ANNALS OF THE POLISH ASSOCIATION
OF AGRICULTURAL AND AGRIBUSINESS ECONOMISTS

received: 26.04.2019
acceptance: 22.05.2019
published: 03.06.2019

Annals PAAAE • 2019 • Vol. XXI • No. (2)

JEL codes: Q13, P48, O43

DOI: 10.5604/01.3001.0013.2082

MARTA DOMAGALSKA-GRĘDYS

Agriculture University in Krakow, Poland

FACTORS OF IMPLEMENTATION AND IMPORTANCE IN THE PROCESS OF KNOWLEDGE EXCHANGE IN THE CONSERVATIVE ANIMALS NETWORK OF BREEDERS AND INDUSTRY ORGANISATIONS. THE POLISH CASE[1]

Key words: knowledge, producer of animals of conservation breeds, industry organisation of animal breeders

ABSTRACT. Knowledge is a key resource to support European agriculture in meeting today's challenges such as global competition, food safety, human, animal and plant health as well as environmental protection requirements. The question arises as to which organisations in the current institutional system of agriculture provide knowledge to farmers who keep livestock of conservative breeds at the expected level of quality and exchange (frequency)? The aim of the research was to identify a new role of industry organisations in the transfer of knowledge and indicate variables determining the importance and exchange of farmers' knowledge with industry organizations. The survey was conducted among 145 farmers in south-eastern Poland in 2017. The research instrument was a questionnaire of interviews with farms and representatives of industry organisations. Multiple regression analysis was used to demonstrate the influence of factors on the level of knowledge exchange (importance and frequency). The results of the research indicate that industry organisations can address their knowledge mainly to farms with poor financial stability (e.g. without a sales contract) and that the planned succession on the farm motivates the farmer to seek knowledge. Among the group of factors indifferent to the validity and implementation of knowledge exchange are: 1st the occurrence of a successor on the farm, 2nd the contracting of sales, 3rd the size of the farm and the 4th the age of the owner. It is recommended to create specialized industry compounds in Poland for conservative animal breeds (not only within species).

INTRODUCTION

Knowledge is a key resource to support European agriculture in meeting today's challenges such as global competition, food safety, human, animal and plant health as well as environmental protection requirements. On the other hand, support for knowledge transfer in rural areas is particularly important, as commonly operating economic entities (farms) represent a low value of human capital due to knowledge and skills deficits [Bański 2015].

[1] The publication concerns the BIOSTRATEG2 / 297267/14 / NCBR / 2016 project, funded by the National Center for Research and Development under the Biostrategy programme entitled 'Directions for the Use and Conservation of Livestock Genetic Resources in the Conditions of Sustainable Development.

In particular, there is a lack of cooperation skills. Despite these shortcomings, farmers, breeders of livestock of conservative breeds (cattle, sheep and pigs), willingly participate in the implementation of agri-environmental programmes. The aim of the research was to determine the role of trade unions for breeders of conservation breeds in the transfer of knowledge and indicate variables determining the importance and exchange of farmers' knowledge with trade organizations. The results are a continuation of research on breeders' relations within the framework of the project.

INSTITUTIONAL ASPECTS OF SUPPORT FOR KNOWLEDGE TRANSFER TO AGRICULTURE

The European Union supports organisations providing advisory services in agriculture within the framework of the Common Agricultural Policy, as exemplified by measures: Support to the Farm Advisory System (FAS) and Cooperation – Networking of European Innovation Partnerships (EIP) [Prager et al. 2015].

Public sector organisations play an important role in supporting farmers, but they are not able to meet the needs of most farms [Wasilewski 2011, p. 47]. Agricultural Advisory Centres (ODR), whose services are used by the largest number of farmers, are the leading centres of knowledge transfer [Wasilewski 2011, Bański 2015]. Advisory systems are becoming increasingly complex and are provided by an increasingly complex group of participatory actors [Bourne et al. 2016]. The importance of cooperation between state and non-state collective actors in policy integration and social learning of sustainable development policy guidelines have been widely studied [Dedeurwaerdere 2005a, 2005b, Dedeurwaerdere et al. 2015, Delmas, Young 2009, Kanie, Haas 2004].

The question arises as to which organisations in the current institutional system of agriculture provide knowledge to farmers who keep livestock of conservative breeds at an expected level of quality and exchange (frequency)? The changing conditions of conducting agricultural activity mean that the situation requires monitoring and the creation of a new offer of services providing knowledge and favouring its diffusion. For example, state enterprises in the service sector have a higher level of customer orientation [Liu et al. 2002]. Research results also suggest that the interaction between entrepreneurship and integrated market orientation, as well as human resources practice, has a significant impact on customer value and innovation [Nasution et al. 2011]. Research conducted by Anna Bisaga [2014], shows that trade representatives from corporations are involved in the diffusion of knowledge for farmers, providing knowledge on quality requirements for agricultural materials, new plant varieties and animal breeds, thus becoming a source of market information. Nowadays, it is about the effective diffusion of knowledge to farmers, which cannot be ordered or enforced**.** Organisations wishing to institutionalise the diffusion of knowledge must consider the motivational factors that shape the intentions of individuals (farmers), seek and share knowledge at the micro and smoothly transfer knowledge to the macro level [Choua, Hsu, 2018]. Referring to the results of a study by Molly Wasko and Samer Faraj [2005], it can be assumed (hypothesis) that producers of conservative breeds will develop communication and knowledge exchange by building strong relations. It is worth noting that knowledge can be seen as a public good for all

market participants, including participants in knowledge exchange in long-term profits [Ma, Agarwal 2007, Maruping, Magni, 2012a, 2012b, Zhou et al. 2012, Durcikova et al. 2011, He, Wong 2004]. This aspect refers to the issues of the article. Keepers of conservation breeds exchange knowledge and pass it on (consumers, neighbours, institutions with which they cooperate, e.g. industry organisations, research institutes, Agricultural Advisory Centres, banks, service providers, commercial agents).

So far, research conducted by, among others, Adam Wasilewski [2011], shows that the public institutional system functioning in Poland enabled but did not fully satisfy the knowledge needed by farmers.

KNOWLEDGE NEEDED BY BREEDERS OF CONSERVATIVE BREEDS (CATEGORIES OF KNOWLEDGE)

Breeders of conservative breeds, in addition to their technological knowledge, are included in a number of administrative obligations, such as keeping herd books and compliance with the rules typical of each breed of animal. Getting into regulations and the market requires different categories of knowledge:

1. The know-what knowledge, close to information, e.g. on breeding parameters (e.g. fat content in milk, meat).
2. The know-how knowledge that explains reality refers to rules (of supply and demand, especially in pork production taking into account price fluctuations, i.e. "pork price peaks and declines").
3. The know-how knowledge relating to the ability of farmers to do something e.g. establish a group of agricultural producers, create a niche product brand, e.g. from Red-and-White breed cow's milk or lamb from Uhruska sheep.
4. The know-how knowledge which concerns finding a contractor for a marketing project for new niche products made of materials of conservative breeds of animals (cabanos made of pork meat of the Puławy breed pigs, woolen clothes made of sheep wool or accessories made of pig or cattle sheep hides). The use of know-how classification helps to bring closer the scope of breeders' knowledge needs and to identify organisations and activities that would satisfy them effectively.

INDUSTRY ORGANISATIONS IN THE FACE OF THE NEED TO EXCHANGE KNOWLEDGE OF BREEDERS OF CONSERVATION BREEDS

Due to the adopted context of factors influencing the importance and exchange of knowledge in the paper, the position of industry organisations in the institutional environment of farms implementing the programme for the conservation of breeds of breeding animals should be emphasized. Our own research to date shows that industry organisations have very good relations with farmers and support them in various ways. Since these are neither scientific nor advisory organisations, and their position historically results from the law of socio-occupational agricultural organisations, nowadays they can be more often found among the partner organisations cooperating with farmers. The activity of industry

organisations is focused on a number of issues, including training and instructional activities and the defence of producers' interests as well as cooperation with individuals and organisations working for agriculture.

The review of Polish trade organizations of cattle, pigs and sheep shows that they support farms in contracting, organizing trainings and representing the interests of producers in Poland and abroad [Domagalska-Grędys 2017]. According to the author's research cited above, POLSUS stood out from three industry associations (cattle, pigs and sheep). POLSUS is mostly involved in activities for producers and breeders of "Puławiak" conservation breed pigs through the cooperation and promotion of meat. The Federation of Cattle Breeders and Milk Producers (FHBPM) is similarly active. Against the background of two distinctions, the Polish Union of Sheep Farmers (PZO) has become an organisation with a smaller variety of activities. Knowing the involvement of industry organisations in activities for breeders, it can be assumed that in a similar hierarchy they will occur in terms of frequency of knowledge exchange with farmers (POLSUS-FHBPM-PZO). According to the author, the role of the organisations in satisfying the needs for knowledge of the affiliated farmers is growing.

MATERIAL AND METHODS

The research on the factors of implementation and importance in the process of knowledge exchange between producers of farm animals of conservation breeds and the organisations was carried out among 145 farms, in south-eastern Poland, in 2017. The research instrument was a questionnaire carried out in the form of an interview with farms and representatives of the organisations, conducted by Agricultural Advisory Centre (ODR) employees and the author. The research was carried out in deliberately selected entities: farms with an appropriate number of animals of conservation breeds and industry organisations to which the farms belonged. A literature review and secondary data from websites were used to analyse trade unions and their role. The research task was to identify possible factors that could intensify the exchange of knowledge and improve the importance of selected categories of knowledge among the only proposed variables (x1-x11). The variables (x1-x11) referred to the characteristics of the holding (e.g. area, presence of a successor, number of persons employed, % of contract sales) and the characteristics of the farmer running the farm. The following survey questions were asked:

1. What categories of knowledge do farmers, who produce with the participation of animals of conservative breeds (cattle, sheep and pigs), implementing the programme of biodiversity of animal species, expect?
2. Are industry organisations involved in passing on knowledge needed by the farmers surveyed?
3. Is the assessment of validity (WW) and knowledge sharing (NW) dependent on selected independent variables x1-x11 (Tables 2-3 describes the designation of independent variables)?
4. To which group of farms can industry organisations address their knowledge offer the most?

   Multiple regression analysis was used to research the cause-effect phenomena.

Evaluation of the intensity (importance) and exchange of knowledge (performance) of industry organisations is an element of the IPA (Importance-Performance-Analise) analyses conducted in the project concerning exchanges of farms with institutions.

CHARACTERISTICS OF FARMS AND FARMERS AFFECTING THE IMPORTANCE AND EXCHANGE OF KNOWLEDGE

The exchange of knowledge (in terms of importance and frequency) between farmers and institutions depends on the characteristics of both farms and farmers. Surveys by A. Wasilewski [2011] indicate that larger farms with better financial standing more often reached out for knowledge. In view of the fairly broad spectrum of variables, it was considered that experience in running a farm and breeding animals of conservation breeds, the education and age of the farmer, the number of people working and the presence of a successor on the farm, as well as the size of the farm and the existence of a sales contract, were all evidence of the need for frequent knowledge exchange and importance of knowledge for the breeder. The study quoted by A. Wasilewski [2011] confirmed the interdependence of knowledge needs of farmers with the size of their farm. The set of independent variables (ZN) was extended to include education, experience, farm succession (indicators of formal agricultural and informal knowledge) and contracting (farmer's market knowledge indicator).

RESEARCH RESULTS AND DISCUSSION

The group of entities cooperating with farms included public sector organisations (Agricultural Advisory Centres, Agency for Restructuring and Modernisation of Agriculture (ARiMR), commune offices, voivodeship, poviat, chambers of agriculture, scientific and research units), industry organisations, other farms. The most important partners of cooperation for farms with conservative breeds of animals were agricultural advisory centres (ODR) and industry organisations [Domagalska-Grędys 2017, 2019, Domagalska-Grędys, Żmija 2018].

According to the opinion of farms, the greatest need for knowledge exists in the area of finance and marketing (Table 1). Knowledge of patenting and new product development was valued the lowest. Farms do not see the need to look for knowledge about the development of new products. The surveyed farms require a spectrum of knowledge, but were unable to point out which knowledge they most required (no highest score of 5 in any area of a-h knowledge was given). In the arbitrary opinion of the author, industry organisations could provide the most important categories of knowledge to breeders, also in terms of creating new products (Table 1). The issues of patents and intellectual property protection should be dealt with by specialist institutions (not by industry organisations), hence the average importance rating (f = 2.6) should be considered a rational opinion of breeders.

The results of the regression analysis for the importance of knowledge exchange (WW) with industry organisations indicate significant dependencies in the scope of two independent variables: successor presence and possession of contract farming (Table 2).

Table 1. Assessment of the importance of searched areas of farm knowledge and opportunities for involvement of industry organisations

Searched areas	Farms*	Knowledge information how what?	Knowledge how why?	Knowledge know how?	Knowledge know who?	Role of industry organisations
Marketing	3.7				+	+
Exports	2.9	+		+		+
Training	3.7	+		+	+	+
Finance	4.4	+		+		+
Production quality	3.4	+				+
Patents and protection of intellectual property	2.6	+			+	
Equipment	3.1	+			+	
Development of new products	2.8				+	+

* Assessment of the importance on a scale of 1-5 (5 – most important)
"+" determination of the potential involvement of industry organisations in the exchange of knowledge in four areas
Source: own research

Table 2. Results of regression analysis of knowledge exchange (WW) of farms with industry organisations for demographic variables

Demographic variables (independent variables) N = 126	b*	Standard deviation z b*	b	Standard deviation z b	t (114)	p
Free selection	-	-	4.056337	0.429219	9.45050	0.000000
x1 Number of years of farm operation	-0.125359	0.114765	-0.007231	0.006620	-1.09232	0.276997
x2 Number of years after the introduction of conservative breeds	0.174182	0.113351	0.015480	0.010074	1.53666	0.127148
x3 Vocational education	0.050185	0.151481	0.087641	0.264543	0.33129	0.741031
x4 Secondary education	0.038915	0.147676	0.070280	0.266703	0.26351	0.792630
x5 Higher education	-0.031545	0.124699	-0.095141	0.376096	-0.25297	0.800746
x6 Bachelor's degree	0.028309	0.115655	0.089162	0.364264	0.24477	0.807073
x7 Age of the owner	-0.023904	0.110010	-0.001741	0.008012	-0.21729	0.828370
x8 Number of persons employed on the farm	0.040743	0.092320	0.027916	0.063255	0.44133	0.659813
x9 Successor Yes/No 1/0	0.205110	0.100343	0.353924	0.173146	2.04408	0.043250
x10 Area of the farm [ha]	0.060417	0.095977	0.001786	0.002837	0.62950	0.530282
x11 % of contract farming	-0.194343	0.093576	-0.003702	0.001782	-2.07685	0.040063

Source: own research

The fact that there is a successor on the farm results in an increase in the assessment of the importance of exchanged knowledge WW by 0.20511 standard deviation as compared to the situation of the absence of a successor. On the other hand, an increase in contract farming by 1 standard deviation causes a decrease in the importance of knowledge exchange by 0.1943 (b* = -0.194343) with industry organisations.

Farms with a contract are more independent and do not value knowledge from industry organisations. In turn, the presence of a successor on the farm triggers respect for knowledge. Older farmers (transferring farms to successors) recognise that knowledge can always be „useful", especially during the succession of young inexperienced successors, hence the high importance of knowledge offered by industry organisations in their assessment. The absence of a successor on the farm does not create a need to use the knowledge of industry organisations.

Multiple regression analysis, assuming the intensity of knowledge exchange (NW) as a dependent variable for a set of independent variables (x1-x11), did not confirm the occurrence of significant correlations (Table 3). Differences affecting x1-x11 on WW and NW data types for analysis of Tables 2 and 3 are confirmed by general statistical parameters of WW and NW models (Table 4).

Table 3. Results of regression of knowledge exchange (NW) of farms with industry organisations for demographic variables

Demographic variables (independent variables) N = 122	b*	Standard deviation z b*	b	Standard deviation z b	t (110)	p
Free selection			3.763086	0.417172	9.020464	0.000000
x1 Number of years of farm operation	-0.099646	0.116335	-0.005699	0.006653	-0.856544	0.393559
x2 Number of years after the introduction of conservative breeds	-0.064001	0.111668	-0.005502	0.009601	-0.573131	0.567726
x3 Vocational education	0.001734	0.155864	0.002838	0.255133	0.011123	0.991146
x4 Secondary education	0.030951	0.153572	0.051678	0.256417	0.201538	0.840650
x5 Higher education	-0.119339	0.129208	-0.345127	0.373668	-0.923620	0.357706
x6 Bachelor's degree	0.004393	0.121085	0.012705	0.350177	0.036281	0.971124
x7 Age of the owner	0.110928	0.118284	0.007545	0.008045	0.937812	0.350395
x8 Number of persons employed on the farm	0.076487	0.097064	0.049188	0.062421	0.788007	0.432387
x9 Successor Yes/No 1/0	0.009334	0.104265	0.014958	0.167078	0.089526	0.928827
x10 Area of the farm [ha]	0.137162	0.101416	0.003739	0.002764	1.352468	0.178999
x11 % of contract farming	-0.064334	0.097440	-0.001146	0.001736	-0.660243	0.510478

Source: own research

Table 4. Statistics on regression analysis of the importance and implementation of knowledge exchange WW and NW between farms and industry organisations

Statistics for regression ZZ →WW (NW) (importance of exchange between farms and industry organisations) ZN – demographic variables	Statistics summary Dependent variables WW Industry organisations	Statistics summary Dependent variables NW Industry organisations
	value	
R multiple	0.309552	0.219543
Multiple R^2	0.095822	0.048199
Corrected R^2	0.008577	-0.046981
F (11,114)	1.098312	0.506401*
p	0.369041	0.895471
Standard error of estimation	0.851079	0.815085

* F(11,110)
Source: own research

A. Wasilewski's research to date [2011] shows that "cooperation and diversification of cooperation between farms and public institutions (Agency for Restructuring and Modernisation of Agriculture (ARiMR), Agricultural Property Agency, Agricultural Advisory Centres and Regional Agricultural Advisory Centres, local government) was to some extent dependent on the area of the farm and the level of direct surplus. As a rule, farms with a larger area cooperated with a larger number of public sector organisations, more actively seeking and using all available forms of support, which also proves the possibility of obtaining institutional rent in a group of large-area entities [Wasilewski 2011]. The cooperation of farms with selected institutions had an impact on farmers' investment decisions. The above results were not confirmed in studies of farms with conservative breeds of breeding animals, which may indicate the specificity and obsolescence of the previous conditions of farm operations. However, the analyses confirmed the significant impact of two factors on the perception of the importance of knowledge exchange (WW): 1. „occurrence of the successor" on the farm (x9) and 2. „having sales contracting" (x11). Statistically insignificant, but strongly affecting the exchange of knowledge (NW) in the sample of farms studied were such factors as: 1. the area of the farm (x10) and 2. the age of the owner (x7).

In the ranking of the quality of services provided by public sector organisations, agricultural advisory centres and research institutes were ranked highest [Wasilewski 2011]. The assistance of these organisations was of a high level of expertise. According to the researcher, these organisations are obliged to systematically improve the qualifications of staff and adapt their offer to the current needs of farmers, as negative evaluations of services also appeared in the evaluations (10% of farmers assessed institutions negatively). The results of the research show that new (more partner) institutions – industry organisations – are important in the transfer of knowledge for farmers.

Taking into account the context of the article (knowledge transfer for farmers implementing the programme of maintaining breeding animals of conservation breeds), it is worth quoting the results of surveys of English farmers applying the principles of sustainable agriculture, who complained about the lack of a simple transfer of terms and

usefulness of theory during training [Rose et al. 2019]. The contribution of information and communication technologies [Bilali, Allahyari 2018] is important in solving the above problems, which is worth recommending to the surveyed farmers, encouraging them to participate in trainings and e-learning forms of education and search for useful knowledge.

CONCLUSIONS

1. Industry organisations have played an important role in the diffusion of knowledge into niche agriculture, playing an important role in preserving the biodiversity policy of farm animals. Clearly, the role of industry organisations in providing knowledge is increasing and its scope (from market knowledge to marketing knowledge) is also widening.
2. Due to the fragmented nature of the production of holdings that undertake the upkeep of conservative breeds (cattle, pigs and sheep), financial problems determine the main areas of knowledge desired. In the context of the declared high importance of marketing knowledge by breeders, it seems important to satisfy the marketing knowledge deficit in order to introduce new products from materials of conservative breeds of animals.
3. Industry organisations can address their knowledge mainly to farms without a sales contract (with a worse financial situation, less stability). Planned succession on the farm motivates to search for knowledge and becomes a profitable "investment" in the farmer's activities.
4. Among the group of factors indifferent to the validity and implementation of knowledge exchange are: the occurrence of a successor on the farm, the contracting of sales, the size of the farm and the age of the owner.

In the development of knowledge transfer to niche markets of materials and animal products, industry organisations specialising in particular animal breeds play an important role [dedicated not only to animal breeds (as in the case of a breed of cows such as Montebelliard in France)]. In Poland, the organisation of producers of conservative breeds of animals is at an initial stage, hence the role of models of activities of other European countries (France, Spain, Italy) are a recommended direction of activities.

BIBLIOGRAPHY

Bański Jerzy. 2015. Rola instytucji otoczenia biznesu w rozwoju przedsiębiorczości wiejskiej (The role of the business environment in the development of rural enterpreneurship). *Wieś i Rolnictwo* 2 (167): 139-149.

Bilali Hamid El Allahyari, Sadegh Mohammad. 2018. Transition towards sustainability in agriculture and food systems: Role of information and communication technologies. *Information Processing in Agriculture* 5: 456–464.

Bisaga Anna. 2014. *Rola dyfuzji wiedzy i informacji w procesie modernizacji gospodarstw rolnych na przykładzie województwa opolskiego* (The role of knowledge and information diffusion network in the process of modernization of agricultural households on the basis of the Opole voivodeship). *Journal of Agribusiness and Rural Development* 2 (32): 17-25.

Bourne Mieke, Anja Gassner, Parmutia Makui, Alice Muller, Jonathan Muriuki. 2016. A network perspective filling a gap in assessment of agricultural advisory system performance. *Journal of Rural Studies* 50: 30-44.

Choua Shih-Wei, Chia-Shiang Hsu. 2018. An empirical investigation on knowledge use in virtual communities–A relationship development perspective. *International Journal of Information Management* 38: 243-255.

Dedeurwaerdere Tom. 2005a. *From bioprospecting to reflexive governance*. Ecological Economics, 53 (4): 473-491. https://doi.org/10.1016/j.ecolecon.2004.10.013.

Dedeurwaerdere Tom. 2005b. *The contribution of network governance to sustainable development*. Working Paper Series, Les séminaires de l'IDDRI, 13.

Dedeurwaerdere Tom, Audrey Polard, Paul Melindi-Ghidi. 2015. The role of network bridging organisations in compensation payments for agri-environmental services under the EU Common Agricultural Policy. *Ecological Economics* 119: 24-38.

Delmas Magalia A., Oran R. Young. 2009. *Governance for the Environment. New Perspectives*. Cambridge: Cambridge University Press.

Domagalska-Grędys Marta. 2017. Relational premises in the cooperation between farms with conservative breeds and industry organizations. *Zeszyty Naukowe SGGW w Warszawie. Problemy Rolnictwa Światowego* 17 (4): 52-67.

Domagalska-Grędys Marta. 2019. Strategies of knowledge sharing in farms keeping conservative breed livestock. *International Scientific Conference Hradec Economic Day* 9 (1): 121-127.

Domagalska-Grędys Marta, Janusz Żmija. 2018. *Principal Component Analysis (PCA) in the Assessment of Cooperation of Farms Implementing the Biodiversity* [In] Proceedings of the 5th International Scientific Conference on Modern Economics, 14-16 May 2018. University of Vigo, Spain. Germany: University of Wismar.

Durcikova Aleksandra, Kelly J. Fadel, Brian S. Butler, Dennis F. Galletta. 2011. Knowledge exploration and exploitation: the impacts of psychological climate and knowledge management system access. *Information Systems Research* 22 (4): 855-866.

He Zi-Lin, Poh-Kam Wong. 2004. Exploring vs. exploitation: an empirical test of the ambidexterity hypothesis. *Organization Science* 15 (4): 481-494.

Kanie Norichika, Peter Haas (eds.). 2004. *Emerging forces in environmental governance*. Tokyo: United Nations University Press.

Liu Sandra S., Xueming Luo, Yi-Zheng Shi. 2002. Integrating customer orientation, corporate entrepreneurship, and learning orientation in organizations-in-transition: an empirical study. *International Journal of Research in Marketing* 19 (4): 367-382. DOI: 10.1016/S0167-8116(02)00098-8.

Ma Meng, Ritu Agarwal. 2007. Through a glass darkly: information technology design identity verification, and knowledge contribution in online communities. *Information Systems Research* 18 (1): 42-67.

Maruping Likoebe, Massimo Magni. 2012a. What's the weather like? The effect of team learning climate, empowerment climate, and gender on individuals' technology exploration and use. *Journal of Management Information Systems* 29 (1): 79-113.

Maruping Likoebe, Massimo Magni. 2012b. Attracted to or locked in? Predicting continuance intention in social virtual world services. *Journal of Management Information Systems* 29 (1): 273-305.

Nasution Hanny N., Felix. T. Mavondo, Jekanyika Matanda, Nelson Oly Ndubisi. 2011. Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial Marketing Management* 40 (3): 336-345, https://www.sciencedirect.com/science/article/abs/pii/S0019850110001379, access: 31.01.2019.

Prager Katrin, Andrea Knierim, Pierre Labarthe, Livia Madureira, Violeta Dirimanova, Jozef Kania. 2015. *Perspektywy Wspierania Rolników: Instytucje Doradcze w Europejskim Systemie Wiedzy i Informacji Rolniczej – AKIS* (Perspectives to Support Farmers: Advisory Bodies in the European Agricultural Knowledge and Information System). PROAKSIS, htttp://proakis.webarchive.hutton.ac.uk/sites/www.proakis.eu/files/PROAKIS_Polish_final_PRINT.pdf, access: 31.01.2019.

Rose David C., William J. Sutherlandb, Andrew P. Barnesc, Fiona Borthwickc, Charles Ffoulkesd, Clare Hall, John.M. Moorbyf, Philippa Nicholas-Daviesf, Susan Twiningd, Lynn V. Dicksh. 2019. Integrated farm management for sustainable agriculture: Lessons for knowledge exchange and policy. *Land Use Policy* 81: 834-842.

Wasko Molly McLur, Samer Faraj. 2005. Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. Management Information Systems *Quarterly* 29 (1): 35–57.

Wasilewski Adam. 2011. Współpraca rolników z instytucjami sektora publicznego (Farmers cooperation with institution of public sector). *Zagadnienia Doradztwa Rolniczego* 1: 41-58.

Zhou Zhongyun, Yulin Fang, Douglas R. Vogel, Xiao-Ling Jin, Xi Zhang. 2012. *Attracted to or locked in? Predicting continuance intention in social virtual world services. Journal of Management Information Systems* 29 (1): 273-305.

***

CZYNNIKI REALIZACJI I WAŻNOŚCI W PROCESIE WYMIANY WIEDZY W SIECI POWIĄZAŃ HODOWCÓW ZWIERZĄT RAS ZACHOWAWCZYCH ZE ZWIĄZKAMI BRANŻOWYMI. PRZYPADEK POLSKI

Słowa kluczowe: wiedza, producent zwierząt ras zachowawczych, związek branżowy hodowców zwierząt

ABSTRAKT

Wiedza jest kluczowym zasobem wspierającym europejskie rolnictwo w podejmowaniu współczesnych wyzwań stawianych m.in. przez: globalną konkurencję, bezpieczeństwo żywności, zdrowie ludzi, zwierząt i roślin oraz wymogi ochrony środowiska. Rodzi się więc pytanie, które organizacje w obecnym systemie instytucjonalnym rolnictwa, dostarczają wiedzy rolnikom utrzymującym zwierzęta hodowlane ras zachowawczych na oczekiwanym poziomie jakości i wymiany (częstotliwości)? Celem badań było określenie nowej roli związków branżowych w przekazywaniu wiedzy oraz wskazanie zmiennych określających ważność i wymianę wiedzy rolników z organizacjami branżowymi. Badania przeprowadzono wśród 145 gospodarstw Polski południowo-wschodniej w 2017 roku. Instrumentem badawczym był kwestionariusz wywiadu z właścicielami gospodarstw i z reprezentantami organizacji branżowych. Do wykazania wpływu czynników na poziom wymiany wiedzy (ważności i częstotliwość) zastosowano analizę regresji wielorakiej. Wyniki badań wskazują, że związki branżowe mogą adresować swoją wiedzę głównie do gospodarstw o słabej kondycji finansowej (np. bez kontraktu sprzedaży) oraz że planowana sukcesja w gospodarstwie motywuje do poszukiwania wiedzy przez rolników. W grupie czynników nieobojętnych na ważność i realizację wymiany wiedzy są: 1) występowanie następcy w gospodarstwie, 2) posiadanie kontraktacji sprzedaży, 3) wielkość gospodarstwa i 4) wiek właściciela. Rekomendowane jest tworzenie w Polsce specjalistycznych związków branżowych dla ras zachowawczych zwierząt (nie tylko w obrębie gatunków).

AUTHOR

MARTA DOMAGALSKA-GRĘDYS, DR HAB.
ORCID: 0000-0002-9709-5960
Agriculture University in Cracow
Faculty of Agriculture and Economy
Department of Management and Marketing in Agribusiness
21 Mickiewicza Av., 31-120 Kraków, Poland