

EDUCATION OF FARM OWNERS AND THEIR OPINIONS ON A NEED AND FORMS OF TRANSPORTATION SERVICES

Summary

The present paper presents results of research on opinions of farm owners concerning the need and forms of transportation services within the context of their education. According to 59.04% of surveyed farmers, there is demand for transportation services. The primary reason for such demand is time savings (the number of answers increases along with an increase in farmer's education). 48.80% of farmers use such services (42.86% having a primary education and 71.43% having a higher education). The primary reason for using such services is the fact to be cheaper when compared to own transport – percentage share in answers increases along with an increase in education. Among farmers who provide such services, 71.24% perceive it as a source of additional income. Either transportation services in the form of sale or purchase of means of produce sale or combination of these occur in 44.56% of answers. All-inclusive transportation services in external transportation, that is purchase of means and collection of goods, are preferred by 36.73% on average and the number increases along with an increase in education. The values for farmers having a primary and higher education are: 14.29% and 67.14% respectively.

Key words: transportation means, transportation services, services

WYKSZTAŁCENIE WŁAŚCICIELA GOSPODARSTWA ROLNICZEGO A JEGO OPINIE O POTRZEBIE I FORMIE OBSŁUGI TRANSPORTOWEJ

Streszczenie

Prezentowane wyniki badań dotyczących opinii właściciela gospodarstwa na temat potrzeb i form obsługi transportowej w kontekście jego wykształcenia. Według 59,04% rolników usługi transportowe są potrzebne. Podstawowym powodem przemawiającym za potrzebą usług jest oszczędność czasu (ilość odpowiedzi rośnie wraz ze wzrostem wykształcenia). 48,80% rolników korzysta z usług (42,86% podstawowe i 71,43% wyższe). Podstawowym powodem korzystania z usług transportowych jest to, iż są one tańsze w stosunku do transportu własnego - % odpowiedzi rośnie w miarę wzrostu wykształcenia. Wśród rolników dających usługi średnio 71,24% upatruje w tym dodatkowy zarobek. Obsługa transportowa w formie: albo zakup środków, albo sprzedaż produkcji lub ich połączenie 44,56% odpowiedzi. Pełną obsługę transportową w transporcie zewnętrznym tzn. zakup środków i odbiór produktów preferuje 36,73% średnio i ich udział rośnie wraz z wykształceniem. Jest to 14,29% rolników z wykształceniem podstawowym i 67,14% z wykształceniem wyższym.

Słowa kluczowe: środki transportowe, obsługa transportowa, usługi

1. Introduction

Transportation, as an element required for agricultural production, has a significant influence on its efficiency. A disadvantageous increase in shipping distances that has been occurring over the recent years as a result of growing distances between sales markets and farms causes an increase in transportation effort and thus in expenditures [5, 7, 8]. Therefore, application of more efficient technologies, also in regard to transportation is one of the elements that determine expenditures. An analysis of technical and technological advancement indices allows for a conclusion that implementation of technological advancement in transportation may bring considerable savings [4]. Education seems to be one of the criteria that determine the efficiency of farming. Although it is not directly reflected in an increase in technical advancement index, but some relation can be noticed [2]. Technical advancement is connected to purchase of new transportation means, that is a long-term investment. For that matter, machine services are becoming increasingly important as an alternative to own purchase of equipment. According to a number of authors, both using and offering such services by a farm contributes to an increase in farming efficiency and improving its financial

conditions. [1, 3, 9].

Within the scope of services used, transportation services constitute a considerable share. They place right after IT and consulting services as the top technical service [10].

2. Scope and aim of work

Due to changes occurring in agriculture, which also concern agricultural transportation, the present work aimed at examining opinions of farm owners on the following subjects:

- need for transportation services in agriculture
- a potential model – form of transportation services.

The subject of research covered farms producing agricultural goods in the Małopolska region. Research included 166 farms. Research included farms, whose owners or successors declared continuation of farming operation and, in most cases, expanding their farm area.

Therefore, the examined farms were divided according to their owners' education into the following groups:

- A – primary – 7 people – 4.22%
- B – vocational – 87 people – 52.41%
- C – secondary – 65 people – 39.15%
- D – higher – 7 people – 4.22%.

3. Methodology

Research was carried out based on a dedicated survey and research subjects were selected deliberately – declaration of running agricultural production on the same level or, which occurred quite often, an increase in production. Research concerned transportation means in possession and usage of such means, as well as the respondents' opinion on the needs and forms of transportation services. A detailed research methodology has been presented in a previous work [6].

4. Results

The average size of studied farms was 26,24 ha of farming area. Farm size increases along with an increase in farmer's education, from 16.70 ha (vocational education) to 39.44 ha (higher education). Regardless of farm size, there is a little difference among each group's farming conditions expressed in an average allotment size. Diversification in distances, both for internal and external transportation, seems to result from location – land layout in the first place and from a search for more favourable sales markets. A detailed characteristic of the studied subjects is shown in a previous work [6].

Depending on farming conditions, production level (transportation needs) and equipment in own means, there is a demand for external services. Table 1 presents answers to the question whether transportation services are needed. With the average 59.04% of yeses, no relation between the number of answers and farmer's education was noticed. It may be stated only that the primary reason for such demand is time savings (the number of answers increases along with an increase in farmer's education). The lack of own means is second best reason. 100% of farm owners who do not perceive themselves as in demand for transportation services justified their answer by a sufficient number of own means.

On the other hand, when asked whether they use transportation services and why so (Table 2), 48.80% of farmers answered yes and percentage share of yeses increases along with an increase in education (42.86% for primary education and 71.43% for higher education).

The primary reason for using such services is the fact that they are cheaper when compared to own transport – percentage share in answers increases along with an increase in education. The above fact proves that farmers are able to calculate and compare operation costs of transportation means.

For no answers, a sufficient number of own means is the primary reason. However, a considerable number of farmers believe that transportation services are too expensive.

The next question asked farmers whether they provide transportation services. On average, 43.98% of farmers answered yes. The lowest number of yeses occurred in primary and higher education groups. Among service providers, an average 71.24% of farmers perceive services as a source of additional income with 100% farmers with higher education.

Table 3 presents distribution of answers to the question: Do you provide services and why?

However, a majority of respondents (56.02% on average) do not provide services – the largest number, that is 85.71%, occurred for higher education group. On average, the highest % share of respondents do not provide services due to a lack of demand – 38.71% on average; from 16.66% for higher education to 60% for primary education group.

It may be thus assumed that they will be potential service providers if such demand occurs.

The next question asked to all farmers concerned a potential future model of transportation services. The results are presented in Table 4.

The last 3 answers might actually be compiled into one, that is transportation services combined with purchase of production means and sale of produce. These answers were however separated because farm owners made a strong distinction between these two types of services.

Purchase of means, sale of produce or combination of these occur in 44.56% of answers in total. All-inclusive transportation services in external transportation, that is purchase of means and collection of goods, are preferred by 36.73% on average and the number increases along with an increase in education. The values for farmers having a primary and higher education are: 14.29% and 67.14% respectively.

Table 1. Percentage share of answers to the question: Are transportation services necessary and why so?

Tab. 1. Procentowy udział odpowiedzi na pytanie: czy usługi transportowe są potrzebne i dlaczego?

Description	Education				
	Average	Primary	Vocational	Secondary	Higher
Yes	59,04	85,71	56,32	58,46	71,43
lack of financial means	27,55	50,00	38,78	13,16	0,00
time savings	46,94	33,33	42,86	50,00	60,00
Cheaper	25,51	16,67	18,36	36,84	40,00
No	40,96	14,29	43,68	41,54	28,57
in possession of own means	100,00	100,00	100,00	100,00	100,00

Source: own work / Źródło: opracowanie własne

Table 2. Percentage share of answers to the question: Do you use transportation services and why so?

Tab. 2. Procentowy udział odpowiedzi na pytanie: czy korzysta z usług i dlaczego?

Description	Education				
	Average	Primary	Vocational	Secondary	Higher
Yes	48,80	42,86	42,53	56,92	71,43
lack of financial means	28,40	33,33	37,84	18,92	0,00
time savings	35,80	33,33	29,73	40,54	40,00
Cheaper	35,80	33,34	32,43	40,54	60,00
No	51,20	57,14	57,47	43,08	28,57
in possession of own means	57,64	100,00	56,00	60,71	50,00
They are expensive	42,36	0,00	44,00	39,29	50,00

Source: own work. / Źródło: opracowanie własne

Table 3. Percentage share of answers to the question: Do you provide services and why?
 Tab. 3. Procentowy udział odpowiedzi na pytanie: czy daje usługi i dlaczego?

Description	Education				
	Average	Primary	Vocational	Secondary	Higher
Yes	43,98	28,57	44,83	49,23	14,29
Income	71,24	50,00	79,49	71,88	100,00
Debt discharge	28,76	50,00	20,51	28,12	0,00
No	56,02	71,43	55,17	50,77	85,71
Lack of financial means	30,10	0,00	25,00	36,36	66,67
Lack of time	25,81	40,00	29,17	18,19	16,67
Uneconomic	5,38	0,00	0,00	0,00	0,00
Lack of demand	38,71	60,00	45,83	45,45	16,66

Source: own work. / Źródło: opracowanie własne

Table 4. Percentage of answers to a question concerning the preferred model of services
 Tab. 4. Procentowy udział odpowiedzi: preferowany model usług

Description	Education				
	Average	Primary	Vocational	Secondary	Higher
Specialist transportation companies	13,87	14,28	11,49	16,92	14,29
Farmers' associations	10,84	14,29	13,79	7,69	0,00
Neighbour-to-neighbour services	30,73	28,57	31,03	30,77	28,57
Purchase of goods with transportation	6,02	28,57	13,79	9,23	0,00
Sale of produce with collection	1,81	0,00	1,15	1,54	0,00
Purchase and sale with transportation	36,73	14,29	28,75	33,85	57,14
Total	100,00	100,00	100,00	100,00	100,00

Source: own work / Źródło: opracowanie własne

Neighbour-to-neighbour services are another model of transportation services mentioned by respondents, with the average of 30.73% and little variation in regard to education. Paid external services make only 24.715% (13.87% for specialised units and 10.84% for bodies providing all types of shipping). Generally speaking, it may be stated that their share decreases along with an increase in farmer's education.

5. Summary and conclusions

With the average 59.04% of yeses to the question whether transportation services are needed, no relation between these answers and farmers' education was identified. It may be stated only that the primary reason for such demand is time savings (the number of answers increases along with an increase in farmer's education). 48.80% of farmers use services and percentage share increases along with an increase in education (42.86% for primary education and 71.43% for higher education). The primary reason for using such services is the fact that they are cheaper when compared to own transport – percentage share in answers increases along with an increase in education. On average, 43.98% of farmers provide services with the lowest number in higher education and primary education groups. Among service providers, an average 71.24% of farmers perceive services as a source of additional income with 100% of farmers having a higher education. On average, 38.71% of farmers do not provide such services (from 16.66% for higher education group to 60% for primary education group) due to a lack in demand. It may be thus assumed that they will be potential service providers if such demand occurs. A combination of purchase of means or produce sale with transportation was the form of transportation services mentioned most frequently and this occurred in 44.56% of answers. All-inclusive transportation services in external transportation, that is purchase of means and

collection of goods, are preferred by 36.73% on average and the number increases along with an increase in education. The values for farmers having a primary and higher education are 14.29% and 67.14% respectively. According to the surveyed farmers, neighbour-to-neighbour services which were mentioned on average by 30.73% of respondents are another preferred model of transportation service.

6. References

- [1] Ferenc J.: *Ekonomika i organizacja rolnictwa*. Warszawa: Wydawnictwo Key Text, 1999.
- [2] Hamerska I., Roczkowska-Chmaj S.: *Wykształcenie i wiek rolników a wskaźnik postępu naukowo-technicznego*. *Inżynieria Rolnicza*, 2008, 11 (109), 75-82.
- [3] Jabłonka R., Kapela S.: *Zapotrzebowanie na usługi mechaniczne w gospodarstwach indywidualnych powiatu wysokomazowieckiego*. *Inżynieria Rolnicza*, 2010, 1 (119), 215-221.
- [4] Kokoszka S., Tabor S.: *Postęp technologiczny a koszty transportu produktów rolnych*. *Inżynieria Rolnicza*, 2006, 11 (86), 177-182.
- [5] Kokoszka S.: *Odległość i wielkość przewozów w zależności od rodzaju ładunku i wielkości sprzedaży produkcji*. *Problemy Inżynierii Rolniczej*, 2009, 4, 29-35.
- [6] Kokoszka S.: *Owner's education and means of transport available on the farm*. *Journal of Research and Applications in Agricultural Engineering*, 2014, 59 (1), 64-67.
- [7] Parafiniuk S.: *Nakłady transportowe w badanych gospodarstwach rodzinnych*. *Inżynieria Rolnicza*, 2006, 13 (88), 377-383.
- [8] Sawa J., Parafiniuk S.: *Efektywność nakładów pracy w wybranych systemach produkcji rolniczej*. *Motrol*, 2003, 5, 101-116. Lublin: PAN.
- [9] Szuk T.: *Usługi maszynowe w wybranych gospodarstwach rolnych Dolnego Śląska*. *Inżynieria Rolnicza*, 2009, 8 (117), 207-213.
- [10] Tabor S., Kuboń M.: *Usługi techniczne i usługi produkcyjne w wybranych gospodarstwach powiatu miechowskiego*. *Inżynieria Rolnicza*, 2010, 7 (125), 207-213.