and self-propelled machines were included in a small degree. Till 1970 there had been developed only the servicing form of tractorization of peasant farms, carried out by agricultural circles.

In the current decade the number of tractors in individual farms kept growing fast namely, from 55 thous. pieces in 1970 to 200 thous. pieces in 1976.

Apart from the advance of individual mechanization, the service mechanization of agricultural circles is being further developed, with shifting to specialistic services such as harvest of grains, sugar beets, potatoes and feeds by combines, and to complex services, which have been discussed before.

In spite of mechanization progress in recent years the effective demand for tractors and other machines considerably exceeds their supply. In order to meet this demand, high investment outlays are borne at present for the development of agricultural machine industry. We are building now the second tractor plant, which will allow to increase tractor production from 57 thous. pieces to over 100 thous. pieces yearly. There are expanded plants producing combines for harvesting of various crops. In general, till 1980 the agricultural machine industry will achieve production of over 80 new and modernized types of agricultural machines.

In general, we may say that at present, Polish agriculture is faced with essential, technical modernization. The question may arise, why we take up this programme today only.

According to the analysis of historical experience of various countries, at the initial phase of industrialization, agriculture participates in costs of total economic development and designates a major part of its accumulation for the expansion of industry. With the development of economy and change of its structure, agriculture not only stops participating in the costs of total advance, but requires additional financing itself. Agriculture itself is unable to finance the costs of its technical reconstruction and requires inflow of means from outside.

At every development stage the society is faced with problems of an objective nature. At present, Poland is at a development stage when the basic technical reconstruction of agriculture cannot be postponed any more. It results from the need for further, harmonious development of the entire economy, whereas the comminuted and poorly technically equipped individual farming, marked by a low labour productivity, is still in a conflict with the advance of other sectors of national economy.

What has been so far the advantage of small-scale peasant farming, favourable for the development of the whole national economy, namely agricultural production growth of low capital intensity, and a fairly low social cost of great number of manpower employed, and of maintaining rural population, becomes its disadvantage now. The necessity of ensuring an adequate income level to agricultural population, in relation to non-agricultural population, with low labour productivity in agriculture, re-

quires additional financing of these incomes by constant growth of prices for agricultural products.

At present, the essential, technical reconstruction of agriculture in Poland, individual peasant farming included, is both necessary and implementable. On one hand, the level of economic development of the country, in particular the expanded industrial potential, allows a considerable increase of investment outlays for agriculture, and on the other, the demographic situation of the country provides conditions for shifting of manpower from agriculture to non-agricultural sectors.

Similarly as it has taken place in state farms, individual peasant farming also enters, at an accelerated rate, the second stage of capital-consuming intensification of agriculture. This stage is marked by increased investment outlays that substitute the loss of manpower per agricultural are unit. The employment reduction will ensure increase of labour productivity, and it will limit the growth of production costs, as well as the necessity of additional financing of the labour remuneration increase through the price rise for agricultural products.

Investment outlays, on the other hand, borne in all agricultural sectors, will still require some additional financing from state budget in form of partial sinking of investment credits.

Conditions for essential technical changes in agriculture have been provided for a few years now, and are expressed in higher investment outlays for expansion of industries manufacturing production means for agriculture.

Technical and social reconstruction of agriculture requires a considerable growth of investment outlays for agriculture. In the fifties, at the initial phase of industrialization of the country, the share of outlays for agriculture in total investment outlays amounted to 10—12 per cent. In the past 15 years this share has grown slightly, but it did not exceed 16 per cent. According to plans for the next decade, the share of investment outlays for agriculture in total investment outlays is to exceed 20 per cent.

The achieved level of economic development of the country, agriculture included, provides incomparably greater possibilities for social and technical reconstruction of agriculture than those available in early fifties. The picture of Polish agriculture was essentially changed during this 25-years period. The supplying of agriculture with production means, particularly with modern technical work means, increased manifold. This is confirmed, for example, by the number of tractors, which grew from about 20 thous. pieces in 1950 to 434 thous. pieces in 1976. There also occurred a manifold increase of investment possibilities of the national economy. Investment outlays for agriculture in the five years from 1976—80 will be 10-fold, and in the next-coming 5-year periods 15- and 20-fold higher than in the years 1951—55.

The need for constant growth of agriculture production requires a maximum use of productive potential of all agricultural sectors, including the individual one. Apart from socialization processes of agriculture which are going on, simultaneous structural changes inside individual farming are necessary. That is not only for purely economic reasons, i.e. for ensuring adequate increase of social labour productivity, but also for creating assumptions for further transformations in agriculture that are

conditioned, among others, by reduction of the number of families employed in agricultural production. In the future, big-area farming only one third of the present individual farmers will find employment. The setting-up of socialized farms with the present employment level would be economically irrational, because of the inability of using labour reserves, and ensuring an adequate income level to agricultural population.

The rule of gradual structural changes, spread over a long period of time, which is adopted by agrarian policy, is aimed, on one hand, at ensuring the conditions for constant production growth within individual farming, and, on the other hand, at facilitating to the existing and newly set-up socialized farms the achievement of a higher production level per area unit than that of individual farming. This will determine the rate of production growth in the entire agriculture with the increasing share of socialized farming. The basis of the agrarian policy carried out in Poland is the associating of agricultural production growth with gradual social and economic reconstruction of agriculture.

The ensuring of agricultural production growth at the time of social and economic changes, is realistic, of course, provided that these changes are preceded by adequate increase of technical equipment of agriculture. Technical reconstruction of agriculture, and outflow of manpower connected with it, must rather be a condition for than a result of structural transformations. Technical reconstruction becomes a stimulus for social changes and new forms of farming.

The socialization process of agriculture can take place at different stages of economic development of the country, and it does not have to be accompanied either by technical reconstruction or by outflow of manpower from agriculture. However, the higher the level of the country's economic development, the greater the needs and requirements as for conditions and results of socialization of agriculture. In countries with a developed industry, and a much higher labour productivity in non-agricultural sectors than in agriculture, the aim of social and economic changes, is, among others, to eliminate disproportions in labour productivity level, in living and working conditions between population employed in agriculture and that working in other sectors of national economy. This is feasible only when newly arising forms of farming are accompanied by decrease of hitherto existing employment per area unit, and by adequate increase of technical equipment. Therefore, advance in socialization of agriculture, ensuring, at the same time, agricultural production growth, is conditioned by possibility of national economy of supplying agriculture with production means and by the capacity of this economy to absorb manpower released from agriculture.

Processes of land concentration in agriculture and creating bigger production units, regardless of their social form, are very costly. Considering the lower labour productivity in agriculture than in other sectors of national economy, and difficulties in ensuring to agricultural population an similar rate of income growth to that in other professions, the agriculture is unable to defray from its own means the costs of structural changes or, according to the term adopted in Poland, costs of processes of technical and social reconstruction of agriculture.

Technical and social reconstruction of agriculture is in the interest of the entire society, as it releases manpower from agriculture, which is needed for development of non-agricultural sectors of national economy. Manpower released from agriculture must be substituted by technical working means, thus, defined investment inputs are required. It would not be theoretically justified or socially fair if those inputs were borne by population which is staying in agriculture. These outlays must be borne by the whole society by financing them, to a higher or lower degree, out of the state budget. The state, while financing structural changes in agriculture, interferes directly or indirectly in these processes both to accelerate them and to direct them according to the social and political character of the socialist system.

Financing of structural changes in agriculture is carried out by direct and indirect subsidies. These subsidies cover direct financing within the state sector of agriculture, sinking of a part of investment outlays in co-operative, group and individual farms, as well as by tax reductions for investments in group and individual farms. The state's share in financing investments is differentiated according to the social form of farming: the higher the degree of socialization of production processes, the greater the help of the state. Thus, in individual farms which take up specialization by signing a pertinent contract with a socialized enterprise for delivery of defined products, the state subsidy in form of remittance of investment credit for livestock buildings can amount to 40 per cent, in group farms to 60 per cent, and in co-operative farms to 80 per cent (whereas investments for mechanization are not subsidized).

Cheap investment credit also is a form of subsidy. For example, the interest on investment credit granted to peasant farms (co-operative, group or individual ones) amounts to 2 per cent, sometimes even 1 per cent.

Except subsidies to investment outlays, state and co-operative farms, which take over land from the State Land Fund, obtain subsidies for development of each hectare of the land taken over. These are subsidies for equipping farms with fixed and working production means necessary for effective and intensive development of newly acquired land.

In the sector of peasant farming (individual, group and co-operative farms) two forms of investing exist: the individual and the social one. The individual form includes investments done by farmers themselves. The social form covers three investment groups: melioration, electrification are carried out by state enterprises and financed out of state budget. Farmers are charged with only a part of these investment costs, which they later on repay during 10 years. Investment outlays for machine purchase in agricultural circles are financed out of Agricultural Development Fund (without counting the own financial means of agricultural circles from depreciation allowances and from profit).

The share of financial outlays spent directly or indirectly by the state amounts to over 60 per cent of total investment outlays for agriculture, whereas the rest is covered out of the own means of individual and co-operative farms.

State investments in agriculture are financed directly or indirectly out of state budget, with the minimal direct contribution of agriculture

to this budget in form of taxes. The amount of land tax paid by individual and co-operative farms amounts to about 5 milliard zlotys only.

Total fiscal charges of peasant farms are the following (data for 1976 in milliard zlotys):

land tax	5.1
community tax	1.7
Agricultural Development Fund	3.9
Other charges	1.6
total	12.3

In relation to the earned gross income from agricultural production (194 milliard zlotys) fiscal charges of peasant farms are inconsiderable as they amount to only 6.3 per cent. These charges remain, in principle, unchanged, with constant income growth of peasant farms. The maintaining of fiscal charges of peasant farms on an unchanged level with growing incomes is to facilitate them to finance the still increasing investment outlays.

However, regardless of the income growth and the relative decrease of financial burdening, peasant farms are unable to finance in full investments out of their own means. A part of investment outlays is financed by the state in form of a debit balance of contracted and paid of credits, i.e. at the cost of indebtedness of farms. In the past years 30—45 per cent of investments were financed out of credits.

Earning out agricultural production growth assumed till 1990, employment reduction by 40—50 per cent and structural changes in agriculture will require a manifold increase of investment outlays.

Investment outlays for agriculture so far, considering minimum employment reduction, were used mainly for increasing of agricultural production potential and for renewal of worn-away production means. In the near future, beside further outlay growth for the above mentioned purposes, additional investment outlays will be borne for the following:

- 1) substitution of manpower loss through fixed production means,
- 2) reconstruction of production means of wound-up individual farms as they are useless in newly organized socialized and group farms as well as in individual farms which will have their area increased.

Both these forms of investment outlays are, from the viewpoint of agriculture, an equivalent of investment costs for structural changes, whereas from the social viewpoint they are an equivalent of investment costs for gaining manpower from agriculture for non-agricultural sectors of national economy.

In the years 1977—90 the rate of growth of agricultural production is expected to be more or less the same as in the past fifteen years. In absolute figures, however, production growth will be by about 50 per cent higher. This will, naturally, also require adequately higher investment outlays for increasing the agricultural production potential. The volume of these investments will depend on the rate of development of the whole national economy, which will determine, on one hand, the demand of

non-agricultural sectors for manpower from agriculture, and, on the other, investment possibility of national economy.

Regardless of the time needed for social and economic changes in agriculture, of forms and stages of these changes, determining of the final model of agriculture in foreseeable future is of essential significance also for current policy. A vision of such a model allows at present to influence some processes and stimulate their development in the desired direction. This refers mainly to spatial development, localization of some investments, settlement network, infrastructure.

An opinion on the future shape of agriculture can be formed by watching agricultural development trends in socialist countries of a fully socialized agriculture. Although various organizational forms which are arising now are of experimental character in searching optimum solutions, they indicate, nevertheless, that the future model of agriculture will be marked by big-area agricultural enterprises of high production concentration, based on industrial methods of production and its organization.

Apart from occurring processes of merging state or co-operative farms, traditionally developed in the territory of a village, into big, multi-line agricultural enterprises covering several, and sometimes a dozen or so thousand hectares, in all socialist countries, Poland included, largescale economic organisms are being set up in form of agricultural and industrial combines, including agricultural and service enterprises as well as agricultural processing plants.

8. Perspectives of changes in polish agriculture

The general direction and strategic target of changes in Polish agriculture is determined by socialist character of the system.

Thus, in Polish agriculture two parallel processes will take place namely, on one hand, the latest forms of production organization will be developed and improved in the socialized, chiefly state, sector, and, on the other hand, a gradual change of individual peasant farming will follow. Such a development of agriculture results from objective economic and social conditions. The adopted strategy for further agricultural development assumes, as it did till now, its conformity with certain rules. The major of these rules are the following:

- the rule of associating production tasks to agriculture with its socialist reconstruction,
- the rule of gradualness in structural changes of peasant agriculture,
- the rule of parallelism (in time) of technical and social reconstruction of agriculture.

Simple reserves of production growth in peasant farming are more and more modest, and the bringing into operation of new ones requires considerable investment outlays. These outlays will not be effective without structural changing of peasant farming.

More and more perceptible barrier of progress is the comminuted agrarian structure. It makes impossible the growth of production scale, farm modernization and increase of labour productivity and of agricul-

tural incomes. The present agrarian situation is characterized by the following phenomena:

- fast rate of dropping out of the weakest farms,
- demand for land, strongly supported by the state, from the part of farms capable of development,
- inclination of farmers, greater, than in past years, to associate in groups and production co-operatives.

These phenomena provide a chance for a considerable acceleration of improvement of the agrarian structure.

The situation concerning manpower in peasant farms is inseparably linked with agrarian structure. With the generally high level of employment, many farms face the shortage of manpower which often brings about their deterioration. A solution can be brought only by structural changes in peasant farming. This is the only way to ensure necessary outflow of manpower from agriculture to non-agricultural sectors of national economy, and to ensure the rate of growth of agricultural income similar to that of non-agricultural incomes — which is one of the prior tasks of the agrarian policy.

Though the necessity of social and technical reconstruction of agriculture results from objective assumptions, its rate, course and forms will be determined, to a large degree, by subjective factors, primarily by the policy towards rural areas. Implementation of the rule of gradualness of socialist changes, and of associating these changes with a constant growth of agricultural production will require fulfillment of two basic conditions by the policy. First of all, it is necessary to ensure to newly set-up socialized enterprises — early enough — the material basis needed for up-to-date farming. Secondly, while stimulating the expansion of socialized agriculture, individual peasant farms capable of development should be supported, simultaneously. We shall deal with this matter later on.

The next factor which influences the reconstruction of rural areas is the change of farmers' attitude to socialist farming forms. In the nearest future one should expect a much more active participation of farmers themselves in structural changes of rural areas than it had taken place till now. It means that in area expansion of socialized agriculture, besides taking over the land dropping out of peasant use, greater and greater role will be played by conscious and voluntary decisions of farmers on joining group forms of farming. Along this line there will be acting the following: natural evolution of the peasant sector, inflow of new technique the effective exploitation of which will require co-operation, new possibilities in the organization of work and in alleviating of its strenuousness that are provided by farmers' collaboration, and, finally, difficulties in solving, within an individual peasant farm, of social questions elementary for the man of today such as standardized working day, leisure time, rest, recreation, health prophylaxis, professional inactivity at old age, etc.

The question of leisure time, rest, etc. acquires significance, particularly in view of gradual introduction of a 5-day working week in socialized economy. Since this kind of working conditions practically cannot be reconciled with individual running of a farm, the aspiration to ensure these very conditions provides, or will provide, an essential assumption

for changing the form of farming. Therefore, the sooner the technical equipment of farms will grow, the sooner the agrarian structure within peasant farming will be improved, the sooner the production and the income of farms will increase, the faster conditions will arise for development of new forms of farming and for gradual socialist changes of agriculture.

That is the logic of agricultural changes in an economically developed country of an advanced level of agricultural development. These changes should accompany the development of small-scale farms, and should be a consequence of overcoming by them the technical, economic and social barriers of growth. That is why, agrarian policy in Poland, which stimulates technical reconstruction and development of agricultural production in small-scale farming as well as the improvement of agrarian structure, favours creating of conditions for gradual, socialist changes in rural areas.

In the next-coming period, the changed demographic situation of the country will be of particular significance for socialization process of agriculture. In the decade of 1970—1980 the increase of manpower in the entire national economy will exceed 3 million persons. In the next-coming decade (1980—1990) the growth of manpower reserves in the whole national economy will amount only to about 1.1 million persons, i.e. it will be by 2 million persons smaller than now. This will create conditions for greater outflow of agricultural population to non-agricultural professions and for employment decrease in agriculture, and thus for acceleration of its social and economic changes.

There is also anticipated reduced professional activity of subsidiary groups of manpower employed so far in individual farms namely, people at post-production age, persons permanently employed outside the farm, youth studying at secondary schools, and women. It will be a consequence of, primarily, the retirement law for farmers introduced in 1977, extended youth education, full migration of a part of youth employed now already outside agriculture but still living on the parents' farm, and one-line orientation of biprofessional persons.

Over 3.5 million families are connected with agriculture at present (in all sectors), including about 2.4 million families connected entirely, and about 1.1 million families connected partly. It is assumed that till 1990 there should remain in agriculture no more than 1.5 million families, including about 1 million of families employed in agricultural production only, and about 500 thous. families of biprofessional holders.

About 2 million families are expected to abandon agriculture, 1 million of which entirely (mainly migration to cities). Other families will continue to live in the country, giving up running farm, and keeping for themselves a small plot only (vegetable garden and orchard).

One of the tasks of economic policy is to influence the polarization of biprofessional farms, either towards reducing the farm area and keeping a small plot or towards enlarging the farm area and setting-up a typically agricultural farm.

Many of the aged farmers, in order to avoid uncertain future, which used to be the traditional form of the so-called life annuity, delayed the

transfer of their farms to the successors and kept running the farm till old age, as long as they were strong enough to work. This brought about, on one hand, the going over of successors to other professions, even from big and prosperous farms, and, on the other hand, extensification of agricultural production in farms run by aged people.

In case if the farmer transferring his farm to the successor or to the state obtains a pension also in virtue of employment outside agriculture, he is free to choose the basic pension. Then he obtains the pension from the second source in the amount of 50 per cent.

Pension for the transferred farm is granted to both spouses in common, at the request of one spouse, however, it can be paid separately. In case of death of one of the spouses, the other draws the previously granted pension in full amount. Farmers' pensions will be paid out of a special Retirement Fund, which is made up of state subsidy (two thirds of the sum of the Fund) and of farmers' contributions (one third).

The new retirement law is an act of great significance for Polish agricultural areas since, on one hand, it solves a humanitarian problem, very difficult so far, of old people in rural areas, and, on the other hand, it facilitates earlier taking over of farms by young farmers, provides conditions for acceleration of intensification of agricultural production, as well as for improvement of agrarian structure.

Apart from land turnover through the State Land Fund, there exists in Poland private land turnover among individual farmers. Also group and co-operative farms, and recently even the state farms, can buy up land directly from individual farmers. The state support land purchases, granting for this purpose, especially to young farmers who buy whole farms, convenient credits, remitted in part. In regions of comminuted farms the preferred trend is the distribution of land from the State Land Fund which aims at improvement of agrarian structure inside small-scale farming. In those regions the land of the State Land Fund is allocated for exploitation, in the first place, to groups of farmers on a long-term lease basis, and to individual farmers in form of sale or long-term lease.

In some regions of the country of a relatively more advantageous agrarian structure and, in this connection, of smaller demand for land on the part of individual farmers (mainly in Western and Northern voivodships), one of the chief forms of developing the land released is taking it over by state farms. Where the released land is not directly adjacent to state farm land or where complexes of released land do not allow to organize a rational state farm, other forms of land development are applied both by production co-operatives, farmers' groups and by individual farms.

As it appears from the above considerations, the improvement of agrarian structure will be further achieved in two following ways:

- a) by voluntary land merging by individual farmers for the purpose of common farming (organization of production groups and production co-operatives),
- b) by winding up of a part of individual farms and taking over their land by other peasant farms.

9. Advancement of women in the rural population — an example of achievements in a specific field of agricultural policy

The agrarian policy in People's Poland has been oriented all along on achievement of both production and social goals. We have already mentioned many activities taken up by the state with respect to social changes in rural areas. Let us consider now, in greater detail, the role of women in social and economic life of rural areas. In the past 33 years essential changes occurred in this respect, shown in the rise of women's position in all fields. It should be emphasized, in the first place, that this rise of women's position could be achieved owing to political, economic and social changes which took place in People's Poland. The socialist system ensured to women an equal start in acquiring knowledge, professional qualifications, and assuming posts in the political, social and economic life of the country. At present, women hold many high posts in organs of superior authorities of our country. For example, women constitute 20.6 per cent of deputies to the Parliament of People's Poland, 27.8 per cent of councillors in national councils. Among employees on managerial posts in regional offices of state administration 38.8 per cent are women. The percentage of women among employees of these offices is still higher and amounts to 67.1 per cent.

Women's share in the total number of population amounts to 51.5 per cent, and in the population at production age — 49.2 per cent. Women make 39.0 per cent of employees with higher education, and about 70 per cent of employees with grammar-school education. Among persons studying there are 49.2 per cent women.

A particularly high percentage of women works in agriculture. While the percentage of women in relation to the total number of persons employed outside agriculture amounts to 42.9 per cent, in agriculture it amounts to 53.0 per cent, with 26.4 per cent in socialized agriculture and 57.1 per cent in individual farms.

The percentage of women in the total number of socialized agricultural employees shows an upward trend (in 1960 it was 21.0 per cent, and in 1970 — 23.8 per cent), whereas in case of individual farms a downward trend is likely to begin (in 1960 it was 57.0 per cent, in 1970 — 60.2 per cent, and in 1976 — 57.1 per cent).

Equality of rights for women, mentioned above, concerned, to the highest degree, the field, where it was the least before the war, that is to say, rural areas. Women, in particular, benefit from the chance created by common advance of education. The share of girls studying at all types of schools corresponds, in principle, to population proportions according to sex. This share keeps growing constantly, which is shown in Table 21.

Women make a similarly high percentage among graduates from single kinds of schools. Therefore, since a few years, the degree of general and vocational preparation of youth, girls included, who assume work, is very high. Worth noting is the fact that women complete their education, to an ever wider degree, in schools for working adults. The overall educational system in Poland, and facilities for students, account for the general educational level, and that of professionally active women especially, has risen considerably. The educational level of the society became equalled

Table 21

Share of girls in the total number of students
(in %)

Kind of school	1960/61	1974/75
Higher schools	41.3	51.9
of which: agricultural schools	30.1	48.1
Post-secondary vocational schools	61.1	73.8
of which: agricultural schools	.	23.0
Grammar schools	64.2	71.2
Secondary vocational schools	50.6	52.9
of which: agricultural schools	45.7	61.8

according to sex, which is one of the basic achievements of social policy, and which offers an equal starting point to young women in their professional work and in assuming a suitable place in the social life of the country.

Among professionally active women in 1960 12.5 per cent of the total number of women had higher and secondary education, in 1970 — 19.4 per cent, and in 1974 — 24.3 per cent.

Changes which take place in the field of education also concern agriculture. Education of women professionally active in agriculture keeps improving, although the general level is still lower than that occurring in other sectors of economy. At it appears from Table 22, there is still a considerable differentiation of educational level of women in individual agriculture in relation to socialized agriculture, where the structure according to educational level is more similar to the analogous structure of women professionally active outside agriculture. It is worth emphasizing that in socialized agriculture there also takes place a concentration of highly qualified staff, among which a considerable per cent is made by women.

The assumption of professional and social work by women contributed to achieving by them such a position in the life of the country, that this fact is recognized to be a concrete expression of social revolution that had been accomplished in the past thirty years. Growth of professional activity concerns, in principle, all age groups, except for the youngest age group (in connection with the extended educational period) and the oldest one. Professional activity level of women aged 15 and over amounted in 1960 in cities to 31.2 per cent, and in the country to 48.9 per cent, and in 1974 respectively to 42.8 and to 51.4 per cent.

A noteworthy fact is the extension of professional activity age of women working in agriculture (mainly individual agriculture) considerably over retirement age. The next-coming years will bring radical changes in the field, in connection with the introduction of the common retirement system for individual farmers, including women working in individual farms.

Table 22

**Structure of women professionally active in agriculture
according to educational level**

Year	Education						
	total	higher	secondary	elementary vocational	elementary	incomplete elementary, and no elementary	undefined
Total in agriculture							
1960	100,0	0,0	1,0	0,4	25,2	73,2	0,2
1970	100,0	0,2	2,3	2,4	42,7	51,8	0,6
1974	100,0	0,3	2,9	3,1	49,7	43,5	0,5
In socialized agriculture							
1960	100,0	1,3	7,7	0,8	31,8	58,1	0,3
1970	100,0	3,6	25,0	6,2	36,1	28,3	0,8
1974	100,0	3,7	27,4	6,4	41,0	21,1	0,4
In individual farming							
1960	100,0	0,03	0,0	0,4	25,0	73,6	0,1
1970	100,0	0,03	1,2	2,2	43,1	53,0	0,5
1974	100,0	0,04	1,3	2,9	50,2	44,9	0,7
Outside agriculture							
1974	100,0	5,3	32,7	14,4	41,7	5,2	0,7

As it has been mentioned before, individual farming employs the largest number of women (39 per cent of the total number of professionally active women), and it is one of the most feminized sectors of economy. Women's problem in individual farms deserves special interest since fairly essential changes are to be noted there. Thus, an outflow of young women to work outside agriculture occurs, the consequence of which is the process of accelerated ageing of rural population, mainly women.

On the ground of representative survey studies, it is estimated that in countrywide scale about 19 per cent of farms are run by women themselves. Individual farms run by women self-reliantly determine production from about 12 per cent of agricultural land, and supply to the market over 10 per cent of commercial production of the individual sector. Farms run by women are marked by many characteristic features.

They are smaller in area than average farms in the country. They are typical for a very high share of women in total labour resources (65 per cent). Moreover, their equipment with production means is poorer, they show less investment activity, meanwhile, they take more advantage of mechanization institutions servicing agriculture, and of neighbourly services. Production level in those farms is highly differentiated according to the age of the farm-running woman, and to the equipment level of the farm with agricultural machines. Younger women (about 100 thous. persons) prove their school or non-school training for farmer's job and they achieve good production results.

It should be said that countrywomen in general, and those running farms for themselves in particular, are under protection within the legislation of People's Poland, and benefit from many preferences granted to them by regional authorities and organizations.

The specific women's situation resulting from their burden of bringing up children is constantly considered in social policy. The care about mother's and child's health provides the basic assumption of the system of health protection of the society. The major part of pregnant women was covered by medical consultancy in 1974. 230,7 thousand counsels were given by the rural health centres. The advance of maternity help rendered it possible to assist in 99.8 per cent of childbirths. In 1974 90.3 per cent of childbirths took place in hospitals, 9.1 per cent in delivery-rooms, and only 0.4 per cent in delivery stations with midwife help. 46.3 per cent of 564.2 thous. childbirths delivered at hospitals were deliveries of countrywomen. The role of delivery-rooms in rural areas is decreasing. Covering by the system of free medical care, beginning with 1972, of the whole rural population considerably contributes to overall health improvement of women employed in agriculture.

Help extended to countrywomen in educating children and youth can be seen, among others, in constant expansion of the network of social and educational establishments. For example, pre-school education of rural children has developed considerably. In 1960 there were operating 1.701 rural child-care centres with 54.8 thous. children, while in 1974 there were 8.092 centres with 213.6 thous. children.

A great achievement also is the setting-up in rural areas a network of collective schools, which ensures to children, besides high-level teaching, social and living conditions similar to urban models (playgrounds, gym halls, swimming pools, proper heating, etc.).

Together with increasing education and professional activity, there is constantly growing the social position of women, and their share in political, social, cultural and educational activities. This also concerns countrywomen. Moreover, countrywomen show great activity in organizations which operate in rural areas. For example, among members of agricultural circles, the share of women amounts to 45.3 per cent. Women-members of agricultural circles are, simultaneously, members of rural housewives' circles. Over 36 thous. of rural housewives' circles associate about 1.3 million countrywomen. Women associated in rural housewives' circles are running various educational, cultural and economic activities, which both raise civilization level of the village, and facilitates running of a farm.

It is worth mentioning that rural housewives' circles are marked by great activity. In many cases, these circles are the actual leader of the village determining economic development and introduction of all kinds of novelties in the farm and household.

C. INFLUENCE OF LINKS WITH THE INTERNATIONAL ECONOMY AND STRUCTURAL CHANGES AND DEVELOPMENT OF AGRICULTURE

As it appears from material presented in previous parts of the report, the development of Polish agriculture was based primarily on valorization of domestic capacities and reserves. That was so, because in Poland foreign capital has not been used as a development factor. Land reform and further agrarian changes contributed to social and economic activation of agriculture, and intensive industrialization of the country allowed directing to agriculture an ever growing stream of production means such as tractors, agricultural machines and equipment, fertilizers, etc.

The fact should also be emphasized that the development of Polish agriculture, similarly as the development of the entire national economy, was accompanied by expansion processes of international division of labour. Connections with foreign countries acquire greater and greater significance and gradually start influencing essentially the growth of production of food and of other articles of agricultural origin.

Connections of agriculture and food economy with foreign countries cover many fields, beginning with deliveries of liquid fuels and raw materials for fertilizer production, through mutual exchange of production means of industrial and agricultural origin, concluding with trade in ready food articles.

With the modernization of agriculture and introduction of modern technologies there are growing primarily connections of an indirect nature, i.e. imports of raw materials needed for industries making production means for agriculture. In two basic fields, liquid fuels and fertilizers, Polish agriculture is virtually fully dependent on imports. Supply of national economy, agriculture included, with liquid fuels is nearly all covered by imports, mainly from the USSR. Under these circumstances, the substitution of live traction force by introduction of tractors and cars increases the dependence of agriculture on foreign suppliers of liquid fuels.

Similarly, the supply with fertilizers depends on deliveries of respective raw materials from abroad. Natural gas, imported from the Soviet Union, is the basic raw material for production of nitrogen fertilizers. Phosphorites needed for production of phosphates are purchased by Poland in North African countries. Similarly, potassium chloride is imported by Poland from the Soviet Union.

In both fields under discussion there is built up the domestic industry for processing of the imported raw materials. Great progress in this realm has been achieved in the past decade. Owing to foreign licences, modern plants of petro-chemical industry were built in Płock, and Gdańsk, as well as fertilizer plants in Gdańsk, Police, Puławy and Włocławek.

Polish agriculture requires a highly differentiated assortment of machines. Besides efficient self-propelled and tractor machines, various horse-drawn machines and tools are still needed.

Production development of many kinds of machines is based on foreign licences. As for specialistic machines of limited domestic market, it was assumed to produce them for exports as well. This solution is fully justified as, on one hand, it allows specialization and large-scale production of defined kinds of agricultural machines, and, on the other hand, it ensures a supply of agriculture with a full set of necessary machines and tools.

For example, production of a whole generation of 35—75 KM capacity tractors based on „Massey-Ferguson-Perkins” licence is being launched. Expansion and reconstruction of tractor industry will allow to supply rural areas in the eighties with over 100 thous. tractors yearly. Expansion of harvesting machines plant in Płock also is being continued. The productive capacity of this plant is to reach about 8 thous. grain combines yearly, compared with the 4 thous. combines produced at present. Besides „Bison Super” combine production, also that of „Bison Giant” combines and of corn grain harvesting combine will increase.

The expanded press-producing plant in Lublin will make high-squeeze presses for straw and hay harvesting, on the basis of „Fahr” licence. Combines for beet harvesting, based on „Kleine” licence, are now produced in the plant in Słupsk. This plant is being expanded and its production capacity is to reach about 1600 combines a year. There are more examples of this sort.

Comprehensive scientific and technical collaboration with foreign countries also plays a significant role in the advance of agriculture. Fast development of science and technique calls for maintaining permanent contacts with scientific centres of other countries. More and more extensive scientific studies can be concentrated on selected key problems, with simultaneous benefiting from scientific achievements of other countries. Moreover, in many cases, research must be undertaken and carried out in common by research centres of different countries which co-operate closely with one another. In particular, it is unthinkable nowadays to carry on breeding studies without importing breeding and semen material.

Especially convenient conditions for international scientific and technical co-operation were created within the COMECON. Besides exchanging the results of research carried on separately in single countries, common scientific works are taken up, among others, in growing new varieties of cultivated plants, in animal rearing, in fighting pests, weeds or insects causing serious damage to plants and animals, in organization and mechanization of production processes in economics and organization of agriculture, and many other fields. For example, within expanded collaboration, at the Institute of Plant Cultivation and Acclimatization in Radzików in Poland, a bank of information data on wheat mutants, common for COMECON countries, was set up, while at the Institute of Plant Cultivation and Genetics in Odessa in the USSR, a collection was organized covering initial materials of spring wheat and spring barley,

valuable for economic reasons. Simultaneously, common studies are being carried out, which evaluate usefulness of varieties grown in member countries.

In the field of animal breeding, mutual deliveries of breeding material and exchange of semen of valuable breeders are of great significance. Besides other forms of collaboration, there operates, among others, in Czechoslovakia an international control and experimental poultry station, which is testing chickens of the COMECON countries. Studies on plant protection and animal treatment, undertaken in common, also are of great importance for the development of agricultural production. A practical effect of these common studies was the conclusion of an agreement, within COMECON, on quarantine and protection of plants against insects and diseases, and of an agreement on co-operation in the field of veterinary medicine.

Provisions concerning mutual information of occurrence and intensity of animal diseases, or on plant diseases and damage-causing insects proved to be of particular significance. The warning system thus established often allowed to limit spreading of diseases or damage-causing insects, and thus to prevent incalculable losses. Let us quote as an example, prevention of spread of foot-and-mouth disease to Poland, despite dangerous epizootic of that disease in Czechoslovakia in 1972.

International scientific and technical co-operation in the field of agriculture within COMECON also includes organization of mutual consultancies, scientific trainings and production practices.

The use of foreign experiences in the process of introducing scientific and technical progress in Polish agriculture is not limited merely to development of scientific and technical co-operation within the COMECON, though the latter is of a leading nature. There is being developed parallel collaboration with international agricultural organizations operating in determined agricultural lines, the specialized agencies of the United Nations (FAO, UN Economic Commission for Europe, International Meteorological Organization, etc.), as well as bilateral co-operation with countries of Europe and of other world regions. Poland collaborates, apart from specialized agricultural agencies of the UN, with over twenty international agricultural organizations. The subject range of this co-operation is indirectly characterized by Poland's membership in organizations such as International Seed Testing Association (ISTA), European Association for Potato Research (EAPR), International Institute for Beef Research (IIRG), International Institute of Mechanization of Field Experiments (UIMFE), International Society of Horticultural Science (ISHS), World Poultry Sciences Association (WPSA), World Veterinary Association (WVA), European Society for Blood Group Matters (ESABR), International Office of Epizootics (CIE), International Federation of Seed Trade (FIS), and many others. These organizations providing a forum for the exchange of experiences allow us to get acquainted with the achievements of other countries in the fields of agricultural production and food economy complex and to use them, partly at least, for the needs of our country.

In the whole scientific and technical co-operation of Poland with international organizations of worldwide range in the field of agriculture,

special consideration is deserved by collaboration with UN specialized agencies, FAO in particular, because of the variety of co-operation forms.

In some respects, the co-operation with FAO and other UN specialized agencies, more or less linked with agriculture, forestry and naval economy, does not differ essentially from co-operation with other agricultural organizations. It concerns, particularly, mutual exchange of scientific and technical information, undertaking of common studies for the needs of agricultural practice, agrarian policy, and international trade. Such is the nature of co-operation in the region of Europe, realized through FAO and ECE. The result of this co-operation was, among others, the first, multi-discipline, comprehensive study on beef and milk in Europe, carried out in 1972, which provided assumptions for trade policy coordination in European continent scale, studies on structural changes in European agriculture, studies on effectiveness of beef production on the bases of imported feeds, studies on tendencies for changes in the level of outlays, production and incomes of European agriculture, studies on agricultural prices, etc.

Through FAO and other UN specialized agencies co-operation of Poland with developing countries is being expanded parallel. There should be noted, particularly, the participation of Poland in the implementation of UN technical assistance programmes for developing countries.

Specialists employed by FAO take part as experts in elaborating and carrying out development projects for different branches of agricultural production and of food industry, and they also train the staff of agricultural workers in countries of Africa, Latin America and Asia. Apart from the above, FAO organizes in Poland seminars and scientific trainings for representatives of developing countries, which aim at acquainting the trainees with the experiences in rural and agricultural development, that can be used under the conditions of developing countries (such as use of the achievements and experience of agricultural co-operatives, some lines of food industry, experiences in agricultural management, etc.).

The scope of benefiting from technical assistance programmes extended by the UN to agriculture and agricultural and food industry in Poland is determined mainly by the level of economic development achieved by our country. Within the collaboration with UN specialized agencies, this kind of co-operation brings the most measurable advantages from the viewpoint of introducing scientific and technical advance in agriculture and food economy of the country. For example, with the UN financial contribution within the programme concerning poultry breeding and organization of poultry meat and egg production, there were set up in Poland a centre for meat chicken breeding, a Poultry Research Institute and Training Centre, all of them were equipped with adequate research apparatus, installations and appliances. There was also organized within this programme 3,6,9 and 12-month training of Polish fellows in scientific and production centres leading in poultry breeding, both in West European countries and in the USA. It concerns fields like: genetics, biochemistry, utilization of breeds, feeding, prophylaxis, technology and economics. Moreover, exhibits of chicken farm building were brought to Poland, and so were experts in sexing chickens, in genetics, and other specialities. The carrying out of this programme contributed to widespread-

ing of modern technologies, accelerating of the rate of growth of poultry meat and egg production, and to income increase of producers of these articles.

In recent years also, a programme was carried out in Poland on deep-sea fishing, and there was accomplished the first phase of the project concerning studies on contamination of plant and animal products with pesticides. Realization of the seed programme has been started.

In all the connections of Polish agriculture with foreign countries the commercial ties in international trade in agricultural products are of prior significance in shaping rural and agricultural development. Prior significance of these connections is due to the fact, among others, that foreign trade balance in agricultural and food products, in view of its importance in the Polish balance of payments, has a considerable bearing on the intensity of indirect ties of agriculture with foreign countries, and on the rate of growth of the whole national economy. What is more, the development of business relations in this field paves the way, among others, for the advance of scientific and technical co-operation of the countries concerned.

For Poland, the connections with foreign countries are an extremely important factor for the fast economic growth. Considering the high share of agriculture in making the total product, the place of agriculture in foreign trade is of great importance. Agricultural and food exports were and are for Poland a vital source for financing imports of industrial goods (mainly investment goods), and thus, an essential condition for development of the entire national economy. Though only less than one seventh of foreign currencies come from agricultural and food exports, the significance of these exports for the growth of the country's economy is incomparably greater. This is the effect of the geographic structure of these exports. Agricultural and food products make over one third of Polish exports to free-exchange markets. Although the share of agricultural and food exports in total Polish exports keeps decreasing, its volume is growing, and the traditional „Polish” markets for meat products (ham, bacon, canned meat, etc.), for egg and poultry products, dairy articles, sugar and confectionery products, fruit and vegetable produces, spirits, seeds, animals for breeding, etc. are still one of the chief sources for obtaining foreign currency for national economy. Thus, we may say that agriculture and food economy essentially contributed to the industrialization of the country by providing currencies necessary for purchases of investment goods. Imports of machines and equipment were later of basic importance for agricultural development and its technical modernization.

The place of exports and imports of agricultural and food articles in the development of Polish economy was undergoing some changes in the postwar years. At the initial stage of fast industrialization the significance of agricultural and food exports was fairly high (17.3 per cent of the total exports value), whereas the share of imports of agricultural products in the total national imports was fairly low then, the lowest in the postwar thirty years (11.1 per cent). At that time, 1.48 unit of exports of agricultural and food products fell per 1 unit of agricultural imports.

While evaluating the functioning of the model of international trade in agricultural and food articles there cannot be left out of account

a number of negative phenomena which influence the development of Polish agricultural trade and agriculture. Primarily, there is to be indicated the lack of stability and uncertainty of agricultural markets, shown in high amplitude fluctuations of world prices recently occurring both on the market for products of plant origin and that for animal articles, and shown also in limitation from day to day of possibilities to place exports or to realize purchases. In case of Poland, these phenomena brought about a disturbance of proportions existing so far between the rate of growth of the value of imports and that of exports, which led to a rapid growth of deficit in agricultural-food trade. Apart from the import price rise, the essential point in this respect was total locking or restricting of some markets where Poland used to place its exports traditionally.

Poland pursues an active policy in imports of grains and fodder, developing, simultaneously, exports of refined animal products. We are not willing, however, to increase excessively imports of fodder, which are expensive at present and burden considerably our balance of payments. In this situation, intensive steps are taken to activate domestic grain and fodder production.

The major item of Polish agricultural and food exports are products of animal origin. Since many years Poland holds the position of an important exporter of these products on the world market. The share of animal products amounts to 60 per cent of the value of total agricultural and food exports. The foreign trade surplus in animal products covers the foreign trade deficit in products of plant origin.

Polish agriculture is being actively adjusted to the changing situation on world markets. It is worth pointing out the following important processes. According to changes in the demand structure for meat and meat products, different operations were launched in Poland aiming at increasing production of high-quality beef in demand. High-grade breeding material is imported by Poland, wide-scale rearing works are in progress, sharp selection of cattle is carried on according to tightened quality criteria, feeding is being improved, there is a wide-scale going over to industrial fattening of young slaughter cattle, etc. These are large-scale operations, which, as should be expected, will bring effects in the long run.

Another example of adjustment operations is the recently undertaken sugar policy. Growing demand for sugar and consequent rise of world sugar prices brought about in Poland a sequence of decisions of perspective significance. They aim at the increase of the sugar beet cultivation area (purchasing prices for sugar beets are raised), the improvement of seed cultivation and economy, the improvement of raw material transportation, construction of new and modernization of existing sugar factories, etc. The purpose of these operations is to achieve production of 2200 thous. tons of sugar yearly in 1980, the major part of which will be designated for exports.

In the difficult food situation of the world, in view of growing food deficit in many regions stricken with hunger, Poland is active, considerably increasing its agricultural production, the major part of which is designated for exports.

Apart from that, Poland exports certain quantities of fertilizers (chiefly nitrogen ones), some agricultural machines, grain combines, and tractors — and thus, it contributes to the development of world agriculture.

D. Resume and conclusions

Poland belongs to a small group of world countries of very high dynamics of economic growth. This was determined by extensive social, economic and structural changes that occurred after World War II. While in 1938 the national income per one inhabitant amounted to about 200 dollars (and in the years 1944—45 it certainly did not exceed 100 dollars), it amounts to over 2500 dollars now.

Before World War II the main source of income for about 60 per cent of the population was agriculture, and in 1976 this index amounted to 25 per cent only.

In evaluating the strategy of Poland's economic development adopted 33 years ago, it can be said nowadays, from historical distance and acquired experience, that it was the right strategy. As it appeared from our experience, the main driving force and development factors of agriculture are outside it namely, in the development of industry. Industrialization of the country finally determines directions of agricultural development, the possibilities and rate of its modernization, and outflow of manpower from agriculture which is one of the conditions for its technical modernization. This strategy ensured a dynamic development of agriculture, and, at the same time, constant technical advance in agriculture, which allowed a two-fold increase of agricultural production in twenty-five years period, and provided conditions for essential technical and social reconstruction of agriculture at the time when it becomes an objective necessity.

The main factor that dynamizes economic development of Poland and shapes structural changes is industry. In comparison with 1938 total industrial production has increased 20-fold, with less than 5-fold growth of the number of employees. This means that each employee in this sector of economy produces nowadays 4 times more than in 1938. At the time of people's authority (i.e. after 1945) a powerful industrial base has been created, which allows development of all branches of national economy. It was not an easy task. As a result of a tremendous investment effort, the country was rebuilt fast after war destruction, and then, its economic potential was built up and modernized. This refers to industry and agriculture, transport and communication, housing construction and municipal, social and cultural undertakings. As a result of this effort the value of fixed assets, which amounted to 1.9 billion zlotys in 1946 (in stable prices of 1971), increased to over 5.7 billion zlotys in 1976. Traditional Polish industries namely, fuel-energetic, textile and food industries, have been built up and modernized.

Owing to great efforts and renouncement of the society in the years of fast industrialization, Poland changed from an agricultural-industrial country to an industrial-agricultural one, of a considerable, up-to-date

production base, which provided foundations for a fast development in the future.

Consequences and implications of industrialization in Poland far exceeded the range of industry itself. Industrialization becomes the major condition for technical modernization of agriculture, which is followed by social and economic reconstruction. Essential increase of production of tractors, agricultural machines, fertilizers and pesticides that are basic elements of technical infrastructure of agriculture would be unthinkable without a powerful base of heavy industry. Main factors dynamizing agricultural production and modernizing agriculture are outside agriculture nowadays, primarily in industry. Agriculture of the industrial era cannot be developed separately, independent of other branches of national economy, and it is in larger and larger degree dependent on industry.

In economic reality of Poland there was no dilemma whether to develop industry or agriculture. The point was to properly determine outdistancing in time, and adequate relations between industrial and agricultural development.

Industrial development of the country did not diminish the significance of agriculture. Although the share of agricultural production in material production and in the worked but national income is decreasing (from 55.8 per cent in 1947 to 9.1 per cent in 1976), the significance of agriculture for fast and balanced advance of the country is great. We have pointed out before that agriculture is satisfying directly or indirectly over 35 per cent of all consumption needs of the population, and each increase of population's income by 10 per cent brings about a growth of demand for food by 5.3 percent. Thus, the importance of agriculture for providing population with food is greater than it would appear from its share in creating national income. That is because Poland is at a phase of development, in which the economic growth still brings about too slight substitution processes on the market.

The increase of demand for food articles of a higher processing degree, and for those containing protein of animal origin is particularly dynamic. These trends strongly influence the structure and dynamics of agricultural production growth. This is the most vital problem for Poland. Social policy of the state is reflected in high income elasticity of the demand for food. Poland pursues a policy of stable and low food prices. In order to meet the constantly growing needs, agricultural production must increase very fast. For many years now, it has been growing by about 3 per cent yearly on the average. It is a high index (most of highly developed countries achieve a lower rate of growth of agricultural production than Poland does) and this notwithstanding the growth is not always sufficient for satisfying all the needs of the society. Therefore nowadays we focus our attention on alleviating of the food market by increased supplies of industrial consumption goods.

Economic development of Poland at the whole postwar period depended, to an essential degree, on the increase of agricultural production. A typical feature of all countries being at a development stage similar to that of Poland is that production increase limits the rate of growth of incomes and of the living standard of the entire nation because, as we mentioned before, the share of expenses for food is relatively high. Under

these circumstances, the increase of wages and real incomes depends, to a large extent, on supply of agricultural products. As it appears from Polish experience, in such a situation, the increase of the share of non-food expenses is particularly desirable, as it alleviates the pressure on agricultural production and renders the growth of real incomes independent of production possibilities of agriculture.

The place of agriculture in the national economy of Poland cannot be, of course, limited to food-providing problems. Agriculture is not only producing food articles but also submits specified demand for production means, services and consumption goods of industrial origin. As a result of economic development and expanding social division of labour, agriculture becomes stronger and stronger linked with national economy, and more dependent on it. We note in Poland nowadays that the source of dynamics of agricultural production are constantly growing supplies of industrial production means, and that agricultural development is more and more dependent on the advance of industry, building, transport, trade, services, and so on. Approximately one third of production means now used up in agriculture comes from outside agriculture. Among these production means priority goes to products of chemical industry (fertilizers and pesticides), of electric and machine industry, fuel and energy, and food industries. With the development of agriculture, and increasing denaturalization of consumption of the rural population, agriculture becomes less and less self-sufficient. On one hand, the marketability of agriculture keeps growing, and, on the other hand, the demand of agriculture for industrial production means (agricultural machines and equipment, fertilizers, industrial feeds, energy sources, building materials, etc.) and for consumption goods after industrial processing is increasing.

In spite of high dynamics, the inflow to agriculture of production means and consumption goods from non-agricultural branches of national economy has not been sufficient so far, which hindered and slowed down the process of technical reconstruction and modernization of agriculture. Development plans for the next coming two decades foresee investing in agriculture of 3.2-fold means more than at the whole postwar period, which will provide conditions for its essential technical modernization.

Changes in the character of agricultural production are also expressed in the structure of distribution of the gross product of agriculture. Industry takes over 33 per cent of the value of total agricultural production. The essential part of agricultural production (43 per cent) remains in agriculture and, in form of fodder, seeds, etc., is processed into new agricultural products (production self-providing of agriculture). Thus, in all, 76 per cent of the total agricultural product serves satisfying of needs of the material production sphere, and undergoes further processing into more refined goods. The rest i.e. 24 per cent are designated for direct consumption of the population and for exports. Polish agriculture produce more and more production means and raw materials for food production, and relatively, less for direct consumption. This confirms the thesis that with going over to higher stages of economic development, agriculture becomes, to an increasing degree, a raw material branch, whereas food industry deals with production of final consumption articles.

At the whole postwar period of agricultural development one of the most essential problems was the adjustment of individual peasant farming to the requirements of fast growing socialist national economy. In the near future the importance of this problem will increase.

Individual farming has performed successfully so far not only production tasks but allowed to employ and support a considerable number of the country's population. High employment per area unit of agriculturally productive land and low technical equipment of farms performed a favourable role in raising the country from economic backwardness. Under the conditions of a developed economy, these advantages of individual farming become its disadvantage. Individual farming in Poland is now at the turning point of its historical development.

Technical and economic barriers in its development become to manifest themselves more and more acutely in its present shape.

Technical barriers consist in impossibility of effective use of mechanization and technical equipment because of small size of farms and small production scale. Economic barriers of individual farming development depend on its income inefficiency, difficulty in ensuring adequate (of a socially approved standard) rate of growth of incomes from the given area available to a peasant family. Overcoming of the economic barrier requires a decrease of employment and increase of area per employee.

Simultaneously, however, an individual peasant farm experienced an essential evolution under conditions of socialist economy.

From the legal and economic point of view, it remains an individual farm with all attributes of small-scale property of production means. A result of this property is a specifically peasant way of working and living, goals of action, inside organization of the farm, division of incomes, rules of inheriting property, a specific system of values, specific development of the place of the peasant and his family in national community, etc. It would be a mistake, however, to believe that individual property of land and of other production means is nowadays in Poland the same as it used to be. The small-scale system in agriculture is more and more subjected to socialist production relations and develops according to the rules of functioning of the entire economy. Socialist economy exercises a manysided influence on peasant farming. As a result of this, property relations also undergo considerable changes.

The thing noted primarily is that the very individual possessory title, in the sense of owing, gradually loses its importance. At the same time, the use of land and of other production means becomes more and more significant. A peasant farm is primarily a workshop and a source of income from work, and not from property deed. Young generations of farmers rely more and more on their own work than on property as a form of material security. Thus, the relation of rural population to land and other production means, as well as the scale of values and structure of goals have changed evidently.

The most characteristic phenomenon of the present-day stage of peasant farming evolution is the advancing socialization of production process in agriculture. It is to be considered as an integral part of the process of socialistic reconstruction of agriculture. Changes take place

simultaneously on many planes and in many forms; the important thing is that changes in production relations in rural areas in Poland went much farther than it could have been expected on the basis of land socialization. We note that, in the first place, technical production means and production services to agriculture, in the broad sense of the word, become socialized. At the phase of advanced development of production capacities only the land socialization takes place. Many forms of group farming, which occur in the peasant farming itself, such as specialized production co-operatives, peasant production groups, groups for common machine use, different forms of intersector co-operation, do not assume at the initial development stage land socialization but merely portioning out of a part of production means and of agricultural land for common farming. Under these conditions, land socialization becomes as if the final stage of structural changes. This is a new, important feature nowadays of the evolution of property relations within peasant farming. This can be confirmed by the following data: in 1976 the socialized sector in Polish agriculture had available the following (value in current prices): 54 per cent of machines and technical equipment, 67 per cent of transportation means operating in agriculture, 69 per cent of total investment outlays in agriculture, whereas this sector has in its disposal only 22 per cent of land.

This phenomenon also has objective conditionings. At the time of fast technical advance and modernization of production techniques in agriculture, up-to-date production means acquire decisive significance, which means cannot go into the narrow framework of peasant farming, and can be utilized in common only. This determined in Poland the choice of the model of production service to peasant agriculture through agricultural circles and specialized state organizations. It is, at the same time, a way of setting up social property of production means within peasant farming. At the initial stage it does not eliminate of itself individual property, but only creates on its fringe a specific type of social property. In this way, agricultural circles also perform function of production organizer both in the scale of a peasant farm and of a microregion.

In implementing the concept of group co-operation, of service mechanization in Polish agriculture, the idea was to ensure at least a minimum of mechanization services to all farms which need them. The service form of mechanization is and will be developed although it cannot solve all mechanization problems. The small scale of a peasant farm makes it difficult, and sometimes impossible, to apply technique such as grain harvesting by a combine.

Mechanization in plant production makes fairly fast progress, whereas the animal production is much more difficult to be mechanized. Only in a small number of large farms, of a bigger scale of animal production, technical equipment for giving feed, milking, or removal of manure is used. In the major part of peasant farms animal production still is based on manual work. On the average, there fall per one individual farm (excluding small holdings of less than 2 ha) about 8 pig heads, and 4.1 cattle heads, 2.3 cow heads included. With such small production scale the use of mechanical equipment is, naturally, economically ineffective. Small production scale also brings about the fact that labour expenditure per unit of animal production, and thus production costs, are high and exceed the

price level, particularly in smaller farms. The only way which would allow application of mechanization in animal production, lowering of its labour intensity and of prime costs, is the raising of animal production scale. It requires, however, increasing of farm area and changing of farming forms.

Below is the summary of our major experiences:

1. A prerequisite for accelerating development of agriculture and including it in the total organism of national economy is to materialize radical **land reform**, eliminate the remnants of feudal system, allocate land to those who are working on it, and provide to them conditions for and interest in production increase (land reform in Poland was carried out without recompense for landowners). Land reform creates initial economic conditions for agricultural development, and, at the same time, it is of essential political significance since the new authority gains strong support of basic peasant masses and of landless rural population.

Agrarian reform is a problem, the solution of which depends in each country on the system of political forces and on the government's will. However, the system of the UN can and should play a role, bigger than so far, in creating conditions for carrying out of agrarian reforms in countries benefiting from the UN assistance.

Assuming as the starting point the tremendous significance of agricultural production growth for the fulfillment of basic tasks of the Second Development Decade, and the fact, recognized in many UN documents, that carrying out of true agrarian reforms is a prerequisite for advance in agriculture, FAO and other UN specialized agencies should give high priority to their activities in the sphere of agrarian reforms.

First of all, this problem, as it was suggested in the report of the Special Committee for Agrarian Reforms, should be handled not by one FAO Division only, but it should penetrate to other Divisions as well. Then only FAO can carry out its chief tasks as a UN specialized agency called to undertake world problems of agriculture and nutrition.

FAO can activate its operations aiming at agrarian reforms on three basic planes namely.

- information (implemented so far most successfully),
- advisory,
- concrete material and organizational help.

In the two latter spheres an actual priority could and should be given to projects connected with agrarian reform.

Considering the circumstance that agrarian reform is an undertaking, the scope of which exceeds agricultural and rural problems, FAO should initiate bigger coordination of operations of all specialized agencies in this field.

2. In carrying out land reform the aim should be to set up a smaller or bigger (depending on conditions) **state sector in agriculture**. It is not only the origin of future socialized agriculture but, for a long time, it provides a vital footing for the state programme of agricultural modernization (promotion of high-quality seed production, of animal breeding

material, widespreading of modern agrotechnique and machines, training staff for agriculture, acquiring experience in management of big-scale agricultural enterprises, etc.).

3. Solution of the problem of economic surplus and accumulation of means is of decisive significance for the strategy of development of agriculture and of national economy. The success of the development concept adopted in Poland provides the most convincing evidence to show that countries lagging behind in economic development can, on their own, overcome this delay if they solve correctly and successfully the question of accumulation and use of economic surplus. There is no country worldwide where such surplus does not exist. The problem arises to release it, accumulate it in hand of the state, and designate it for strategic aims. To implement this, some preliminary conditions have to be fulfilled namely, establishment of progressive social and political relations, ensuring of the leading role in economy to the state, particularly for accumulating and allocating of economic surplus, central economic planning, and setting-up of social mechanisms which allow to mobilize and use creative forces of the nation.

4. As it appears from Polish experience, chief forces and factors of agriculture lie outside it, in particular with industrial development. Industrialization of the country finally determines directions of agricultural development, especially possibilities and the rate of its technical modernization. Thus, at the initial period, the strategic aim is the development of industry, and agriculture has to contribute to it (capital accumulation, manpower, foreign currency from agricultural and food exports, etc.). Although accumulation abilities of a poorly developed and technically primitive agriculture are very small and insufficient for agriculture to finance its own development, the interest of the whole economy, agriculture included, requires the recognition of industrial advance as the vital strategic goal at the initial phase.

5. There can be various forms of the share of agriculture in costs of industrialization of the country and of overall economic development. In Poland, there was developed the system of compulsory deliveries of agricultural products, for which the state paid to farmers a price by 30 to 40 per cent lower than the market price. These deliveries were a form of taxation of agriculture in favour of the whole national economy. Compulsory deliveries ensured to the state a specified accumulation, and, at the same time, allowed to concentrate in hand of the state basic reserves of food articles, which are of decisive significance for maintaining market balance. Polish experience proved that the scale of burdening agriculture with industrialization costs cannot be too high, however, or else production potential of agriculture decreases and so do its accumulation abilities. Besides a contribution to the total accumulation, agriculture contributes to the overall economic development by providing manpower for the advancing industry, transport, trade, etc. Migration of population from villages to towns and from agriculture to industry creates many complicated economic and social problems, which must be solved according to local conditions and needs. At the first period of accelerated

advance a considerable shuttle migration should be assumed, which leads to creating of a big group of biprofessional population.

6. As long as there exists, like in Poland, the sector of individual peasant farming, **the connecting of peasant means (individual accumulation) with state means** designated for agricultural development acquires great importance. It is the most conspicuous in mechanization. Individual mechanization becomes, at some stage of development, unprofitable both from the individual and social viewpoint (small scale), so in connection with that the state should support forms of group mechanization. In Poland, agricultural circles operating on the basis of Agricultural Development Fund became the basic form of technical service to peasant agriculture. It should be emphasized here that this form allows to mobilize individual peasant means and connect them with the state ones. Besides production aims, the agricultural circles with their social accumulation also perform specified structural functions by creating material assumptions for future reconstruction of peasant agriculture.

7. Polish experience shows that different **forms of production co-operation in agriculture** are of great significance for overcoming the barrier of small-scale production in individual peasant farms, and for raising outlay effectiveness and individual farming system. We mean both the horizontal co-operation among farmers (individual farmers' groups), and the vertical integration of single farmers and their groups with units of socialized economy, in particular with agricultural and food industry, organizations purchasing agricultural products, state farms, etc. Development of these forms is also of essential structural importance since it creates assumptions for setting-up of co-operative agriculture, in which land still remains individual property but other production means being more and more significant in intensification of agricultural production become socialized. As it appears from our experience, the development of horizontal and vertical co-operation provides an important steppingstone from traditional peasant farming to modern socialist agriculture.

8. At the present development stage of agriculture the most effective way to improve agrarian structure is **setting-up of agricultural production co-operatives** that associate peasants, on a voluntary basis, in production, economic and social respect. A co-operative based on group property of production means links best the individual farmer's interest with social goals, increases production scale, raises its effectiveness, and also solves social and living problems of co-operative members.

As we found in Poland, introduction of co-operation in agriculture is a long, historical process. It is justified to start this process from simple co-operation forms and gradually to go over from lower to higher co-operation forms. It is extremely important that the adopted organizational forms of a co-operative and the degree of socialization of production means are approved by farmers.

9. An important achievement of Polish agrarian advance and of Polish agriculture is the formulation and **implementation** of the concept of **agricultural circles' co-operatives**. These co-operatives are a typical Polish

phenomenon, which resulted from experience of linking production intensification in peasant farms with the programme of simultaneous reconstruction of peasant agriculture. In the structural sense, agricultural circles' co-operatives create a new situation in Polish agriculture since they initiate an organizational system which allows to set up state-co-operative community agricultural enterprises that integrate economically and productionally the individual peasant farms. Under Polish circumstances, and agricultural circle's co-operative now is a multi-line, multi-plant, service and production enterprise, managed by management board but supervised by self-management peasant organizations.

10. Under Polish conditions, a significant role in agricultural development was played by **common rural co-operatives of supply and sale**, credit co-operatives, and also some **specialized co-operatives** associating producers of milk, fruit and vegetables, root crops, etc. They make an organizational framework for development of wide self-management movement in rural areas, activate rural environments in social and economic respect, allow to include peasant farming in the system of social planning, and help widespreading technical advance in peasant agriculture.

11. In the past three decades Poland has acquired considerable experience in **planning of agricultural development**, as well as in planned influencing the individual sector of agriculture. The achievement is original since Poland is one of the few socialist countries where the sector of individual peasant farming is maintained on a big scale. There have been developed, especially, forms of indirect influence the peasant farming such as prices, credit system, contracting, multilateral integration ties of a peasant farm with co-operatives and with the state sector, etc. The effectiveness of individual forms of planned influence of the agriculture is high in Poland, both in short and in long terms.

ВОПРОСЫ ЭКОНОМИКИ СЕЛЬСКОГО ХОЗЯЙСТВА ПОЛИТИКА РАЗВИТИЯ СЕЛЬСКОГО ХОЗЯЙСТВА И СЕЛА В ПОЛЬШЕ

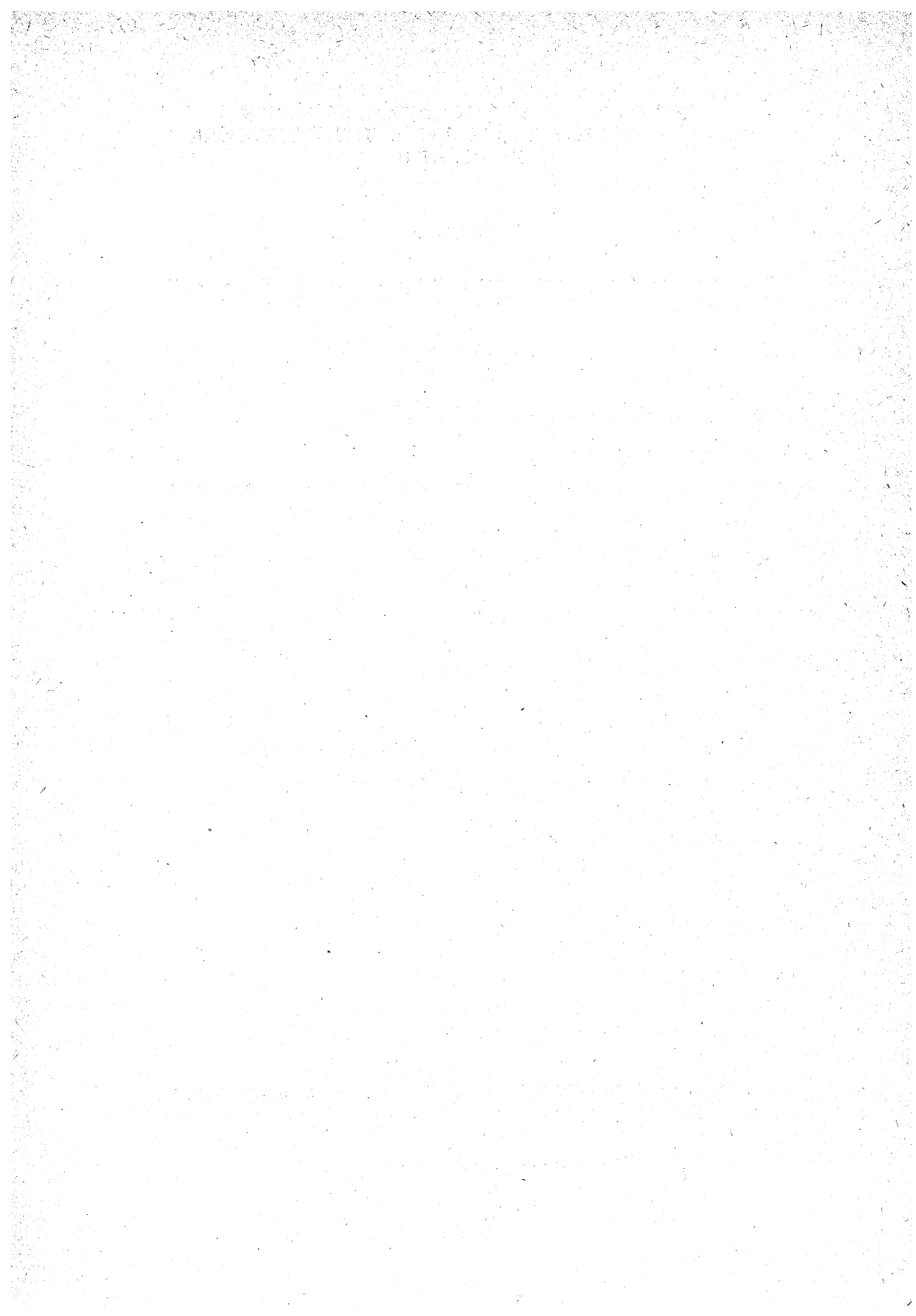
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PROBLEMS OF AGRICULTURAL ECONOMICS POLICY OF AGRICULTURAL AND RURAL DEVELOPMENT IN POLAND

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