

REGISTRATION OF FARM TRACTORS IN POLAND IN 2015

Abstract

The paper presents registration of farm tractors in Poland in 2015 on the basis of the number of registered vehicles in the Central Register of Vehicles and Drivers (CEPiK). Data provided by the Polish Chamber of Commerce for Agricultural Machines and Facilities (PIGMiUR) were the source material for the analysis. The scope of the analysis covered seasonality of registration on a monthly basis, demand for specified brands (producers), origin (national, foreign) and structure of power outputs of tractors registered in Poland.

In 2015, as compared to the former year, there was a drop in registration of both new and used tractors. The largest number of registered tractors had the power of 36-54 kW. The share of new tractors in the number of registrations in total amounted to approx. 45% in 2015. In the group of new tractors, the brands New Holland, Zetor and John Deere were the most numerous. The share of Polish brands in the registration of tractors in total in 2015 amounted to less than 4%.

Keywords: farm tractor, market, sale, tractor registration, demand.

JEL codes: Q13, Q17, O13.

Introduction

The demand for farm tractors is closely associated with the economic situation in agriculture. The transformation of the agrarian structure, the EU payments and the support programmes had their influence on the changes of the market in farm tractors. After the accession to the EU, Poland noted a significant increase in demand for tractors (Lorencowicz, 2011). The favourable situation

on the market in new tractors was maintained until 2012, when a record-high number of tractor registrations was recorded in Poland (*Rekordowa...*, 2013). After 2013, the domestic demand for new tractors decreased, but the demand for the used farm tractors increased at the same time. The demand for tractors in Poland is unstable, which results from the nature of agricultural production, the fluctuation in prices of agricultural products and the impact of socio-economic factors (Pawlak, 2012a). The EU financing has a considerable impact on the sale of tractors, as they constitute the main source of funds for the purchases of these vehicles (Lorencowicz, 2011). The scarcity of the EU funds, resulting from the completion of the next edition of the Rural Development Programme, caused a decrease in demand for the new farm tractors after 2012 (*Rynek ciągników...*, 2014; *Sprzedaż ciągników...*, 2015; Różycki, 2016).

The economic situation of the market in means of mechanization, including farm tractors, reflects the income situation of farmers (Pawlak, 2015). When analysing the domestic market in means of mechanization of agriculture, the demand for tractors is an important part of the analysis. The Institute of Agricultural and Food Economics has a substantial contribution to the research on the market in means of mechanization. Results of the research are periodically published in the form of reports entitled *Rynek środków produkcji dla rolnictwa. Stan i perspektywy (Market in means of production for agriculture. Situation and outlook)*. The significant sources of information about the market in farm tractors are also the publications by Pawlak (2012a, 2012b, 2013, 2015) and Lorencowicz (2011, 2013). The impact of changeable market environment on incomes of farmers makes it necessary to carefully monitor the situation on the farm tractors' market. Therefore, there is a need to gather information about the sales of tractors in particular months and according to regions. The article presents the results of research on the registrations of farm tractors in 2015, taking into account their number and the regional differentiation.

Data source and methodology

The evaluation of the market in farm tractors was carried out on the basis of their sales measured by the number of registrations. The data for the analysis was obtained from the Polish Chamber of Commerce for Agricultural Machines and Facilities (PIGMiUR). The first registration of tractors in the territory of Poland was taken into account. According to the definition by PIGMiUR, a farm tractor is considered as a new one if its first registration has been made in the current year or the previous year or two years before. It means that the group of new farm tractors registered in 2015 comprised the vehicles which were produced in 2015, 2014 and 2013. The analysis covered the seasonality of registrations broken down by month and by region, the demand for particular makes (producers) and the power structure of farm tractors sold in Poland.

Research results

In 2015, the number of total registrations of farm tractors in Poland was 29 062 and was smaller by 2% than in 2014. In comparison with the previous year, the number of registrations of new tractors also decreased and totalled 12 362. Some increase was recorded in the registrations of used tractors, i.e. by 8%. The average number of registrations of tractors was 2422 a month, which included 1030 new ones. The highest number of registrations (3410) was recorded in March, while the smallest in August – 1611. As for new tractors, the smallest numbers of registrations were in January, October and November, and the highest numbers – in March and June. Figure 1 shows the registrations of farm tractors in particular months.

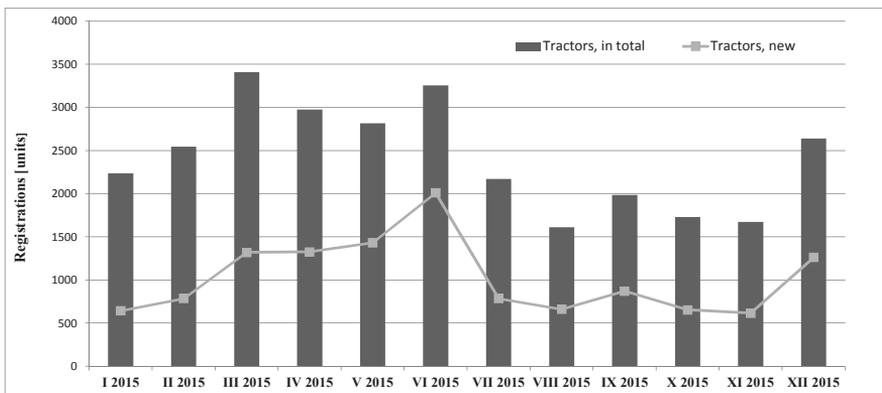


Fig. 1. Registrations of farm tractors in 2015 according to months.

Source: own calculations based on PIGMiUR.

The registrations of new tractors accounted for about 45% of the total number of registrations in 2015. The share of tractors aged 20 years and over was significant and accounted for about 31% in 2015. Nearly every fifth tractor registered in Poland was in the age of 11-20 years. In the registration structure, the tractors in the age of 3-5 years had rather small share. The age structure of tractors registered in Poland in 2015 is presented in Figure 2.

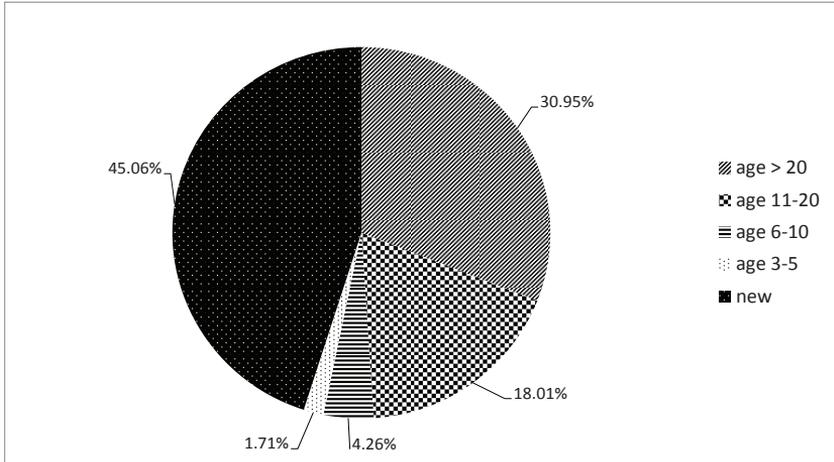


Fig. 2. Age structure of tractors registered in 2015.

Source: own calculations based on PIGMiUR.

The largest number of new tractors were registered in the 2nd quarter of 2015, whereas the largest number of tractors aged over 11 years were registered in the 1st quarter of 2015. In the case of new tractors and those up to 10 years and above 20 years of age, the decrease in registrations was recorded in the period from July to September and their growth in the last quarter of 2015. The number of registrations of tractors aged 11-20 had dwindled beginning with the second quarter of 2015. The registrations according to the age groups in the particular quarters of 2015 are shown in Figure 3.

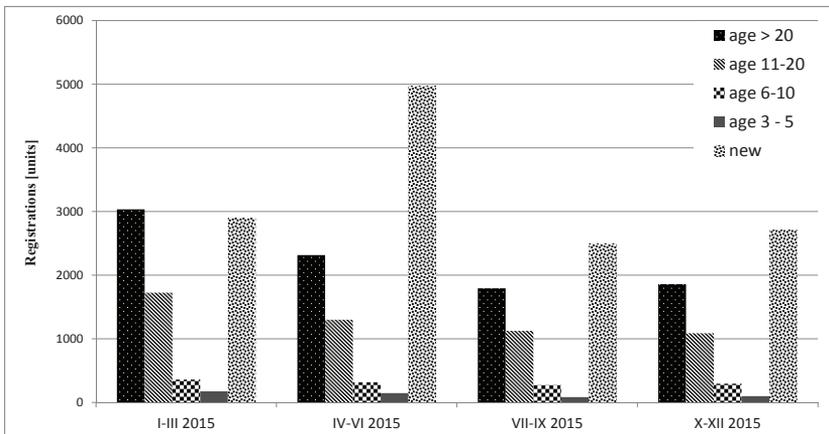


Fig. 3. Registrations of tractors by age groups in the quarters of 2015.

Source: own calculations based on PIGMiUR.

In 2015, the total number of registered tractors produced in Poland was 15 553 and in the case of tractors produced abroad, the registration number was 13 509. The registration numbers of tractors produced in Poland were higher in March-June and in December than the numbers for tractors from abroad. The largest numbers of tractors produced in Poland were registered in July, when the number of their registrations was double the corresponding figure for foreign tractors. The registrations of farm tractors divided into Polish and foreign ones and according to months are presented in Figure 4.

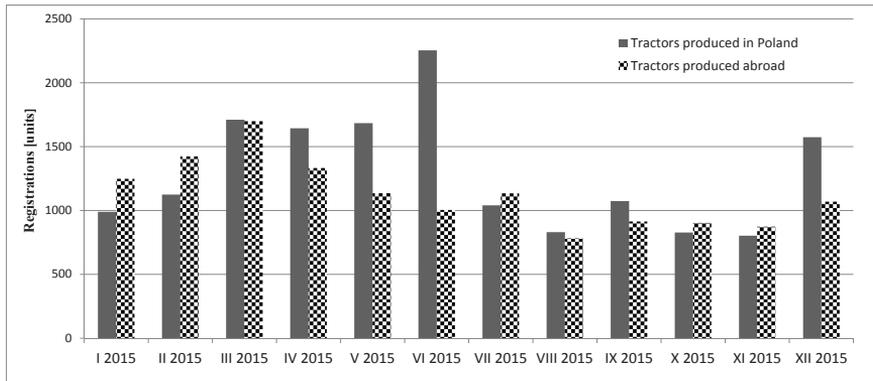


Fig. 4. Registrations of tractors according to the place of origin in particular months.

Source: own calculations based on PIGMiUR.

In 2015, there were 10 556 tractors of power output from 36 kW to 54 kW registered in Poland. About 40% of tractors registered in the country, both new and used ones, had the power output within this range. A similar share in the registration structure of new and used tractors was observed in the power segment of 55-72 kW. Significant differences in the shares of registrations of new and used tractors concerned the tractors of engine output of less than 36 kW as well as these of 73-94 kW.

The power structure of farm tractors registered in Poland is shown in Figure 5. The share of particular power segments in the structure of new and used farm tractors registered in Poland is shown in Figure 6.

The analysis of registrations of tractors by engine output in particular months showed different tendencies both for new tractors and used ones. It was proved, on the example of the two most popular power segments (36-54 kW and 55-72 kW), that the number of registrations of used tractors was on the increase until April, exceeding in that period the corresponding number for new tractors, then some decrease was recorded and in May-June the registration of used tractors was smaller than the new ones. Despite the downward tendency since July, the number of registrations of used tractors was higher compared with new ve-

hicles. The number of registrations of new tractors was the highest in June, then it decreased in July-August, increased again in September and again a decrease was observed in November. In December 2015, the number of registrations of both new and used tractors rose.

The registration of both new and used tractors having their power output of 36-54 kW and 55-72 kW, by month is presented in Figure 7.

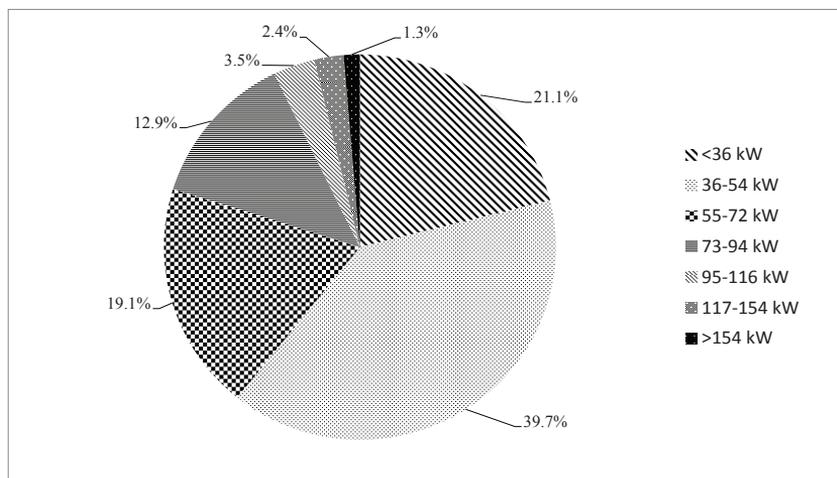


Fig. 5. The registration structure of tractors in 2015 by power output, in total.

Source: own calculations based on PIGMiUR.

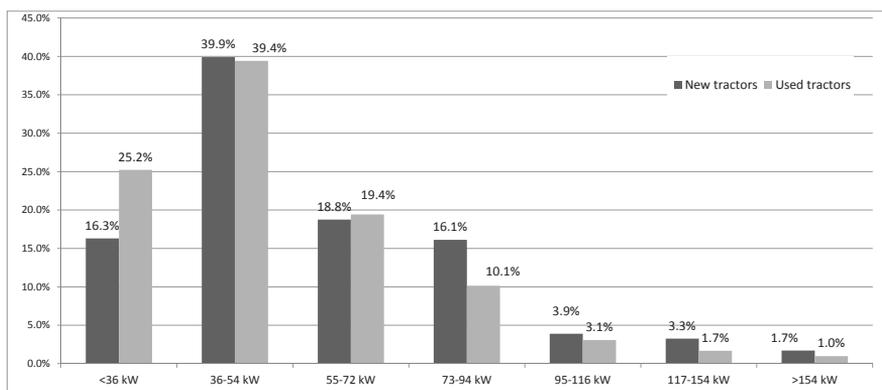


Fig. 6. The share of power segments in the registration structure of new and used tractors in Poland.

Source: own calculations based on PIGMiUR.

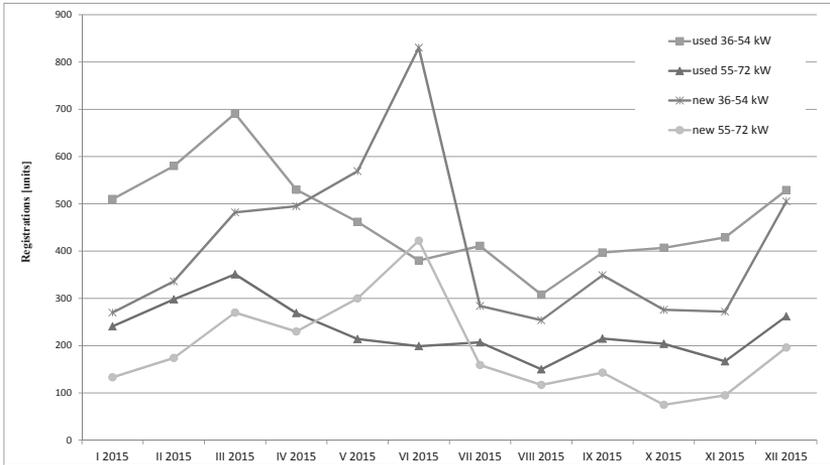


Fig. 7. Registration of new and used tractors of power output of 36-54 kW and 55-72 kW in 2015, in particular months.

Source: own calculations based on PIGMiUR.

In 2015, the number of the registered new tractors was the highest in Wielkopolskie (2053 vehicles) and Mazowieckie (2019) voivodeships. The share of the two voivodeships in the total registration of new tractors was 33% in 2015. The smallest number was registered in Lubuskie (296) and Śląskie (319) voivodeships. The registrations of new tractors in particular voivodeships is presented in Table 1.

The analysis of registrations of new tractors according to months in the voivodeships with the highest number of registrations (Wielkopolskie, Mazowieckie, Lubelskie and Łódzkie) showed a similar tendency. In the first half of 2015, these voivodeships recorded the growth in registrations which peaked in June. In July and August, the number of registrations fell, then it grew in September and fell again in November. In December, the growth in the number of registrations was recorded in all voivodeships under analysis. The registration of new tractors in the selected voivodeships according to months is presented in Figure 8.

Table 1

Registrations of new tractors by voivodeship

Voivodeship	Number of registrations	Percentage (%)
Dolnośląskie	449	3.63
Kujawsko-Pomorskie	959	7.76
Łódzkie	1 002	8.11
Lubelskie	1 334	10.79
Lubuskie	296	2.39
Małopolskie	643	5.20
Mazowieckie	2 019	16.33
Opolskie	329	2.66
Podkarpackie	327	2.65
Podlaskie	805	6.51
Pomorskie	553	4.47
Śląskie	319	2.58
Świętokrzyskie	332	2.69
Warmińsko-Mazurskie	532	4.30
Wielkopolskie	2 053	16.61
Zachodniopomorskie	410	3.32
Total	12 362	100

Source: own calculations based on PIGMiUR.

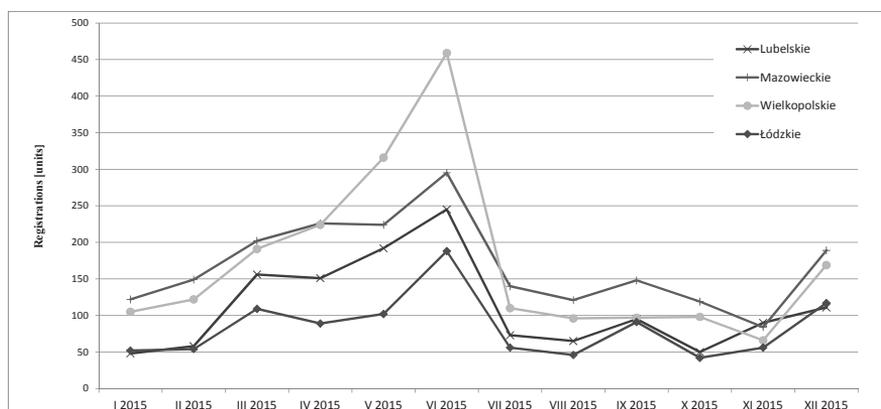


Fig. 8. Registrations of new tractors in the selected voivodeships in particular months.

Source: own calculations based on PIGMiUR.

In 2015, there were tractors of 33 makes available on the Polish market, particularly of foreign production. In addition to many makes produced in Central and Western Europe and the USA, there were also tractors from Japan, China, India and South Korea. As regards the farm tractors registered in Poland, in 2015 the largest share in the market had the following makes: New Holland (2056 units), John Deere (1868 units), Zetor (1655 units), then Deutz-Fahr (1132 units) and Kubota (1094 units). The Polish producer of tractors, the Ursus company, occupied 9th position (396 units) as regards the number of registered new tractors in Poland. Another Polish producer of tractors, the Farmer company, was ranked 28th as regards the number of registrations (46 units).

The registrations of new tractors of particular makes in 2015 are shown in Figure 9.

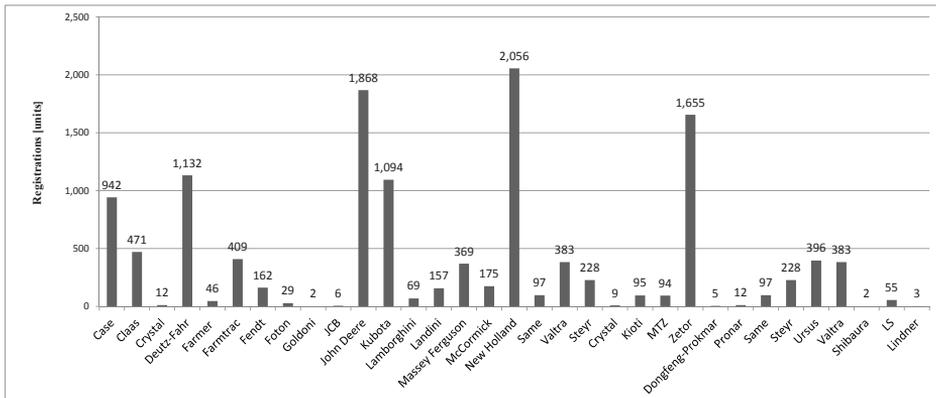


Fig. 9. Registrations of new tractors in 2015 by makes.

Source: own calculations based on PIGMiUR.

The share of New Holland, John Deere and Zetor in the registrations of new farm tractors in 2015 was about 44%. The share of Polish producers, such as Ursus, Farmer and Crystal, in the registration structure of new tractors is small. In 2015, the shares were: 3.11, 0.36 and 0.07, respectively.

In 2015, the tractors produced by New Holland and John Deere were registered most frequently in all power segments. The company at the leading position changed depending on the power range of the registered vehicles, but both New Holland as well as John Deere were always among the three leaders. The analysis of registrations according to the power output of a tractor showed that in the group of power output below 36 kW the most numerous registrations in 2015 concerned the farm tractors produced by Kubota, which at the same time was at 5th position if considering the total number of registrations. Zetor had the leading position in the registration of new tractors of 36-54 kW

in 2015. The number of registrations concerning tractors with power output within this range made by the Czech producer exceeded more than two times the registration numbers of New Holland and John Deere, which occupied 2nd and 3rd positions.

Most tractors with engine output above 117 kW were produced by John Deere. The list of leaders and the registration number of tractors of particular power segments is shown in Figure 10.

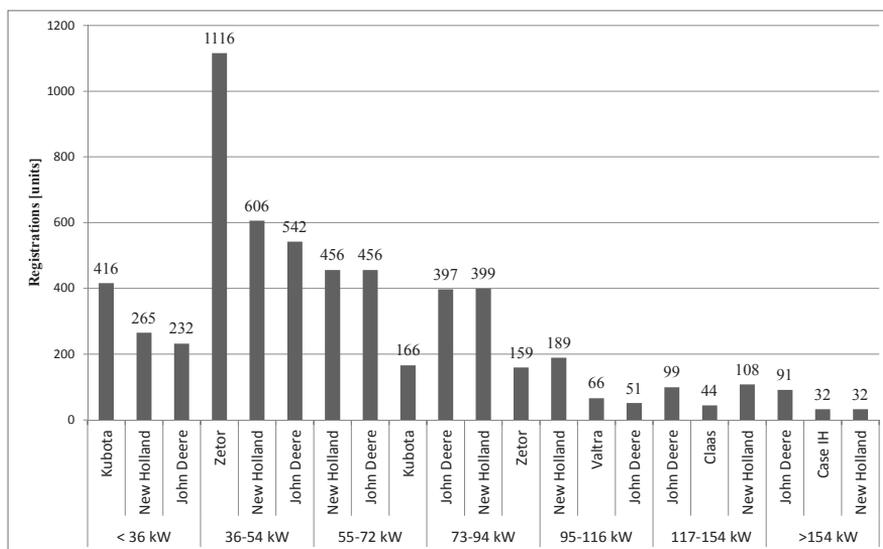


Fig. 10. Leaders in the registration of new tractors of particular power ranges in 2015.

Source: own calculations based on PIGMiUR.

The low share of the Polish producers in the registration number concerned new tractors only. The analysis of total registrations, i.e. both new and used tractors, showed the significant share of tractors produced in Poland. The share of such tractors in the registration structure in 2015 was 53%. Because of no available data on registrations of used tractors, the shares of their producers were not determined. However, it seems that the tractors produced by Ursus dominate in the registration structure of the used ones in Poland.

The analysis of registrations by makes in the group of new tractors according to months showed similar tendency for all producers. Only the number of registrations of tractors produced by John Deere decreased significantly in November-December.

The registrations of tractors produced by the selected producers, according to months are presented in Figure 11.

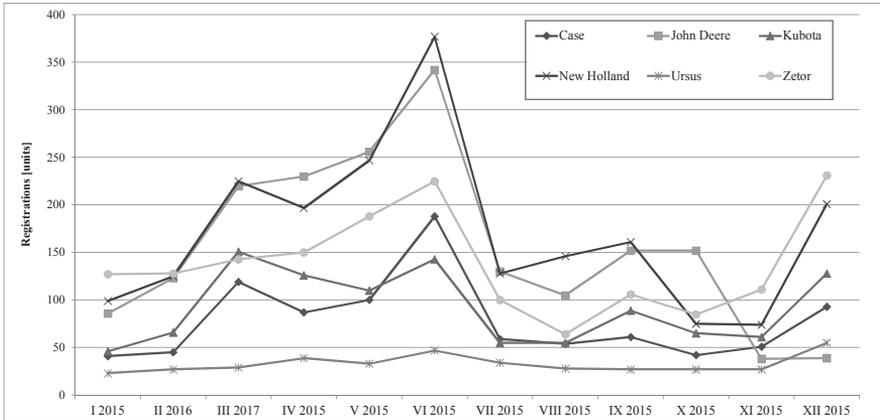


Fig. 11. Registrations of new tractors in 2015 by producer and by month.

Source: own calculations based on PIGMiUR.

The analysis led to the conclusion that the highest number of tractors, both new and used ones, were registered by individual users. In 2015, this group of owners registered 88% of farm tractors in Poland. The owners of the rest of registered tractors were enterprises. The majority of used tractors were registered by individual users in the 1st quarter, and the smallest number – in the 3rd quarter. New tractors were most often registered by individual users in the 2nd quarter, whereas such registrations were at the lowest level in the 4th quarter.

As to the registrations of used tractors by enterprises, no major fluctuations were observed during the year. In the case of new tractors, the significant growth of their registrations in the 4th quarter was recorded. However, the registrations of tractors are kept artificially high at the end of the year by dealers who improve their sales statistics that way (Różycki, 2016).

Conclusions

In 2015, there was a decrease in registrations of farm tractors: for new ones – by 15%, while for used ones – by 8% when compared with the previous year. The total number of farm tractors registered in Poland in 2015 was 29 062 units. The share of the new ones in the total registrations in 2015 was 45%. About 31% of tractors registered in Poland were over 20 years of age. In the registration structure the share of tractors of the Polish production was about 53%. However, in the structure of registered new tractors the share of domestic producers was below 4%.

Most tractors registered in 2015 had their power output within the range of 36-54 kW. In the registration structure of both new and used tractors, the share of this power range was ca. 40%. In 2015, 5617 tractors of power output below

36 kW were registered, which represented 21% of the total registrations. The share of tractors with power output of 55-72 kW in the structure of total registrations was 19%.

In 2015, 33 makes of farm tractors were available on the Polish market most of them produced abroad. In 2015, 12 362 new tractors were registered in Poland. Most registrations were made in Wielkopolskie (2053) and Mazowieckie (2019) voivodeships. The two voivodeships had their share of 33% in registrations of new tractors in 2015. Among new tractors registered in Poland, the majority were of the following makes: New Holland, John Deere, Zetor, Deutz-Fahr and Kubota. The market shares of these producers in 2015 were: 16.1%, 14.6%, 12.9%, 8.88% and 8.59%, respectively. The share of Polish producers in the structure of new tractors' registrations was below 4% in 2015.

References

- Lorencowicz, E. (2011). Rynek ciągników rolniczych w Polsce. *Roczniki Naukowe SERiA*, vol. 3, issue 3, pp. 173-177.
- Lorencowicz, E. (2013). Polska mapa mocy ciągników. *Rolniczy Przegląd Techniczny*, nr 4(170), pp. 58-59.
- Pawlak, J. (2012a). Rynek ciągników rolniczych w Polsce w latach 2000-2010. *Problemy Inżynierii Rolniczej*, issue 1(75), p. 5-14.
- Pawlak, J. (2012b). Zakupy ciągników rolniczych w Polsce w ujęciu regionalnym. *Problemy Inżynierii Rolniczej*, issue 3(77), pp. 35-41.
- Pawlak, J. (2013). Rynek ciągników używanych w Polsce w latach 2005-2010. *Problemy Inżynierii Rolniczej*, issue 3(81), pp. 51-61.
- Pawlak, J. (2015). Podaż krajowa ciągników a ich rejestracja. *Problemy Inżynierii Rolniczej*, issue 2(88), pp. 29-36.
- Rekordowa sprzedaż ciągników w roku 2012* (2013). Retrieved from: <http://maszynydlafermera.pl/informacje/aktualnosci/435-rekordowa-sprzedaz-ciagnikow-w-roku-2012> (access date: 15.05.2016).
- Różycki, Ł. (2016). *Sprzedż ciągników: rok 2015 gorszy od 2014*. Retrieved from: <https://www.agrofakt.pl/sprzedaz-ciagnikow-2015-gorszy-2014/> (access date: 15.04.2016).
- Rynek ciągników w 2013 roku* (2014). Retrieved from: <http://www.wrp.pl/rynek-ci%C4%85gnik%C3%B3w-rolniczych-w-2013-roku> (access date: 15.05.2016).
- Sprzedż ciągników w 2014 roku* (2015). Retrieved from: <http://www.tvagro.pl/PL-H23/3/1147/sprzedaz-ciagnikow-w-2014-roku.html> (access date: 15.05.2016).

JACEK SKUDLARSKI

Szkoła Główna Gospodarstwa Wiejskiego
Warszawa

REJESTRACJA CIĄGNIKÓW ROLNICZYCH W POLSCE W 2015 ROKU

Abstrakt

W artykule przedstawiono rejestrację ciągników rolniczych w Polsce w 2015 roku na podstawie liczby rejestracji tych pojazdów w Centralnej Ewidencji Pojazdów i Kierowców (CEPiK). Materiałem źródłowym do analizy były dane udostępnione przez Polską Izbę Gospodarczą Maszyn i Urządzeń Rolniczych (PIGMiUR). Zakres analiz obejmował sezonowość rejestracji w układzie miesięcznym oraz regionalnym, popyt na określone marki (producentów), pochodzenie (krajowe, zagraniczne), a także strukturę mocy rejestrowanych w Polsce ciągników rolniczych.

W 2015 roku w porównaniu z poprzednim rokiem miał miejsce spadek rejestracji zarówno nowych, jak i używanych ciągników rolniczych. Najwięcej w Polsce zarejestrowano ciągników o mocy 36-54 kW. Udział nowych ciągników w liczbie rejestracji ogółem wyniósł w 2015 roku ok. 45%. W grupie nowych ciągników najwięcej zarejestrowano pojazdów marki New Holland, Zetor oraz John Deere. Udział polskich marek w rejestracji ciągników ogółem w 2015 roku wyniósł niespełna 4%.

Słowa kluczowe: ciągnik rolniczy, rynek, sprzedaż, rejestracje ciągników, popyt.

Accepted for print: 13.07.2017.