ABSTRACT

The aim of the research is to assess the financial situation of farm households in Poland in 2010–2017. The analysis of household finances, i.e. the value and structure of income as well as the method of their distribution, was performed. Despite a significant improvement in the living conditions of this group of people, the financial situation of farmers’ families was worse than of those who have other sources of income. Disposable income in households of farmers per person per month in 2017 amounted to PLN 1575.57 and was as much as PLN 420 higher than in the previous year. The ratio of the share of expenditure on food in total expenditure in 2017 was 31%. Aggregated data from studies of household budgets published annually by the Central Statistical Office constituted the basis of the information used as the sources and own surveys carried out in 2017 in 302 farmers households located in the Masovian Voivodeship.

Key words: farmers’ household, household budget, available income, financial situation

JEL codes: D1, D31, G51

INTRODUCTION

A household is defined as a key unit in terms of consumption and investments. This is related to the basic purpose of operation of a household, which is to meet the common and individual needs of its members. The degree of satisfaction depends on the level and living conditions of households. In the subject literature, there are several definitions of the level and conditions of living. When talking about the living conditions of the population, terms such as: standard of living, quality of life, well-being of the society, etc., are used. Living conditions constitute a general state of satisfaction of all life needs and human activities [Liszewski 2004]. The standard of living determines the degree of satisfaction of material and spiritual needs. Quality of life is the degree of human satisfaction with living conditions, i.e. the conditions that people live in [Knioryska 2010]. According to Roeski-Słomka, the financial condition of households is mainly demonstrated by the level of income and expenditure as well as the amount of savings [Roeske-Słomka 2004]. The material conditions of households mean the livelihood and subsistence of households, and their level depends on the income and expenses of households budget. The method of managing financial resources influences the financial situation of households. The material conditions of households are also determined by socio-demographic factors, including number of persons in the household, age, education, family live cycle, etc.

Farmers’ households differ from other groups of households by many socio-economic features, which strait affect their financial situation. Farmers’ households constitute a specific socio-economic group due
to their close connection with farms, and thus the specificity of the consumption and production sphere [Chmielewska 2000]. Income obtained by farmers’ households from farms constitutes the basis for the functioning of families and farms. As a result, this hinders the management of private finances of farmers’ households [Kozera and Wysocki 2014]. Agricultural income is, to a large extent, dependent on sales revenues subject to seasonal fluctuations, which rely on the management conditions in a given year. The specificity of the implementation of agricultural activity on the farm is associated with difficulties in predicting future production volumes, costs, and inputs due to, among others changing soil and climatic conditions, plant and animal diseases, drought threats as well as excessive rainfall [Kusz 2009]. In addition to natural factors, the market environment has a significant impact on the income of farmers. Depending on the amount of selling prices of specific agricultural products, the income situation of farms may vary [Felczak 2014].

In the economic theory several laws applying to agriculture, for example: law of “diminishing returns”, “parity price ratio” the ratio of the prices farmers get to the price they must pay, showing that prices received by farmers have not risen as much as have prices they have to pay in a long time. “Low-income elasticises for food” what means that when consumers get richer, do not want to expand their food consumption as much as they want to expand the consumption on other goods (industrial). That’s why farm incomes fluctuate between boom and bust to a greater degree than non-farm incomes. Its justifying the government intervention in farmers sector. There are variety of programs supporting and maintaining farm income (Common Agricultural Policy of European Union, government support to farmers in USA, etc.) to keep the farmers in profession. It’s not solving the important problem of rural poverty, there are needed transfer-program payments to health care services, education and retraining [Samuelson 1980].

RESULTS AND DISCUSSION

The basic indicator of the assessment of households’ financial situation is their disposable income. Its value indicates the economic rank of a given household and its wealth; it determines the purchasing power of the household and, consequently, the ability to meet the needs of its members. Disposable income includes current cash and non-cash income, reduced by voluntary and compulsory payments, such as: taxes on income, inheritance, donations and real estate. Disposable income is allocated for consumption purposes, for other expenditures and for savings [Muszyńska 2010]. Figure 1 presents the level of disposable income of households in 2010–2017 in nominal terms.

The basic indicator of material conditions is the level of current income per person in the household. In the years 2010–2017, in Polish households, there was an increase in the average disposable income per person in a household by 34%. In 2017, disposable income amounted to PLN 1598.13 per person. The
improvement of the financial situation of households resulted from the improvement of the socio-economic situation in Poland. The level of disposable income of households is characterized by an upward trend during the period under discussion. In the particularly difficult socio-economic situation, compared to other groups of households, there were members of farm households [Zmija 2015]. The nominal incomes of farmers’ households during the study period were characterized by high dynamics of changes. A particularly high increase in incomes of all farmers’ households was observed in 2017, which amounted to PLN 1575.57.

In the studied period, the lowest level of disposable income was observed in 2011 (PLN 983.88). The Institute of Agricultural and Food Economics – National Research Institute analysis shows that the income of farmers’ households has increased significantly recently as a result of good economic situation on the food market and production growth, at relatively stable costs [PAP 2018].

The latest CSO research also shows an important issue regarding the inhibition of a clear drop in the income dispersion in households per household in terms of place of residence (urban – rural) in 2018, measured for several years, measured by the Gini coefficient [GUS 2019].

The main sources of households’ maintenance in Poland are paid employment, farm work, self-employment and social benefits. Income is also obtained from other sources, such as renting land and buildings, social benefits, loans and credits, winnings, gifts and damages. The membership of a household in the socio-economic group is determined on the basis of the main source of income, which is why the structure is dominated by income obtained from this source [Muszyńska 2010]. The basis for maintaining farmers’ households is work on the farm.

The level and sources of income obtained by farmers’ households in 2010–2017 are shown in Table 1. There are evident changes occurring in the structure of income of farmers’ households. In the studied period, a relative increase in the importance of income from paid employment and self-employment and a decline in income from an individual farm in agriculture were also observed in farmers’ households.

Despite the changes in the area structure of agriculture, only a few farmers’ households are able to ensure an adequate level of income for farmers and their families, sufficiently satisfying the consumption function (the basis for maintaining farmers and their families), the production function (accumulation in the household) and the motivational function (striving to achieve higher consumption and production) [Leśniak-Moczuk 2008]. Therefore, in order to improve personal finances, members of farmers’ households, especially small farms, are increasingly taking up paid employment or self-employment [Kozera and Wysocki 2014].

The financial situation of households is also demonstrated by the manner of managing the finances of a given household. It is the entirety of decisions of household members, consisting in obtaining funds...
Table 1. Sources of income and income level in farmers’ households (PLN) in 2010–2017

| Specification                              | 2010     | 2011     | 2012     | 2013     | 2014     | 2015     | 2016     | 2017     |
|--------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Income from paid employment               | 104.76   | 111.73   | 129.28   | 123.27   | 141.38   | 145.27   | 152.85   | 162.06   |
| Income from self-employment               | 10.26    | 10.13    | 9.78     | 13.52    | 11.59    | 14.30    | 12.6*    | 18.11*   |
| Income from an individual farm in agriculture | 732.01   | 677.15   | 755.24   | 812.89   | 692.79   | 681.28   | 715.82   | 1,075.03 |
| Income from social insurance benefits      | 117.76   | 134.00   | 141.44   | 150.78   | 145.20   | 149.11   | 152.59   | 158.67   |
| Retirement, national                      | 82.24    | 91.86    | 92.76    | 96.49    | 94.24    | 103.15   | 110.02   | 114.36   |
| Pension for incapacity for work, national | 18.68    | 21.60    | 24.25    | 23.69    | 24.44    | 26.09    | 24.92    | 26.24    |
| Family pensions, national                 | 6.89     | 7.73     | 7.04     | 8.66     | 8.79     | 7.68     | 7.48*    | 7.76*    |
| Income from other social benefits         | 34.58    | 31.18    | 33.67    | 33.65    | 31.94    | 29.77    | 93.34    | 135.98   |
| Unemployment benefits, national           | 1.77     | 0.72     | 1.29     | 1.47     | 1.03     | 0.52     | –        | –        |
| Other income                              | 22.46    | 17.45    | 20.93    | 21.05    | 26.27    | 24.25    | 21.42    | 25.02    |
| Gifts                                     | 18.23    | 14.58    | 18.11    | 17.97    | 22.37    | 18.83    | 16.92    | 19.84    |

*it occurred in the number greater than or equal to 20 but less than 50 cases from the sample.

Source: own calculations based on data from household budget survey of Central Statistical Office [GUS 2011–2016, 2017b, 2018].

from various sources and making decisions on their distribution for various purposes, in accordance with the adopted hierarchy of needs [Bywalec 2009]. The concept of household expenditures should be understood as expenditure on consumer goods and services as well as other expenditures. Expenditures on consumer goods and services intended to meet household needs include goods purchased for cash, credit, free goods and natural consumption. Other expenditures consist of, among others, gifts provided by the household, some taxes, other types of expenditures not directly intended for consumption [Dudek 2006]. With the drop in income in the farmer’s household, the importance of natural consumption, i.e. the consumption of food produced in own agricultural farms, bypassing the market, is increasing [Biernat-Jarka et al. 2015].

Table 2 presents average monthly expenditures per person in farmers’ households. In 2010–2017, the value of these expenditures increased from PLN 757.25 to PLN 867.99 in total. The increase in the value of monthly expenditures reached the highest rates in the group of expenditures on restaurants and hotels (353.9%), on health (141.2%), on clothing and footwear (134.6%). The largest decrease in expenditures in farmers’ households in 2010–2017 was noted in the group of other expenditures as well as education, respectively 87.9% and 76.7%.

Figure 2 shows the structure of expenditures in farmers’ households in 2017. The largest share in total expenditures are expenditures on food and non-alcoholic beverages, home use and energy carriers as well as transport. The ratio of food expenditures to total expenditures in 2017 was 31%. The smallest share in the total expenditures are expenditures on education, pocket money, restaurants and hotels.

Comparison of the level of expenditures with the level of disposable income of households also allows for the assessment of their financial situation. Figure 3 presents the share of consumer expenditures in disposable income in the years 2010–2017. In the studied period, a downward trend in the share of these expenditures in the disposable income of households can be observed from 73.9% in 2010 to 67.9% in 2013 (a decrease by 6 p.p.) and a decrease from 76.1% in 2014 to 55.1% in 2017 (down 21 p.p.). In farmers’ households the lowest share of consumer expenditures in disposable income was observed in 2017, which amounted to 55.1%.
Table 2. Average monthly expenditure per person in households (PLN) in 2010–2017

| Specification                                           | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2017/2010 (%) |
|--------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| General expenditure, including                         | 757.25| 736.02| 784.59| 784.62| 799.35| 779.14| 814.59| 867.99| 114.6         |
| Food and non-alcoholic beverages                       | 238.85| 243.22| 249.87| 246.99| 247.73| 243.84| 256.81| 269.11| 112.7         |
| Alcoholic beverages, tobacco and drugs                 | 18.32 | 18.67 | 19.44 | 18.35 | 20.32 | 16.57 | 17.49 | 18.79 | 102.6         |
| Clothing and footwear                                   | 39.54 | 38.46 | 40.32 | 43.83 | 46.99 | 43.47 | 48.54 | 53.21 | 134.6         |
| Home use and energy carriers                            | 140.38| 132.52| 138.92| 146.36| 138.99| 133.77| 135.78| 147.06| 104.7         |
| Household equipment and running a household            | 40.70 | 39.09 | 38.57 | 42.80 | 38.65 | 39.16 | 42.97 | 48.29 | 118.6         |
| Health                                                 | 28.29 | 27.59 | 30.80 | 33.23 | 33.44 | 33.85 | 38.79 | 39.94 | 141.2         |
| Transport                                              | 87.16 | 76.54 | 87.55 | 79.60 | 86.50 | 84.53 | 85.79 | 86.13 | 98.8          |
| Communication                                          | 32.56 | 32.95 | 32.44 | 37.97 | 38.51 | 39.02 | 42.77 | 43.8  | 134.5         |
| Recreation and culture                                  | 38.79 | 41.93 | 43.67 | 37.94 | 40.45 | 37.15 | 38.46 | 38.54 | 99.4          |
| Education                                              | 5.57  | 6.45  | 5.31  | 7.76  | 5.83  | 4.88  | 6.35  | 4.27  | 76.7          |
| Restaurants and hotels                                  | 6.42  | 5.21  | 9.65  | 13.01 | 17.23 | 14.59 | 15.96 | 22.72 | 353.9         |
| Other goods and services                               | 31.19 | 31.06 | 38.09 | 37.18 | 37.14 | 39.26 | 42.17 | 44.85 | 143.8         |
| Pocket money                                           | 14.05 | 15.50 | 15.85 | 13.97 | 17.60 | 20.22 | 14.22 | 20.13 | 143.3         |
| Other expenditures                                     | 35.44 | 26.82 | 34.13 | 25.62 | 29.98 | 28.83 | 28.50 | 31.14 | 87.9          |

Source: own calculations based on data from household budget survey of Central Statistical Office [GUS 2011–2016, 2017b, 2018].

Fig. 2. Structure of expenditures in farms’ households in 2017

Source: own calculations based on data from household budget survey of Central Statistical Office [GUS 2011–2016, 2017b, 2018].
The financial situation of households is also demonstrated by the share of fixed expenditures in disposable income. Fixed expenditures of households are expenditures on food and non-alcoholic beverages as well as expenditures on home use and energy carriers. Other expenditures are so-called expenditures of free choice (free choice fund). However, it should be borne in mind that the boundary between basic expenditures and free choice is fluid and often debatable, in particular regarding expenditures on transport, house equipment and health [Janoś-Krśo 2011].

A higher share of fixed expenditures in household budgets makes it difficult to meet higher-level needs, thus affecting living standards [Kozera and Wysocki 2014]. It should be noted that as a result of the improvement in the financial situation of households in 2010–2017, a beneficial trend in the form of a declining share of fixed expenditures in households’ budgets was observed, which was mainly related to lower expenditures on food and non-alcoholic beverages in the total household expenditures. Taking this into account, the most advantageous financial situation of farmers’ households was observed in 2017, in which fixed expenditures was charged to approximately 26.4% of household budgets, respectively. The relatively weakest financial situation, where fixed expenditures accounted for 38.2% of disposable income, was observed in 2011.

In 2017, in order to get a better understanding and an in-depth analysis, our own surveys were conducted among 302 randomly selected representatives of farm households located in 10 rural and urban-rural communes of the Masovian Voivodship. The majority of respondents were women (59%).
The researched farms are mainly two- and three-generation families, where four-person farms predominate. The structure of households by persons on the farm is as follows: 1-person – 2.7%, 2-person – 7.8%, 3-person – 14.5%, 4-person – 29.1%, 5-person – 25.7%, 6 and more people – 20.3%.

In about 32% of the examined households, children up to 14 years old lived. Farms without children up to 14 years accounted for 68% of respondents, with 1 child 18%, with 2 – 10%, with 3 and more children – 4%.

One of the most different social categories is the education of the respondents. The vast majority (52%) of the surveyed respondents are people with secondary education, of which 13.8% have secondary education, 38.3% have secondary and post-secondary education – 4.7%. About 4.4% of respondents have basic vocational education, slightly less – 2.2% have higher basic education, while the remaining 18.5% have higher education.

The primary factor determining the participation of each member of the society in the division of the social consumption fund is income per one person. Income is the basis for the intensity of feeling and the degree of satisfaction of needs, which is why it is the basic determinant of the development of the consumption structure. Taking into account the entire population surveyed, the income of the households surveyed is below: PLN 500 – 9.3%, PLN 501–1000 – 28.8%, PLN 1001–1500 – 22.5%, PLN 1501–2000 – PLN 15.6%, over PLN 2001 – 17.5%. About 6% of respondents did not answer the income question.

The respondents were also asked about the size of the owned farm, the average area of the surveyed farms was 22.8 ha, which is much higher than the national average. The average size of agricultural land on a farm in the country in 2016 was 10.31 ha [GUS 2017a]. In every fourth farm, both crop and animal production was carried out, in 54% only crop production, and in 27% only animal production was carried out.

Own surveys only orientatively characterize the degree of affluence of the surveyed households due to the subjective nature of the response and the selected population from one of the provinces, hence the analysis was preceded by the results of representative CSO surveys.

**CONCLUSIONS**

The income structure of the population residing in rural areas is currently undergoing many changes. This is due to changes in the socio-economic environment affecting residents of villages. Both the sources of income and the structure of expenditures are changing. As the performed analysis showed, households in this socio-economic group are characterized by a lower level of disposable income, but their situation is improving every year. There was a decline in the share of income from work on the farm in favour of income from paid employment. Therefore, it can be concluded that farmers’ households are attempting to improve their competitive ability by seeking additional sources of income. The most important item in expenditures from household budgets of surveyed families is food. The basic indicator of material conditions is the level of current income per person in the household. The average monthly income available to one person in households by their size (number) is favorable for single-person households and decreases as the number of people increases.
REFERENCES

Biernat-Jarka, A., Tuka, P. (2015). Food self-supply and income of rural households. Acta Sci. Pol., Oeconomia, 14(3), 5–14.

Bywałec, Cz. (2009). Ekonomika i finanse gospodarstw domowych [Economics and finances of households]. Wyd. Nauk. PWN, Warszawa.

Chmielewska, B. (2000). Spożycie żywności w gospodarstwach domowych [Consumption of food in households]. Studia i Monografie. Wyd. Nauk. PWN, Warszawa.

Dudek, H. (2006). Zróżnicowanie wydatków w gospodarstwach domowych rolników i pracowników użytkują- cych gospodarstwa rolne [Diversity of expenditure in households of farmers and employees using farms]. Zga- gadnienia Ekonomiky Rolnej, 2, 68–78.

Felczak, T. (2014). Czynniki kształtujące wartość użytkowego dochodu z rodzinnego gospodarstwa rolnego [Factors differentiating value of farm net income from agricultural farm]. Sti- warszenie Ekonomistów Rolnictwa i Agrobiznesu, Roczniki Naukowe, 16, 4, 80–84.

Główny Urząd Statystyczny (2011). Sytuacja gospodarstw domowych w 2010 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2010 in the light of the results of the household budget survey]. Departament Warunków Życia, Warszawa.

Główny Urząd Statystyczny (2012). Sytuacja gospodarstw domowych w 2011 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2011 in the light of the results of the household budget survey]. Departament Badań Społecznych i Warunków Życia, Warszawa.

Główny Urząd Statystyczny (2013). Sytuacja gospodarstw domowych w 2012 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2012 in the light of the results of the household budget survey]. Departament Badań Społecznych i Warunków Życia, Warszawa.

Główny Urząd Statystyczny (2014). Sytuacja gospodarstw domowych w 2013 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2013 in the light of the results of the household budget survey]. Departament Badań Społecznych i Warunków Życia, Warszawa.

Główny Urząd Statystyczny (2015). Sytuacja gospodarstw domowych w 2014 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2014 in the light of the results of the household budget survey]. Warszawa.

Główny Urząd Statystyczny (2016). Sytuacja gospodarstw domowych w 2015 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2015 in the light of the results of the household budget survey]. Warszawa.

Główny Urząd Statystyczny (2017a). Charakterystyka gospodarstw rolnych w 2016 roku [Characteristics of agricultural holdings in 2016]. Warszawa.

Główny Urząd Statystyczny (2017b). Sytuacja gospodarstw domowych w 2016 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2016 in the light of the results of the household budget survey]. Warszawa.

Główny Urząd Statystyczny (2018). Sytuacja gospodarstw domowych w 2017 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2017 in the light of the results of the household budget survey]. Warszawa.

Główny Urząd Statystyczny (2019). Sytuacja gospodarstw domowych w 2018 r. w świetle wyników badania budżetów gospodarstw domowych [Household situation in 2018 in the light of the results of the household budget survey]. Warszawa.

Janoś-Kresło, M. (2011). Polskie gospodarstwa domowe w drodze do społeczeństwa informacyjnego [Polish households on the way to the information society]. Studia i Prace Kolegium Zarządzania i Finansów. Zeszyty Na- ukowe, 111, 23–39.

Kiniorska, I. (2010). Przestrzenne zróżnicowanie struktury poziomu życia na obszarach wiejskich województa świętokrzyskiego [Spatial diversification of the standard of living in rural areas of the Świętokrzyskie Voivodship]. Infrastruktura i ekologia terenów wiejs- skich 2, Polska Akademia Nauk, Oddział w Krakowie, Komisja Technicznej Infrastruktury Wsi, 75–84.

Kozera, A., Wysocki, F. (2014). Sytuacja finansowa gospodarstw domowych rolników na tle pozostałych grup społeczno-ekonomicznych ludności [The financial situation of farmers’ households in comparison to other socio-economic groups]. J. Agribus. Rural. Dev., 3(33), 85–99.

Kusz, D. (2009). Procesy inwestycyjne w praktyce gospodarstw rolnich korzystających z funduszy strukturalnych Unii Europejskiej [Investment processes in the practice of farmusing the European Union structural-funds]. Oficyna Wydawnicza Politechniki Rzeszowskiej, Rzeszów, 35.

Leśniak-Moczułk, K. (2008). Dywersyfikacja wewnętrznej struktury dochodów ludności wsi i miast w kierunku spójności pomiędzy środowiskami [Diversification
Sawicka, J., Biernat-Jarka, A., Trębska, P. (2019). Farmers’ households economic situation in Poland in 2010–2017. Acta Sci. Pol. Oeconomia 18 (3), 73–81, DOI: 10.22630/ASPE.2019.18.3.34

SYTUACJA EKONOMICZNA GOSPODARSTW DOMOWYCH ROLNIKÓW W POLSCE W LATACH 2010–2017

STRESZCZENIE

Celem badań jest ocena sytuacji finansowej gospodarstw domowych rolników w Polsce w latach 2010–2017. Analizie poddano sytuację finansową gospodarstw domowych tej grupy ludności, tj. wielkość i strukturę dochodów oraz sposób ich rozdysponowania. Mimo znacznej poprawy warunków życia w badanym okresie sytuacja materialna rodzin rolników była znacznie trudniejsza niż utrzymujących się z innych źródeł dochodów. Dochód rozporządzalny w gospodarstwach domowych rolników na osobę miesięcznie w 2017 roku wyniósł 1575,57 PLN i był aż o 420 PLN wyższy niż w roku poprzednim. Wskaźnik udziału wydatków na żywność w wydatkach ogółem w 2017 roku wyniósł 31%. Bazę źródłową stanowiły dane zagregowane, pochodzące z badań budżetów gospodarstw domowych publikowanych corocznie przez Główny Urząd Statystyczny. Wykorzystano też własne badania ankietowe przeprowadzone w 2017 roku w 302 gospodarstwach domowych rolników zlokalizowanych w województwie mazowieckim.

Słowa kluczowe: gospodarstwo domowe rolników, budżet gospodarstwa domowego, dochód rozporządzalny, sytuacja finansowa