
ANNALS OF THE POLISH ASSOCIATION OF AGRICULTURAL AND AGRIBUSINESS ECONOMISTS

ROCZNIKI NAUKOWE
STOWARZYSZENIA EKONOMISTÓW ROLNICTWA I AGROBIZNESU

Received: 20.06.2024

Acceptance: 26.08.2024

Published: 27.09.2024

JEL codes: C83, D40, H20, H25, Q10, Q18, Y10

Annals PAAAE • 2024 • Vol. XXVI • No. (3)

Open Access, License: CC BY 4.0

DOI: 10.5604/01.3001.0054.7155

TADEUSZ OLEKSIAK¹, DAGMARA PACOŃ

Plant Breeding and Acclimatization Institute (IHAR)
– National Research Institute in Radzików, Poland

THE EFFECTIVENESS OF USING SUBSIDIES FOR CERTIFIED SEED MATERIAL USED FOR SOWING OR PLANTING

Key words: farms, subsidies, effectiveness, certified seeds, farmer decisions, surveys

ABSTRACT. The work aims to assess the effectiveness of the subsidy system for purchasing certified seed material. The assessment was made based on data from the Statistics Poland on the sown area, data from the State Plant Protection Inspectorate on seed trade, and data from the Agency for Restructuring and Modernization of Agriculture on the amount of support provided to farmers, the analyzed changes in the amount of subsidies and the supply of certified seeds. Analyzing the motivation of farmers buying seeds was based on surveys conducted on farms in 2023 – the research concerned species covered by the subsidy system for cereals, potatoes, and large-seeded legumes. In total, the results were collected from 1,008 farms. A stimulating effect of subsidies in the initial period of their application and an improvement in the supply of certified seed material to farms was demonstrated. Maintaining the subsidies unchanged, and later, even at a nominally lower level, resulted in the disappearance of their stimulating effect. The main factors limiting farmers' motivation to purchase certified seed material were indicated: the high prices of seed material, a lack of knowledge about the benefits of using certified seed material, low subsidy amounts, the exhaustion of the de minimis limit, and thus the possibility of using subsidies as well as an overly complicated subsidy system.

¹ Corresponding author: t.oleksiak@ihar.edu.pl

INTRODUCTION

The increase in production using agrotechnical methods is limited by the pressure to reduce mineral fertilization and the use of chemicals, which results from economic (rising production costs) and environmental reasons (active substances may be dangerous to people or the environment). Despite such limitations, further increase in yield is possible, and cultivation technologies are still being improved (e.g., precision farming). There are possibilities to increase production by popularizing biological progress that uses high-quality seeds of more fertile varieties, more resistant to stress factors and adapted to changing growing conditions. The continuing gap between the yields obtained in experiments and production indicates great but unused opportunities to increase yields in production [Wicki 2016, Oleksiak 2023a, 2023b]. The main factor determining the increase in production should be biological progress, especially since certified seed material (CSM), which enables using breeding achievements, is a relatively cheap means of production. The costs incurred for purchasing CSM, thanks to which we can introduce new varieties into cultivation, are comparable to the costs of chemical protections, and lower than the costs of fertilization. Improving the use of the existing yield potential of varieties is possible by popularizing the use of certified seed material, which guarantees quality in terms of parameters determining the sowing value (high germination capacity, vigor, and purity), and is also a carrier of breeding progress that enables the introduction of better-yielding varieties into production and varieties more resistant to environmental stress. One of the methods aimed at popularizing the use of CSM is a system of subsidies for farmers using such seed material.

The work aims to assess the effectiveness of such a system and define the factors influencing farmers' decisions to purchase certified seeds.

MATERIAL AND METHODS

Based on data from Statistics Poland (SP) on the sown area and data from the State Plant Health and Seed Service (SPHSS) on seed trade and the Agency for Restructuring and Modernization of Agriculture (ARMA) on the amount of support provided to farmers purchasing CSM, changes in the supply of certified seeds were analyzed and the development relationship assessed the seed market on the size and scope of the application of subsidies.

In the following years, the share of support was determined by the cost of seed material, using subsidy rates, and the cost of seeds or seed potatoes for sowing per hectare. The cost of seed material was calculated using data from the SP on average prices of certified seed material of individual species covered by the subsidies system. The calculation assumes the minimum number of certified seeds or seed potatoes required when submitting subsidy

Table 1. Surveyed farms

Region (voivodeship)	Number of farms	Range of area of surveyed farms [ha]	Average farm area [ha]	Share of farms in groups by area [ha]				Number of fields		
				%				cereals	potatoes	legumes
				[10-25)	[25-50)	[50-100)	≥100			
Poland	1,008	10.2-575.0	47.5	45	24	20	11	2,257	221	149
Dolnośląskie	39	10.8-260.8	55.2	36	26	23	15	112	8	6
Kujawsko-pomorskie	85	10.2-220.5	28.2	65	22	12	1	131	22	8
Lubelskie	100	10.3-575.0	52.2	35	27	29	9	291	31	10
Lubuskie	29	10.5-150.2	39.4	45	31	14	10	96	0	3
Łódzkie	74	11.0-160.0	30.5	62	26	7	5	123	30	5
Małopolskie	30	12.5-285.1	81.8	17	23	30	30	86	3	4
Mazowieckie	126	10.5-220.0	35.3	62	16	14	8	283	35	10
Opolskie	30	15.5-250.3	67.3	17	27	37	20	100	5	20
Podkarpackie	33	10.3-220.0	35.9	70	12	9	9	74	8	7
Podlaskie	110	11.1-150.9	24.6	71	19	9	1	196	10	1
Pomorskie	69	11.0-401.0	80.7	17	26	30	26	88	7	26
Śląskie	31	10.3-81.8	44.2	19	32	48	0	61	12	1
Świętokrzyskie	31	13.0-110.0	49.2	16	35	42	6	92	5	6
Warmińsko-mazurskie	67	11.0-300.1	60.2	27	22	31	19	173	22	8
Wielkopolskie	113	10.9-270.0	36.1	53	28	13	5	245	12	13
Zachodniopomorskie	41	13.4-560.1	129.2	2	22	22	54	106	11	21

Source: own study based on survey data

applications, which is 150 kg for wheat and 2,000 kg for potatoes. Influencing factors in the decision of farmers to purchase CMS were analyzed based on surveys carried out in 2023 using the method of direct interviews conducted on farms. The survey covered the entire territory of Poland, with all voivodeships in proportion to their size (minimum 29 farms per voivodeship). The research concerned species covered by the subsidy system: cereals (winter wheat, spring wheat, winter barley, spring barley, oats, triticale, and rye), potatoes and legumes, and concerned farms belonging to the agricultural type (TF8) 1 (15,16), those carrying out field crops and type 8 crops, i.e. mixed [Commission Regulation (EC) No. 1242/2008, Journal of Laws, L 335 of 13/12/2008]. In total, results were collected from 1,008 farms. The sample sizes from individual voivodeships considered the differences in sown area by voivodeship. For the research, survey forms containing information about farmers, soil conditions, agricultural technology used, yields in individual crops, and support system analysis for purchasing the CSM were prepared (Table 1).

RESULTS

MECHANISM, AMOUNT, AND SCOPE OF PAYMENTS FOR QUALIFIED SEED MATERIAL

The subsidy program for farmers purchasing CSM has been implemented since 2007, by the Act on the organization of certain agricultural markets [Journal of Laws 2004, No. 42, items 386]. The mechanism aims to provide subsidies for elite or certified seed material used for sowing or planting to agricultural producers within the meaning of the Act on the national system for registering producers, registering farms, and registering applications for payments [Journal of Laws 2004, No. 10, item 76]. Subsidies are granted to agricultural producers for the area of arable land sown or planted with elite or certified seed material of cultivated plant species specified in the regulation of the Council of Ministers on the list of species [Journal of Laws 2023, item 2565]. The beneficiary must have agricultural plots on which subsidized crop species are grown, with a total area of not less than 1 ha, and purchase at least the minimum required quantity of seeds or seed potatoes. For example, for wheat of population varieties, it is 150 kg, and for hybrid varieties 70 kg or 1.7 seed units, while for rye it is 90 kg or 2 seed units in the case of population varieties and 60 kg or 1.7 seed units in the case of hybrid varieties. Detailed information is in the regulation of the Ministry of Agriculture on the use of the minimum amount of seed material [Journal of Laws 2022, item 999]. Subsidies are granted as part of *de minimis* aid in agriculture, which is settled on an ongoing basis in a 3-year system, i.e., in the year of application and the two preceding tax years. The total amount of aid for an agricultural producer cannot exceed EUR 20,000 (the limit increased in 2019 from

EUR 15,000. Once the limit of EUR 20,000 is exceeded, assistance cannot be granted for such an application (Article 3 (7) of Commission Regulation (EU) No 1408/2013 [OJL 352]). The aid is also not granted if the de minimis aid limit exceeds support for Polish agriculture. The regulation of the Council of Ministers is the current subsidy rates [Journal of Laws 2023, item 2563]. In 2023, as part of aid for farmers at risk of losing financial liquidity due to the war in Ukraine, subsidies for elite or certified seed material were introduced under the so-called war aid. Aid was granted for the indicated area of arable land sown with seed material of the elite or certified category, but not more than 50 ha.

THE ACTUAL VALUE OF SUBSIDIES – THEIR SHARE IN THE COSTS OF SEED MATERIAL

In the years of system operation (2007-2023), the total amount of subsidies amounted to PLN 1.5 billion. The analyzed years can be distinguished into two periods. Until 2015, there was growing interest in subsidies on the part of farmers. The rates remained constant, but the area of plantations benefiting from the support system increased, thus increasing the total amount of subsidies for agriculture. Since 2015, with the introduction of a variable aid rate granted per 1 ha, there has been a gradual reduction in the area covered by subsidies (Figure 1, Table 2).

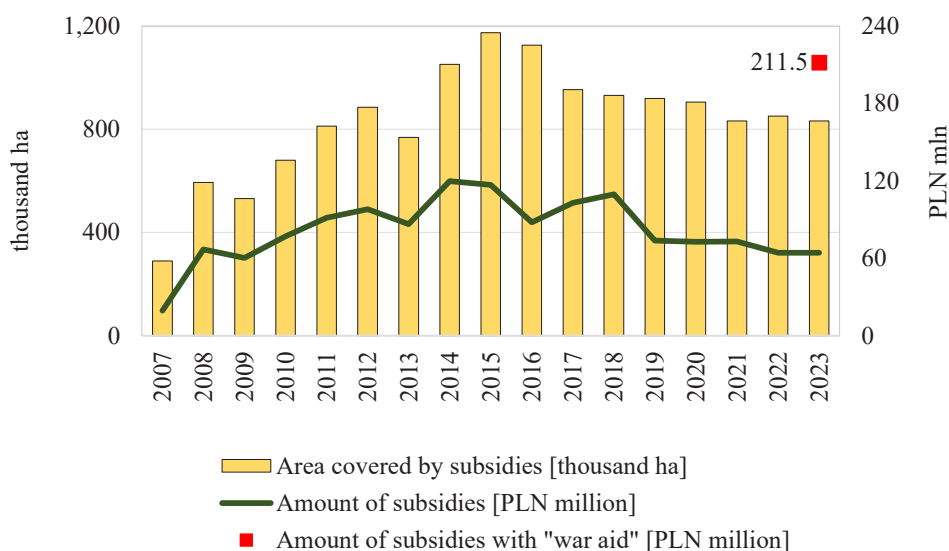


Figure 1. Amounts and area covered by subsidies for seed according to the Agency for Restructuring and Modernization of Agriculture (ARMA)

Source: own study based on ARMA data

EFFECTS OF SUBSIDIES

Following the introduction of the subsidy system, there was a gradual increase in the sales volume of CSM used for sowing basic cereals. In 2015, the sales volume of basic cereal seeds, calculated based on SPHSS data, increased to 48 kg per 1 ha. In the following years, periodic declines were observed, followed by an increase to a level similar to the turn of 2015/2016 (Figure 2). Also, in the case of seed potatoes, an increase in the use of certified material was observed in the first phase (Figure 3).

It is difficult to unequivocally answer to what extent subsidies determined the development of the seed market, because the demand for CSM is the result of many changing factors, even if the purchase cost is considered the main factor. The decision to purchase certified seeds is influenced by elements such as production technology, seed exchange strategy, awareness of the benefits of using CSM, economic factors, and the market situation. However, there is a visible correlation between the amount of support and the volume of CSM sales. Support in the form of subsidies remained at a constant level until 2014, and in later years the value of the rates changed from year to year. Only in 2018 was the value higher than at the beginning of this subsidy system (Table 2). During the same period, CSM prices increased. As a result, the real value of support, which initially represented over 50% of the expense of purchasing wheat seeds, decreased.

Table 2. Subsidy rates per hectare of crops where CSM was used

Type of crop	Years																
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cereals	50*/100**	100	100	100	100	100	100	100	80	69	92	102	69	68	75	65	200
Legumes (including soybeans)	60*/160**	160	160	160	160	160	160	160	130	111	148	163	110	109	120	115	300
Soybeans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
Potatoes	300*/500**	500	500	500	500	500	500	500	400	347	462	511	343	340	374	350	1,200

* First call for applications, ** second call for applications

Source: own study based on the Regulations of the Council of Ministers of November 22, 2023 [Journal of Laws 2023, item 2565]

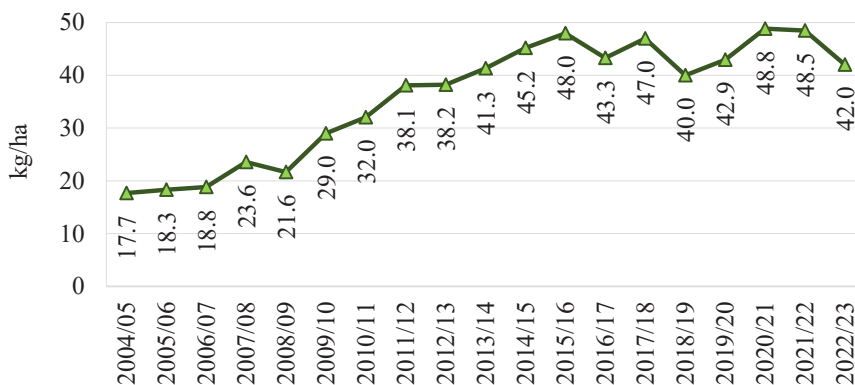


Figure 2. Sales of certified seeds of cereals

Source: own calculations using State Plant Health and Seed Inspection data on sales and data from the Statistics Poland on the sowing volume

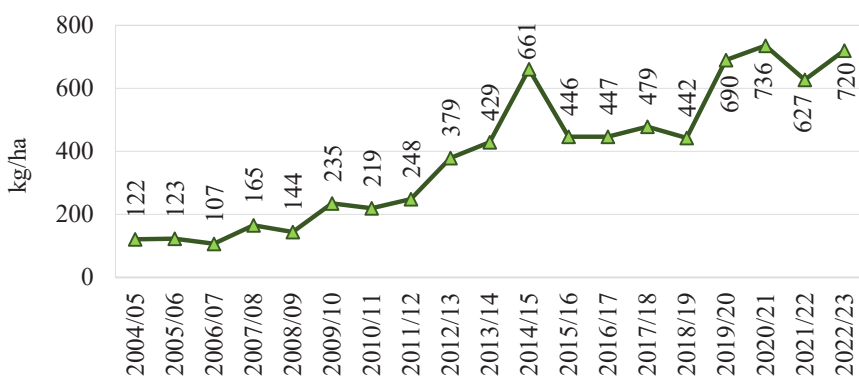


Figure 3. Sales of certified seed potatoes

Source: own calculations using sales data from State Plant Health and Seed Inspection and data on sowing volume from the Statistics Poland

In 2022, the share of support in the cost of seeds was only 13.3% (Figure 4). Only in 2023, after the introduction of one-time so-called war aid, did the share of actual support increase to a level similar to that provided by subsidies in the initial years of the system's operation.

The first years after the commencement of the subsidy system were a period of significant growth in the sales of CSM cereals and seed potatoes. Subsidies in this period stimulated the increase in seed production and sales, thus improving the supply of certified seed material to farms and the better use of breeding progress. The policy of subsidies for purchased seeds caused an increase in demand. Intervention activities also

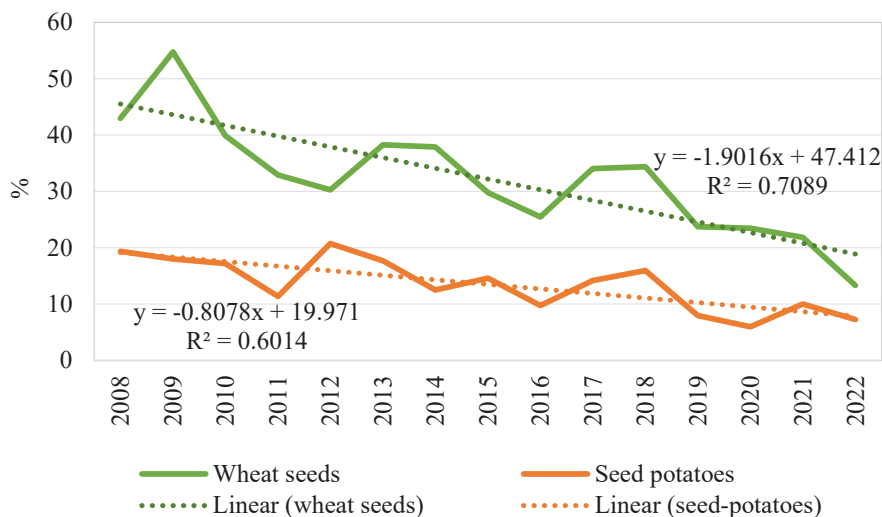


Figure 4. Share of subsidies in the cost of seed material

Source: own calculations based on Statistics Poland data and regulations of the Council of Ministers of May 10, 2022 [Journal of Laws 2022, item 999] and of November 22, 2023 [Journal of Laws 2023, item 2565]

supported breeding farms and seed companies providing seed supply and operating on market principles. The stimulating effect of subsidies on the functioning of the market was confirmed by research by Michał Jerzak and Wojciech Mikulski [2017] and Ludwik Wicki [2017]. In 2013–2016, subsidies covered almost the entire sowing area that used CSM, and in 2008–2016, they contributed to increasing the consumption of certified seeds by approximately 30%. According to Majchrzycki and Pepliński [2017], the stimulation of the wheat seed market was observed only in the case of foreign companies, while the reproduction area of Polish varieties decreased from 52% in 2010 to 30% in 2016. After 2015, there was an explicit slowdown in growth trends and stagnation in the production and sale of certified cereal seed material and, to a lesser extent, potatoes. In this case, it was mainly due to the decreasing cultivation area. The reason could also be the decreasing impact of the support system for buyers of certified seeds.

Keeping subsidies unchanged, and later even nominally lower, resulted in the disappearance of the stimulating effect of subsidies on the decision to purchase certified seeds. This happened despite the significant increase in yield achieved by using CSM. That resulted in the underutilization of the yield potential and the possibility of increasing harvests.

FACTORS DIFFERENTIATING THE USE OF CSM

The analyzed sample included commercial farms with an area larger than the average farm area in Poland (Table 1). The share of certified seed material on the surveyed farms was also relatively large (Figure 5), higher than that calculated based on SPHSS data on the volume of seed sales and Statistics Poland data on the size of sowings of individual species in the country. The shares of cereals and potatoes are 24.9% and 24.5%, respectively [Oleksiak 2023b].

Based on the surveys, the assessment of the importance, value, and use of CSM was analyzed, depending on the education, age of farmers, and size of farm. An attempt was made to determine which factors influenced farmers' decisions to purchase CSM and use the subsidy system. Education, as in the work of Bogdan Klepacki [2005], was one of the differentiating factors determining the purchase of CSM. Most farms using KMS belonged to farmers with higher agricultural education (77%), slightly fewer with technical and vocational agricultural education (68-70%), and much fewer with general education (also with higher non-agricultural education). Farmers with primary education used the least qualified material (25%) (Figure 6).

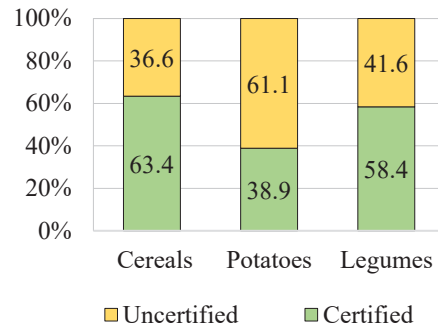


Figure 5. Share of certified seeds on the surveyed farms

Source: own study based on survey data

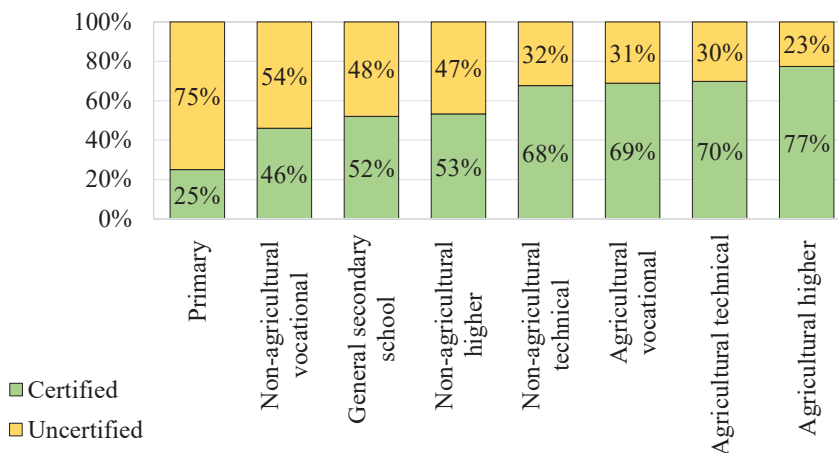


Figure 6. The use of CSM depending on farmers' education

Source: own study based on survey data

Farmers' age was also a factor differentiating use. CSM was used most often by farmers in the age group of 40-60 years, slightly less by farmers from the age group of 31-40 and over 61, and the least by farmers under 30 years of age (Figure 7).

The use of certified seeds also depended on the size of the farm. The larger the farm, the more commonly CSM was used (Figure 8).

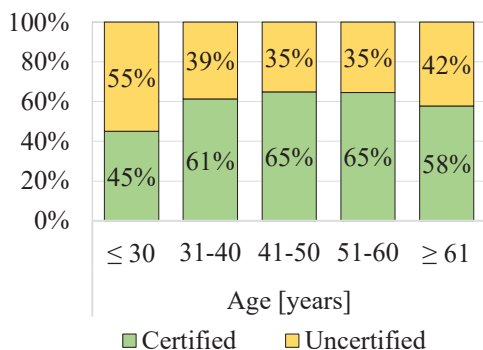


Figure 7. Use of certified seed material depending on the age of farmers

Source: own study based on survey data

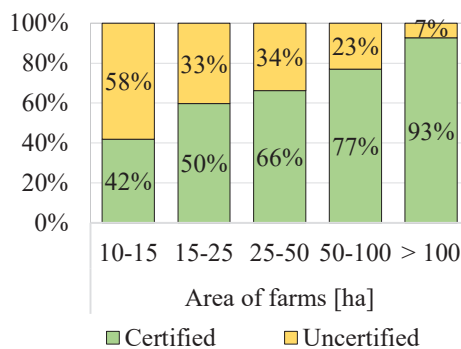


Figure 8. Use of certified seed material depending on farm size

Source: own study based on survey data

The influence of the area of arable land on the farm on the use of CSM was confirmed by the research of Marzena Lisowska and her team [Lisowska et al. 2013].

There are clear indications of an increase in sales and use of good seed material because most farmers using CSM (over 80%) see the benefits associated with it and positively assess its impact on yields (89%) and profitability (82%) (Figure 9).

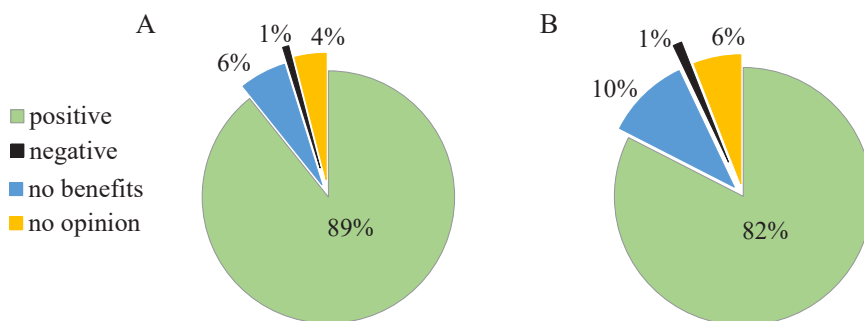


Figure 9. Overall assessment of the impact of using certified seeds on yields (A) on profitability (B)

Source: own study based on survey data

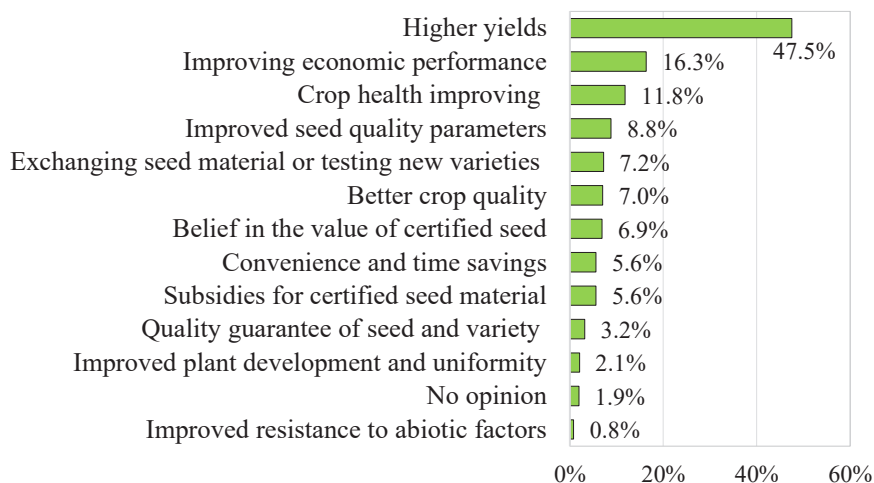


Figure 10. Factors encouraging farmers to use certified seeds

Source: own study based on survey data

The surveyed farmers indicated the main factors determining the use of CSM. Nearly half of them designate an increase in yields. Indicated as decisive factors were the economic effects and health of crops, the quality characteristics of seeds, and yield. Only less than 6% of surveyed farmers indicated subsidies as a factor in deciding on the use of certified seed material (Figure 10).

As the farm area increased, the part of farmers using the subsidy system in the surveyed area groups increased. In fields where farmers do not use CSM, they sow farm saved seeds. Most were seeds from the first propagation (63%). The share of seeds of the second or third reproduction was also significant (28%). Uncertified seeds purchased or exchanged accounted for 9% (Figure 11).

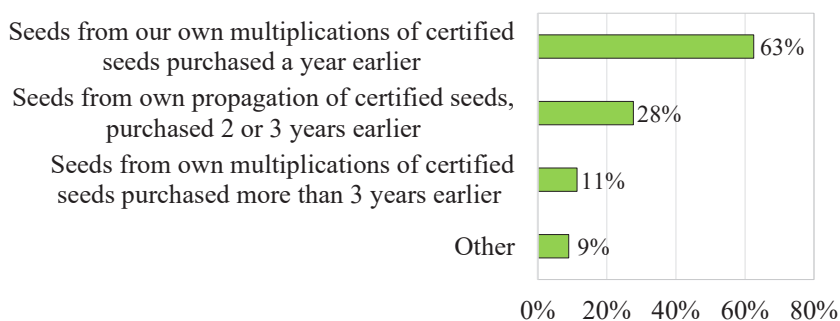


Figure 11. Seeds used in fields where farmers do not use certified seeds

Source: own study based on survey data

When asked what would encourage them to use such material, farmers who do not use CSM mainly indicated economic factors: lowering seed prices (49.9%) and increasing subsidy rates (9.1%). Notable is the large percentage of farmers indicating the importance of knowledge about the advantages of certified material and related promotional activities (24.3%). The need for such actions results from the presence of a significant group of farmers who have a negative attitude or are unconvinced about the advisability of using CSM. People with this attitude constituted as much as 15% of a given group and approximately 6% of all respondents (Figure 12).

The vast majority of surveyed farmers indicated the influence of subsidies on their decisions to purchase CSM. Only 27% of farmers said that subsidies had no influence on their decision, 40% of farmers would buy certified seeds less often, and 33% would not decide to buy them (Figure 13).

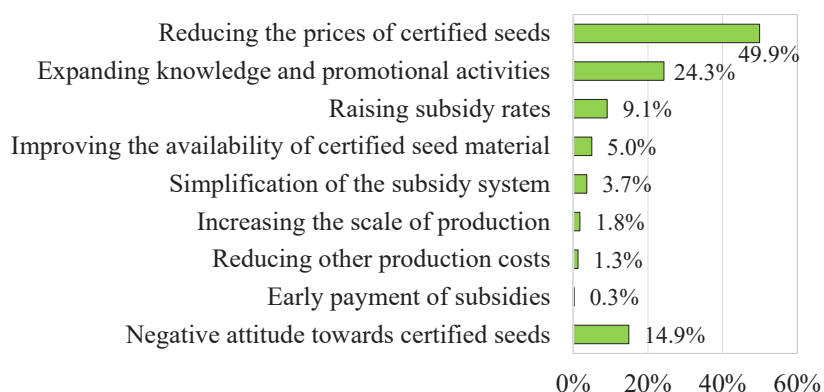


Figure 12. Factors that may encourage farmers to use certified seeds

Source: own study based on survey data

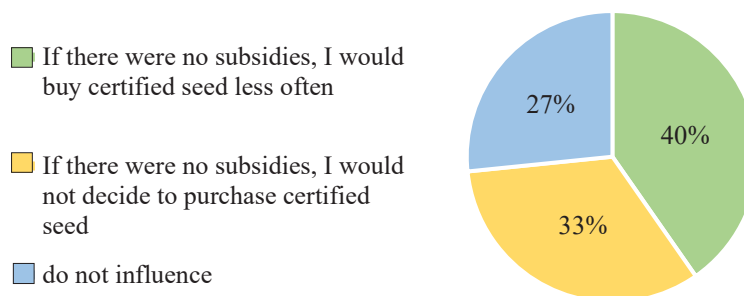


Figure 13. The impact of subsidies on the decision to purchase certified seeds

Source: own study based on survey data

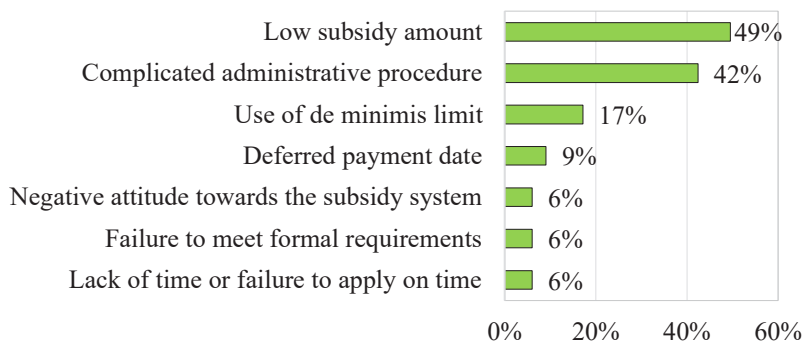


Figure 14. Reasons for not using subsidies for certified seed

Source: own study based on survey data

Farmers were also asked about the reasons for not using subsidies. Among farmers who used CSM but did not use the offered support system, the most common reasons for their resignation were a small amount of subsidy – 49%, and a complicated administrative procedure – 42%. A significant reason indicated by 17% of respondents was the exhaustion of the de minimis limit (Figure 14).

CONCLUSIONS

1. Subsidies for certified seed material constitute a factor influencing the improvement of the supply of seed material and better use of breeding progress. The survey research confirmed the influence of subsidies on the decision to purchase CSM.
2. The beneficial effects were observed primarily in the initial period of their use until 2015. Subsidies stimulated the increase in seed production and seed sales, and thus improved the supply of certified seed material to farms and the better use of breeding progress.
3. For the system to function properly and influence further increase in the use of certified seeds or seed potatoes, the support value should consider changing production costs. Since 2015, there has been a decline in the real value of subsidies. For cereals, support covered only 13.3% of seed costs in 2022.
4. Keeping subsidies unchanged and later even nominally lower, has resulted in the disappearance of the stimulating effect of subsidies on the decision to purchase certified seeds. The result is a noticeable slowdown and stagnation in the production and sale of cereal CSM. To a lesser extent, this also applies to seed potatoes, but in this case, it was mainly due to decreasing cultivation area. This is despite the demonstrated significant increase in yield obtained by using CSM.

5. The motivation to purchase CSM is reduced primarily by economic factors: high prices of seed material and low amounts of subsidies, which do not compensate for growing expenditure on certified seeds.
6. Interest in purchasing seeds is also limited by imperfections in the functioning of the support system: exhaustion of the de minimis limit, and thus the possibility of using subsidies, an overly complicated system of subsidies and delays in payment, the dependence of the amount of subsidies on the area declared in the applications submitted to the agency and the size of funds in a given financial year.
7. The use of support and CSM is also limited by a lack of knowledge of some farmers about the benefits associated with them. CSM is mainly used by farmers who are convinced of the benefits of using such material. The support that effectively encouraged them to purchase and use proven seed material translates into an improvement in assessing the advisability of using CSM; over 80% of farmers using CSM indicated that it affects better yields and the profitability of cultivation.

BIBLIOGRAPHY

- ARiMR (Agencja Restrukturyzacji i Modernizacji Rolnictwa, Agency for Restructuring and Modernization of Agriculture). 2007-2023. *Pomoc krajowa* (National aid), <https://www.gov.pl/web/arimr/pomoc-krajowa2>, access: 10.06.2024.
- GUS (Statistics Poland, SP). 2007-2023. *Produkcja upraw rolnych i ogrodnich w latach 2007-2023 roku* (Production of agricultural and horticultural crops in 2007-2023), <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/uprawy-rolne-i-ogrodnicze/produkcja-upraw-rolnych-i-ogrodnich-w-2023-roku,9,22.html>, access: 15.05.2024.
- Jerzak Michał A., Wojciech Mikulski. 2017. Znaczenie dopłat do produkcji roślin strączkowych w odbudowie rynku rodzimych surowców białkowych pochodzenia roślinnego w Polsce (The importance of subsidies for the production of grain legumes for reconstruction of the domestic market of protein raw materials of vegetable origin in Poland). *Zagadnienia Ekonomiki Rolnej* 2 (351): 152-163. DOI: 10.5604/00441600.1240395.
- Klepacki Bogdan 2005. Wykształcenie jako czynnik różnicujący zasoby, organizację i wyniki ekonomiczne gospodarstw rolniczych (Education as a factor of farm resource, organization and economic results differentiation). *Roczniki Naukowe SERIA 7* (1): 124-128.
- Lisowska Marzena, Antoni Bombik, Katarzyna Rymuza, Jolanta Ziemińska, Małgorzata Wyrzykowska. 2013. Stosowanie kwalifikowanego materiału siewnego w wybranych gospodarstwach rolnych w rejonie Polski środkowo-wschodniej (Application of certified seed material in selected farms in Central-Eastern Poland). *Fragmenta Agronomica* 30 (2): 112-122.

- Majchrzycki Dariusz, Benedykt Pepliński. 2017. Analiza rynku kwalifikowanego materiału siewnego pszenicy ozimej (Analysis of the winter wheat certified seed market). *Roczniki Naukowe SERIA XIX* (2): 158-164. DOI: 10.5604/01.3001.0010.1181.
- Oleksiak Tadeusz. 2023a. Znaczenie postępu hodowlanego w produkcji pszenicy ozimej (The importance of breeding progress in winter wheat production). *Annals of the Polish Association of Agricultural and Agribusiness Economists XXV* (4): 338-349. DOI: 10.5604/01.3001.0054.0855.
- Oleksiak Tadeusz. 2023b. Rynek nasion. [W] *Analizy Rynkowe. Rynek środków produkcji dla rolnictwa – stan i perspektywy* Nr 50 (Seed market. [In] Market Analyses. The market means production of agricultural – status and prospects 50), ed. Arkadiusz Zalewski, 57-64. Warszawa: IERIGŻ PIB.
- PIORiN (Państwowa Inspekcja Ochrony Roślin i Nasiennictwa, State Plant Health and Seed Inspection). 2023. *Informacja o obrocie materiałem siewnym w okresie sprawozdawczym od 1.07.2022 do 30.06.2023* (Information on the trade in seed material in the reporting period from July 1, 2022 to June 30, 2023), <https://www.gov.pl/web/piorin/obrot-materialem-siewnym>, access: 10.05.2024.
- Rozporządzenia Komisji (WE) NR 1242/2008 z dnia 8 grudnia 2008 r. ustanawiające wspólnotową typologię gospodarstw rolnych*. Dz.U. L 335 z 13.12.2008 (Commission Regulation (EC) No 1242/2008 of 8 December 2008 establishing a community typology for agricultural holdings). Official Journal 2008, L 335, No. 13, item 12.
- Rozporządzenie Komisji (UE) NR 1408/2013 z dnia 18 grudnia 2013 r. w sprawie stosowania art. 107 i 108 Traktatu o funkcjonowaniu Unii Europejskiej do pomocy de minimis w sektorze rolnym*. Dz.U. L 352 z 24.12.2013 (Commission Regulation (EU) No 1408/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid in the agriculture sector). Official Journal, L 352, 24.12.2013.
- Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 10 maja 2022 r. zmieniające rozporządzenie w sprawie minimalnej ilości materiału siewnego, jaka powinna być użyta do obsiania lub obsadzenia 1 ha powierzchni gruntów ornych*. Dz.U. 2022, poz. 999 (Regulation of the Minister of Agriculture and Rural Development of May 10, 2022, amending the regulation on the minimum amount of seed that should be used to sow or plant 1 ha of arable land). Official Journal, 2022, item 999.

Rozporządzenie Rady Ministrów z dnia 22 listopada 2023 r. w sprawie wykazu gatunków roślin uprawnych, do których materiału siewnego kategorii elitarny lub kwalifikowany lub ekologicznego materiału siewnego kategorii elitarny lub kwalifikowany przysługuje dopłata z tytułu zużytego do siewu lub sadzenia materiału siewnego kategorii elitarny lub kwalifikowany lub ekologicznego materiału siewnego kategorii elitarny lub kwalifikowany. Dz.U. 2023, poz. 2565 (Regulation of the Council of Ministers of November 22, 2023 on the list of cultivated plant species for which seed material of the elite or certified category or organic seed of the elite or certified category is entitled to a subsidy for seed material of the elite or certified or organic category used for sowing or planting seed material of the elite or certified category). Official Journal, 2023, item 2565.

Ustawa z dnia 11 marca 2004 r. o organizacji niektórych rynków rolnych. Dz.U. 2004, nr 42, poz. 386 (Act of 11 March 2004 on the organization of certain agricultural markets). Official Journal 2004, No. 42, item 386.

Ustawa z dnia 18 grudnia 2003 r. o krajowym systemie ewidencji producentów, ewidencji gospodarstw rolnych oraz ewidencji wniosków o przyznanie płatności. Dz.U. 2004, nr 10, poz. 76 (Act of December 18, 2003, on the national system for registering producers, registering farms and registering applications for payments). Official Journal, 2004, No. 10, item 76.

Wicki Ludwik. 2016 Wykorzystanie potencjału plonowania zbóż w produkcji rolniczej w Polsce (The level of utilization of potential of yielding of cereals species in Poland). *Roczniki Naukowe SERIA XVIII* (5): 267-273.

Wicki Ludwik. 2017 Poziom i zakres wsparcia upowszechniania postępu biologicznego w produkcji roślinnej w ramach działań Agencji Rynku Rolnego (The level and scope of support of biological progress dissemination in crop production in Poland within the measures of Agricultural Market Agency). *Zeszyty Naukowe SGGW. Polityki Europejskie, Finanse i Marketing* 18 (67): 259-271. DOI: 10.22630/PEFIM.2017.18.67.38.

WPŁYW DOPLĄT NA STOSOWANIE KWALIFIKOWANEGO MATERIAŁU SIEWNEGO W GOSPODARSTWACH ROLNYCH

Słowa kluczowe: gospodarstwa rolne, dopłaty, efektywność, nasiona kwalifikowane, decyzje rolników, badania ankietowe

ABSTRAKT. Celem pracy jest ocena skuteczności funkcjonowania systemu dopłat na zakup kwalifikowanego materiału siewnego. Ocenę wykonano na podstawie danych Głównego Urzędu Statystycznego o powierzchni zasiewów, danych Państwowej Inspekcji Ochrony Roślin o obrocie nasiennym oraz Agencji Restrukturyzacji i Modernizacji Rolnictwa o wielkości wsparcia udzielanego rolnikom. Analizowano zmiany wielkości subsydiów i zaopatrzenia w nasiona kwalifikowane. Na podstawie badań ankietowych, prowadzonych w gospodarstwach rolników w 2023 roku, przeprowadzono analizę motywacji rolników kupujących nasiona. Badania dotyczyły gatunków objętych systemem dopłat, tzn. zbóż, ziemniaków i roślin bobowatych grubonasiennych. Łącznie zebrano wyniki z 1008 gospodarstw. Wykazano stymulujący wpływ dopłat w początkowym okresie ich stosowania i poprawę zaopatrzenia gospodarstw w kwalifikowany materiał siewny. Utrzymywanie dopłat na niezmiennym, a w późniejszym okresie nawet nominalnie niższym poziomie, spowodowało zanik ich stymulującego wpływu. Wskazano, że główne czynniki ograniczające motywację rolników do zakupu kwalifikowanego materiału siewnego to: wysokie ceny materiału siewnego, brak wiedzy o korzyściach wynikających ze stosowania kwalifikowanego materiału siewnego, niskie kwoty dopłaty, wyczerpanie limitu *de minimis*, a tym samym możliwości korzystania ze wsparcia oraz nadmiernie skomplikowany system dopłat.

AUTHORS

TADEUSZ OLEKSIAK, PHD

ORCID: 0000-0003-3208-2023

Plant Breeding and Acclimatization Institute (IHAR)

– National Research Institute in Radzików

e-mail: t.oleksiak@ihar.edu.pl

DAGMARA PACOŃ, PHD

ORCID: 0000-0002-3619-9424

Plant Breeding and Acclimatization Institute (IHAR)

– National Research Institute in Radzików

e-mail: d.pacon@ihar.edu.pl

Proposed citation of the article:

Oleksiak Tadeusz, Dagmara Pacoń.2024. The effectiveness of using subsidies for certified seed material used for sowing or planting. *Annals PAAAE* XXVI (3): 112-128.