Application of insurance-based support of agriculture by the state – the Polish experience and the EU guidelines.

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A farmer's activity is successful when various types of risk, typical for production, marketing, finance or human resources, encountered in their operations are coped with properly. In numerous situations the risk management tools and practice have been enhanced with a variety of solutions whose role is to alleviate the burden of realisation of these risks. In present-day Poland this function is performed by subsidised insurance of crops and livestock, but the available solutions within the EU are much more advanced.

Прилагане на държавна подкрепа за селското стопанство, базираща се на застраховка: опитът на Полша и европейските директиви

Резюме

Своеобразието на селскостопанските дейности се отчита още от създаването на Европейския съюз. Стартирането и по-нататъшното развитие на Общата селскостопанска политика се стреми да осигури хармонично развитие на фермите. Всички негативни явления и особено бедствията, възпрепятстват постигането на целите и дори могат да накарат някои фермери да напуснат земята си, като по този начин излагат на опасност стабилността на пазара с храни. Европейската общност позволява и дори препоръчва да се използват различни инструменти за подкрепа. В отговор на Декрета на Комисията № 1857/2006, свързан с прилагането на член 87 и 88 от Договора, във връзка с малки и средни предприятия, произвеждащи селскостопански стоки, Полша въведе субсидирана застраховка на посеви и добитък. Решенията, които се основават на средства, получени от модулация, предлагат още по-големи възможности. Това е формулирано в Декрата на Съвета № 73/2009 от 19 януари 2009 г., който създаде общи правила за системите за директни субсидии за фермерите в рамките на Общата селскостопанска политика: по-широка субсидирана застраховка и особено общи инвестиционни фондове.

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Summary

Idiosyncrasies of agricultural activities have been noticed since the creation of the European Union. Initiating and further development of Common Agricultural Policy (CAP) has aimed to ensure a harmonious development of farms. Any negative occurrences, especially the catastrophic ones hinder achieving targets and may even lead to farmers' abandoning their estates thus disrupting the stability of the food market. The European Community allows or even recommends application of various supportive instruments. In response to the Commission's Decree (EC) No 1857/2006 relating

to implementation of articles 87 and 88 of the Treaty with respect to small and medium-sized enterprises producing agricultural goods Poland introduced subsidised insurance of crops and livestock. Much greater opportunities are offered by solutions based on funds derived from modulation, as defined in the Council's Decree (EC) No 73/2009 of 19th Jan 2009 which established common rules for systems of direct subsidies for farmers within the CAP along with the systems themselves: a broader range of subsidised insurance and especially mutual investment funds.

Introduction

Crises in agriculture are recurrent phenomena. The recent instances of such crises are avian flu, BSE, foot-and-mouth disease or animal feed contamination. On the one hand, Poland's presence within the EU has become an opportunity for farmers to benefit from Common Agricultural Policy (CAP) solutions. On the other hand, however, it leads to limitations in the scope of member state's intervention in agriculture, even on occurrence of catastrophic events.

The study has been focused on two major questions. What are the goals presented to farms concerning their economic activity and what mechanisms may serve to protect the operations of these entities against events which violate their material status? In the Polish reality, what is needed is an assessment of the subsidised insurance in force and an analysis of the possibilities to adapt new solutions available within the framework of the Common Agricultural Policy. The existing and possibly applicable solutions have been technically analysed in detail.

The reasons for the state's engagement in risk management within the framework of Community Agricultural Policy

When analysing a farm one has to stress its distinctness in terms of threats to its operations. One could naturally list a lot of risk categories: financial and non-financial, static and dynamic, personal and property risk and many others[1]. Also, one could single out three groups of risk[2], in relation to their implications to an enterprise:

1. The risks which the enterprise accepts. Their scope is negligible. They are renamed as loss;

2. The risks which the enterprise has to prevent or protect itself against. The obligation to do so may result from the company policy or the legislation in force, or recommendations from e.g. insurance companies;

3. The risks which are physically uncontrollable due to either insufficient effectiveness of available preventive and protective measures or too high a cost of those operations for the enterprise.

Agricultural production is specifically exposed to the consequences of numerous events which result from unpredictability of weather phenomena[3], technological developments or price fluctuations on the agricultural products market.

[1] *Podstawy ubezpieczeń. Vol 1 – mechanizmy i funkcje*, ed. J. Monkiewicz, Poltext, Warsaw 2002

[2] *Vademecum ubezpieczeń gospodarczych, ed. T. Sangowski, Saga Printing, Poznan 1998*

[3] A more thorough analysis of weather phenomena corroborates the uniqueness of threats to farms. Characteristics of weather-related risks indicate at: a)a high degree of spatial correlation of damages and exact localization of the risk, b) lack of possibility to predict weather for more than several weeks, c) total lack of an

Since 25th March 1957, when The Treaty of Rome was established, the importance of agricultural regulations in Europe has been increasingly noticeable, and it reached its peak with setting up The Common Agricultural Policy (CAP)[4]. In article 33 there are five objectives set for CAP:

- rising productivity of agriculture by fostering technological development,
- providing farmers with fair standards of living, mainly by increasing their income,
- stabilisation of agricultural markets,
- securing a suitable level of available supplies
- providing consumers with products at "reasonable prices"[5].

Each of these objectives consists of a number of supportive measures, regulations and norms which have to be adhered to by farmers. Poland's participation in the EU structures enables farmers to become CAP beneficiaries (e.g. receiving direct subsidies, support of particular areas within the Rural Development Programme), and on the other hand it limits the ways of the state intervention in agriculture, even on occurrence of catastrophic events.

There have been several substantial changes to the CAP. In January 1991 Agriculture Commissioner Ray MacSharry proposed changes which would enable to include individual and regional needs of farmers in the discussion. Additionally, MacSharry's reform aimed to promote development of rural areas by initiating new types of activity (e.g. agritourism). "Agenda 2000" accepted by the European Council in March 1999 as a preparatory step for the CAP towards the EU extension, resulted in limitation of intervention on agricultural markets and farmers' gradual accommodation to real, international market prices of their products. Thanks to direct subsidy payments regular income was guaranteed to farmers. The crucial changes to the CAP, however, considering the present article, were introduced as a consequence of the CAP reform established in Luxembourg on 26th June 2003. The relevant document contained decisions concerning modifications of the existing instruments as well as an agreement to conduct an appraisal of the policy functioning (Health Check). The new modified CAP contained the following priorities:

- uniform Single Farm Payment regardless of the farm's product
- the principle of cross-compliance which means relation between meeting certain standards by farms and receiving an SFP.
- It was agreed that larger farms would receive smaller payments, according to *modulation* principle

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individual human influence, d) usually the weather risk does not directly influence the product prices, but the volume of production .

4 W. Chmielewska – Gill, J. Czapla, J. Dąbrowski, W. Guba: *Wspólna Polityka Rolna – zasady funkcjonowania oraz ich reforma*, FAPA, Warsaw, 2003, p5. It must be mentioned that CAP was the first and for a long time the only common policy of the Community.

5 *Consolidated version of the Treaty Establishing the European Community*, Official Journal of the European Communities, 24.12.2002

- Financial discipline referring to reduction of direct payments if expenditure limits on CAP have been exceeded.

- Changes on markets of renewable energy sources, cattle, sheep, milk, farinaceous potatoes, dried fodder, protein-rich plants and cereals.

However, the issue of modulation is crucial to this article. It was introduced by decree of the European Council No 1259/1999 on 19th May 1999 as a supporting tool for CAP direct payments, in response to the Court of Auditors opinion of 22nd December 1998. It was decided that reductions in subsidies would be permissible if environmental constraints were not adhered to. Detailed rules for reduction and use of conserved resources were introduced. By virtue of the European Council decree No 378/2007 of 27th March 2007 the principle of *voluntary modulation* was established and introduced, to reduce direct payments according to the article 2 letter d) of the decree (EC) No 1782/2003 and to transfer the savings to finance the programmes of Rural Areas Development. In order to protect smaller farmers from incurring additional losses a passage was added referring to beneficiaries of direct payments below €5000. They were granted additional aid equal to the subsidy reduction resulting from voluntary modulation.

The sums saved from subsidies reduction in subsequent years, according to the plan mentioned above, are used by member states as supplementary resources intended for supporting the Rural Development Programme. Amounts equal to 1 per cent are transferred to the country which has obtained the savings. The remaining part is divided among all the Community countries, according to the procedure described in article 144 section 2 of the present decree, by the following criteria:

- arable land area
- per capita GDP expressed as purchasing power parity
- employment in agriculture

At the same time it has to be said that work is continually under way in the EU on new risk management options and stabilisation of farmers' incomes, also regarding the aforementioned arrangements with reference to the funds derived from modulation. It is these funds that are to become the basis for new solutions created and subsequently implemented by the member states to prevent the farmers from abandoning agricultural activities in the face of frequent realisation of unforeseen natural phenomena[6], which might disturb the market balance and lead to food production shortages.

It has to be emphasised that the EU documents and legislation contain a number of formerly created regulations which allow the use of farm supporting tools in cases of realisation of catastrophic phenomena. One can take the example of the resolution on risk management and acting in critical situations in agriculture (2005/2053(INI)) or the European Commission's decree No 1857/2006 on application of the articles 87 and 88 of the Treaty with regard to the state aid for small and medium-sized enterprises conducting activity related to agricultural production and altering the decree (EC) No 70/2001. Additional aid for farms,

[6] Detailed analysis of the European solutions referring to this sphere: *Agricultural Insurance Schemes*, European Commission 2006, http://ec.europa.eu/agriculture/analysis/external/insurance/mainreport_en.pdf (status for 1.03.2009)

beyond the formerly established forms of financing, can only be realised in the case of occurrence of *an adverse climatic phenomenon, which can be compared to a disaster*. According to the relevant decree such phenomena refer to *weather conditions such as frost, hail, ice, rain or drought, which damage over 30 per cent of the average annual produce of a given farmer based on the previous three years or the three years' average based on five previous years, excluding the highest and lowest values.* Additionally, the adverse climatic phenomenon which can be referred to as a natural disaster, has to be recognised as one by the public authorities. In such a case the member state may offer aid covering up to 90 per cent of the loss. The other form of support scheduled in the analysed decree is applied only to farmers who meet the small and medium size farm criterion[7]. It is an insurance premium subsidy. Co-financing of premiums by the member state budget may even amount to 80 per cent of the premium cost if the insurance policy mentions exclusively insuring losses caused by adverse climatic events which can be compared to disasters. Otherwise, if the policy covers minor losses caused by climatic events, animal or plant diseases or pest, the aid may amount to maximum of 50 per cent of the premium cost[8].

Subsidised insurance in Poland

The purpose of initiating subsidised insurance in the agricultural sector in Poland which can be noticed in the first draft bill substantiation was to create a solution leading on the one hand to popularise insurance of crops in Poland, and on the other to reduce the necessity to launch various forms of help for harmed farmers derived from the state budget or public finance sector entities[9].

Table 1. The number of policies signed on crops insurance prior to and after introduction of state subsidies.

[7] According to the latest definition included in the annex I to the decree (EC) No 800/2008 of 6th August 2008 accepting certain types of aid to be consistent with the common market as applied in articles 87 and 88 of the Treaty (general decree concerning mass exclusions) enterprises ineligible for this form of aid include large independent companies (employing more than 250 workers and whose annual turnover exceeds €50m and/or whose total annual balance exceeds €43m) as well as those which accompanied by owners or dependent entities exceed the above limits (partnerships and joined ventures). Similar rules are applied to entities owned by one or several natural persons and the linked entities operate on one market or on related markets. A company cannot be considered as small or medium-sized enterprise if 25 per cent of its capital or voting rights are controlled directly or indirectly, commonly or individually by at least one state authority (e.g. agencies in Poland)

[8] *The aid cannot be limited to insurance provided only by one insurer or a group of insurers or to insurance dependent on the condition that the insurance contract is to be signed with a company founded in the given member state.*

[9] This form of aid is executed on the basis of article 87 of the Treaty as in the course of ratification it was seen as consistent with the Community law. (see : http://ec.europa.eu/community_law/state_aids/agriculture-2005/n260-05.pdf)

Years	The number of signed policies (incl. the ones subsidized by state)	The area of drops covered by subsidized insurance (in ha)
2003	44 847	-
2004	39 430	-
2005	36 212	-
2006	49 367 (10 741)	311 740
2007	90 474 (28 412)	575 029
2008	108 343 (87 150)[10]	1 832 036
2009	(144 080)	2 808 104
2010	158 507 (150 833)	2 845 777
2011 – planned	(250 000)	4 750 000

Source: quarterly insurance market data (www.knf.gov.pl) and the information from the Ministry of Agriculture and Rural Development

The number of contracts signed indicates that the task of popularising insurance is being carried out[11]. However, only three insurers (out of 34 companies offering property insurance) offered subsidised crops insurance from the moment of its introduction: PZU S.A., Concordia Polska Mutual Association and Mutual Association TUW (MTU S.A also signed a contract with the Ministry of Agriculture and Rural Development in 2007 but it did not sell this type of insurance, and HDI Asekuracja joined the program of offering subsidised insurance in 2010). The small number of companies involved resulted from, among other reasons, difficulties with constructing the product, lack of experience in adjustment of losses and an enforced estimation of its price (setting the maximum levels of prices which make the farmer eligible for a subsidy)[12]. It has reduced the claims and the scope of aid executed by the state it relation to losses to a limited extent. The drought of 2008[13] forced the government to

[10] The quarterly accounting periods selected for analysis contained the largest number of crop insurance contracts. Between 2004 and 2007 it was the fourth quarter, while in 2008 the second quarter. The fact that there were more statistically active policies at the end of the second quarter probably stems from various ways of registering the policies. In PZU SA the policy states that the contract is valid for 12 months so it is included in the statistics at the end of the year. In short-term insurance offered by Concordia Polska TUW the insurance period written in the policy is equal to the harvesting period of a given crop (largely prolonged in relation to the regular activities established in the agricultural best practice).

[11] A growing number of commercial contracts concluded must be highlighted.

[12] At the moment another amendment to the subsidised insurance bill is under preparation. The proposed change will make it possible to obtain subsidised insurance of fruit and vegetables. (Today the rates set by insurers are well over the 6 per cent below which the farmer may expect a subsidy) First of all, however, the changes are supposed to encourage the insurers to implement insurance against the risk of drought based on the conditions included in the bill. (The state will reimburse the insurers for a major part of the indemnities paid via a reassurance system.)

[13] According to the estimates of the Institute of Soil Science and Plant Cultivation, in accordance with the website "Monitoring suszy rolniczej" (http://www.susza.iung.pulawy.pl) in the fifth reporting period, i.e. from 11th May to 10th July the threat of farming drought was recognized in nearly all types of crops in all the soil classes in 15 provinces, which meant 2091 Polish communes (68.4 per cent) and 57.9 of arable land. The areas of Wielkopolska and Kujawy were the most heavily affected.

perform *ad hoc* supportive actions[14]. In August 2008 a decision was made to launch additional budget-based aid (according to the decree 1857/2006) of PLN 245m. The sum in question, in major part (182m) derived from the contingency fund alteration allocated for subsidising the crops and livestock insurance, was used for benefits, supplementary aid to cover the loan interest and subsidies on account of the sowing seeds and planting material used, of the elitist and qualified categories[15] and encompassed 230,000 farms hit by drought and 1603 farms where losses were caused by a hurricane[16].

Analysis of the process of passing the relevant bill (sessions of parliamentary commissions, proposals tabled) indicates that only two parties were involved in the work on it: the insurance companies and the Ministry of Agriculture and Rural Development representatives. The insurers, via their representatives in the Polish Chamber of Insurance, attempted to create regulations allowing to:

a) offer products covering well-known and accepted risks to farmers

b) properly distribute threats (both based on the area and the type of occurrence)

c) set a price adequate to actuarial figures

d) obtain suitable reassurance conditions (including the state reassurance)

e) and consequently, gain profit from a particular product line.

Most of these expectations (with the exception of a profitable technical result) were fulfilled to a larger or smaller extent. The insurers witnessed an increased demand, while competitors remained disinterested. Introduction of separation of risks within the “obligatoriness” included in the bill made it possible to exclude the risk of drought[17] from the fulfilled contracts. Additionally, sellers of insurance became increasingly interesting for crops and it had various distribution channels used (especially the external ones). Certainly, evaluation of subsidised crops insurance is also influenced by catastrophic events, such as ground-frost in 2007 or drought in 2008, which involved engagement of additional funds in loss adjustment and brought about negative technical results. Another problem was the severe criticism by farmers, media and politicians alike of the insurers’ actions in the context of the losses and the approach to the risk of drought.

On the other hand, the Ministry’s objectives can be defined as follows:

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[14] The government bill of 26th August 2008 concerning establishment of assistance programme for farming families whose estates were affected by either drought or hurricane in 2008 ((http://www.kprm.gov.pl).

[15] The government decree of 26th September 2008 concerning detailed terms of fulfilling the assistance programme for farmers whose estates were affected by either drought or hurricane in 2008.(Dziennik Ustaw No 173, item 1070)

[16] It must be emphasized that *ad hoc* assistance is directed to all farmers, not only those who grow the crops listed in the subsidized insurance bill.

[17] Setting punitive rates (even up to 10 per cent of the future yield value) in areas exposed to drought deprived farmers of the possibility of benefiting from a subsidy for this risk and greatly reduced the numbers of concluded contracts. (in autumn less than 2000 contracts were concluded with regard to the analysed cover) Still, interest in the insurance is very high.

a) obtaining a political result in the form of seeing to the financial interests of potential rural voters

b) obtaining a means for transferring the resources to farmers who were most affected by a phenomenon .

c) preparing solutions which would allow to offer full cover to farmers after 2010

d) all the objectives were to be reached at a lowest possible cost.

The Ministry fulfilled most of its goals as well. Subsidies are popularised: an increasing number of contracts is fulfilled, they are more commonly available, another insurance company joined the program in 2007. The change in the time-span of insurance against spring ground-frosts (liability starting from 15th April) made it possible to cover the key growth periods of rape and in fruit-growing. Nonetheless, subsidised insurance is still criticised heavily by farmers and subsequent amendments will be necessary.

Additionally, if the bill in question is to be the Polish response to the Commission's decree No 1857/2006, it has to be stressed that there are a lot of controversial statements there.

1. According to the contents of the bill, within the 12-month period from July of each year every farmer receiving an area subsidy is obliged to insure 50 per cent of the land against at least one of the risks: flood, hail, drought, negative consequences of wintering or spring ground-frosts. However, the 50 per cent is calculated on the basis of the grown crops with subsidised insurance premiums, i.e. cereals, corn, colza, oil-yielding rape, hops, tobacco, ground vegetables, fruit trees and bushes, strawberries, potatoes, sugar beets or legumes (with the exception of e.g. sorghum). Consequently, the key requirement for an additional subsidy is not met, where the decree stipulates the necessity for concluding an insurance contract covering threats resulting from adverse climatic events which are statistically most likely in a given member country or region. The insurance has to cover at least 50 per cent of the average annual produce or the produce-related income.

2. Drought is the most feared threat for Polish farmers. On the one hand it is for the member states to determine the intensity of this phenomenon, and on the other, introduction of maximum rates has come in the way of including this risk within the subsidised insurance.

3. Limitation of the maximum rates which enable subsidies[18] causes further types of crops insurance (eg. Income insurance) to be eliminated from the framework of this program.

Modulation – the search for the effective way of financing the tasks related to rural development

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[18] According to article 5 of the crops and livestock insurance bill, the premium subsidies on the grounds of crop insurance amount to 50 per cent but no more than 40 per cent of the premium (it is regulated annually by the government bill), if the tariff rates of crop insurance set by the insurer are below

a) 3.5 per cent of the amount insured (for cereals, corn, spring colza, oil-yielding rape, potatoes, or sugar beets)
b) 5 per cent of the amount insured (for winter colza, ground vegetables, hops, tobacco, fruit trees and bushes, strawberries or legumes)

but no more than 6 per cent of total insurance.

The European Council believed it was doubtlessly essential to revise the existing risk management mechanisms and the support systems for farmers facing natural disasters. Talks were held on the subject of solutions allowing farmers to manage risk by themselves and consequently stabilise their income. The main issue in the work on the new solutions was the source and method of financing the newly introduced mechanisms. One of the solutions includes using one per cent of the modulation resources to allocate it to finance the risk management systems[19].

Exploitation of the funds for the Rural Development Program in 2007 was subject to analysis which proved that the funds were too meagre and the financial capabilities of the Community States do not satisfy the budget needs for realisation of the assigned tasks. Therefore a decision was made to increase the obligatory modulation and to add a progressive element to the framework of the new system based on the following rules:

- The total supplementary income derived from modulation remains at the disposal of the state which has generated the resources.

- The UE-15 states as of 2009 would increase the basic rate of modulation annually by 2 per cent relating to all payments over €5,000 until it reaches the reduction level of another 8 per cent in 2012.

- The progressive element was introduced, decreasing the payments gradually by another 3 per cent in the particular payments thresholds.

The table below presents the new, total rates of modulation which should be used (the rates currently in force and supplementary rates)[20].

Table 2. The altered modulation rates in force between 2009 – 2012

Thresholds	2009	2010	2011	2012
From 0 to 5 000	0	0	0	0
From 5 000 to 99 999	5% + 2%	5% + 4%	5% + 6%	5% + 8%
From 100 000 to 199 999	5% + 5%	5% + 7%	5% + 9%	5% + 11%
From 200 000 to 299 999	5% + 8%	5% + 10%	5% + 12%	5% + 14%
Over 300 000	5% + 11%	5% + 13%	5% + 15%	5% + 17%

As it can be seen, within a few years the rates will increase substantially, which will generate larger sums in particular countries. To meet the Polish needs, in August 2007 The

[19] *Health Check to nie reforma*, interview with J. Plewa PhD – general director of Directorate-General for Agriculture and Rural Development in Brussels, Top Agrar Polska No 6/2008, pp. 52-53.

[20] The Council of Europe decree of 20th May 2008 changing the decree (EC) No 1698/2005 concerning support to rural areas by European Agricultural Fund for Rural Development

Foundation of Assistance Programs for Agriculture calculated and published the estimates of the sums likely to be generated in Poland in 2013. It should be added here that the calculations were made on the basis of the European Council decree No 1782/2003 of 23rd Sept 2003, which means that the applied modulation rates are lower than the ones introduced in 2008 and have been in force since 2009, according to the table 1 above.

The estimates were calculated on the basis of the assumptions and the data:

- The data referring to the number of farms and the area structure was taken from The Main Statistical Office (2005)

- The amount of direct subsidy for 2013 based on the Council of Europe decree 2011/2006.

- The direct subsidy rate was determined as the ratio of direct payments against the reference area which was determined to amount to 14,337m ha.

Table 3. Estimated calculations of the sums resulting from the use of modulation in Poland in 2013.

Item	The values of particular items with regard to modulation rate		
	3%	5%	10%
Direct payment rate (€/ha)	209,99	209,99	209,99
Farm threshold size	23,81	23,81	23,81
Percentage of total number of farms which qualify for modulation	6,76	6,76	6,76
Percentage of farmland subject to modulation	44,22	44,22	44,22
Additional subsidy (€)	68 484 400	114 140 667	228 281 335
Resources obtained from modulation in Poland (€)	28 836 360	36 393 933	72 787 865
Resources obtained from modulation which remain in Poland (80 per cent	17 469 088	29 115 146	58 230 292
Resources obtained from modulation which remain in Poland (90 per cent)	19 652 724	32 754 539	65 509 079

Source: the team of The Agricultural Policy Analysis Unit (SAEPR)

The Community Law asserts that all the financial resources obtained from the modulation can be used exclusively within the Rural Development Program, including the amount which could finance the means of risk management and be applied in critical situations.

The document relating to the distribution of resources was created in early 2009[21]. It was emphasised in the beginning that due to the increasing importance of efficient risk

[21] The Council's Decree (EC) No 73/2009 of 19th Jan 2009 which established common rules for systems of direct subsidies for farmers within the CAP along with the systems of subsidies themselves, altering the decrees (EC) No 1290/2005, (EC) No 247/2006, (EC) No 378/2007 and repealing the decree (EC) No 1782/2003

management the member states should be able to co-finance both the insurance premiums paid by farmers to cover crops, livestock and plants and the compensations for losses incurred because of diseases or environmental incidents. In the analysed section devoted to the sources of financing losses in agriculture articles 70 and 71 are key: “Insurance of crops, livestock and plants” and “The common investment funds regarding plant and animal diseases and environmental incidents.”

Subsidising crops and livestock insurance premiums within the new support system.

According to the analysed document there is a possibility of additional insurance premium subsidy (beyond the existing one) in the case of contracts protecting farmers from the consequences of “adverse climatic phenomena”, which can be treated equally to weather conditions, further compared to natural disasters, including frost, hail, ice, rain or drought.

The most important change, however, with respect to the existing regulations and a Polish farmer’s ways, is an appraisal of damage which will ultimately lead to the payment of compensation by the insurance company. According to the rules determined in the analysed decree the company’s liability occurs when the damage exceeds 30 per cent of the farm’s average production loss. A detailed calculation of damage consists in determining the level of actual loss on a particular field and the animal produce against the total farm’s produce – the past three years’ average or based on the last five years excluding the lowest and highest value. Acceptance of such an assumption can lead to the situation where farmers may practically receive compensations in very few cases. It might be paid only in the case of a catastrophic event.

Table. Example of catastrophic damage calculation in a farm

Type of produce	Area in ha	Produce value in PLN	Example of damage	Area in ha where the damage occurred	Loss of crop	Loss of produce value
Winter colza	10	50 000	Hailstorm	6	60%	18 000
Corn	10	60 000	Spring ground-frosts	10	40%	24 000
Winter wheat	10	40 000	Hailstorm	5	40%	8 000
Spring barley	10	35 000	Hailstorm	5	40%	7 000
Dairy cattle		40 000	No damage			
Total	40	225 000				57 000
Percentage of total loss of the farm’s produce value (assuming that the produce value in the given year is the same as the last three years’ average)						**25**

The farmer will not receive a compensation as the loss is lower than 30 per cent of the farm's produce

Source: calculations carried out by the Agricultural Insurance Commission of the Polish Chamber of Insurance

In the case of most common risks such as hailstorm, spring ground-frosts, hurricane or rainstorm the damage is usually below the 30 per cent of the loss incurred in the crop from a given field. Assuming that the crops are damaged to a various extent on different fields due to occurrence of the aforementioned risks, a farmer may hardly ever receive a compensation. The above example presents large losses in single crops caused by hailstorm or spring ground-frosts. If we set the losses against the whole farm's produce value, the farmer will not receive a compensation. Within the currently functioning state-subsidised insurance, in the case described in p 5 the farmer would receive PLN 57,000 of compensation, assuming the lack of damage deductible applied by the insurer or PLN 51,000 if the deductible were 10 per cent of the damage value.

Another problem is that hardly any book-keeping is carried out in farms. It is virtually impossible to determine a credible level of average productivity and average prices based on the last three years or the last five years excluding the lowest and highest value. Inadvertently, it makes it impossible to determine the average produce value in this time-span.

Also, the process of adjustment of losses may cause serious difficulties. The loss adjuster would have to assess the damage in the insured crop and subsequently set this damage against the value of plant and livestock produce which was not insured or was insured only partially. This requires additional expertise and a huge amount of further labour.

It must be stated, however, that another point of the Council's Decree (EC) No 73/2009 asserts that as for crops, the insurance may also concern the damage caused by pest, which broadens the agricultural market product options. Currently such solutions are not offered in Poland. The damage which can be covered by such products is also defined very broadly: *"economic loss" denotes all the additional costs incurred by a farmer resulting from taking exceptional measures in order to limit supply on a given market or any substantial loss of produce.*

Within the scope of livestock insurance the products may include "animal diseases" which are listed in the animal diseases register established by World Organisation for Animal Health or in the appendix to the Council decision 90/424/EEC of 26th June 1990 concerning expenditure for veterinary science. It is also a much broader solution than the ones in force at present[22].

The maximum level of the premium subsidy was established as 65 per cent of the payment receivable. It can be allocated to any insurance company operating within the confines of the Community which offers the particular solutions.

Mutual Funds as a special form of insurance cover implementation.

Decree 73/2009 introduces special financial and organisational solutions to compensations paid to farmers who have incurred economic losses caused by animal and

[22] In Poland the subsidised insurance bill does not allow the budget to co-finance the premiums if the coverage includes death of livestock or necessary slaughter due to diseases.

plant diseases or the so called environmental incidents. The solutions entail granting financial contributions to mutual funds[23].

Special attention has to be paid to the concept of a mutual fund. According to the definition given in the section 2.a) of the decree a mutual investment fund is a system empowered by the member state in accordance with its state law which enables associated farmers to jointly insure themselves. Thanks to this fund compensations are paid to those farmers associated in the fund who have incurred economic losses on the grounds of the events mentioned above. The compensation is paid from:

– primary capital contributed by the associated and unassociated farmers or other entities in the agricultural supply chain

– loans taken by mutual funds on commercial terms

– sums which have been transferred to the fund when the farmer is entitled to a compensation for economic loss from any third party (by virtue of the community law or state law) and the compensation for the loss has already been paid by the mutual fund.

The reservation is, however, that the primary capital cannot be financed from the public money.

The formula proposed in the decree resembles closely a well-known in Poland and often practised idea of neighbours' mutual help, which has never been formally organised. In rural communes (of the Radomskie, Kieleckie, Lubelskie or Tarnowskie regions) after the obligatory insurance of livestock against death had been abolished (in 1989) neighbourhood groups of mutual insurance started arising to cover the damage caused by cattle or horses mortality. The premium reflecting the actual market price of animal is paid on entering the group (sometimes the premium may increase along with the growth of the market value of the animal) or annually, depending on particular group. Then the premiums are deposited in a bank account[24].

The decree states that a mutual fund should enable the farmers to insure their crops and livestock, so it limits the farmers' organisational possibilities to the forms accepted by the insurance activity bill and the EU insurance directives. The idea of mutuality in Poland can be realised exclusively through a mutual fund in three different forms: a large insurance association, a small mutual insurance association and a mutual membership association. A large mutual insurance association is impossible to accept because of the equity requirements. The formula for a mutual membership association, a group joined by common insurance

[23] In the Polish version of the decree the term „mutual investment fund" is used.

[24] Within this formula dairy cows and horses are eligible for insurance of up to 50 per cent of their value. After the animal's death what can be sold or used is traded, and half of the value is paid back to the claimant. Correctness and reliability of the indemnity application is checked by so called "village threes"(consisting of two farmers living in the village outskirts while the third one in its centre). Farmers stress that this method is very cheap and effective, as in some communes the compensations are paid from the interest on the capital, and the gained surpluses are invested locally. See. Z. Kotowski, Wiejskie ubezpieczenia wzajemne – z myślą o przyszłości, „Ubezpieczenia w Rolnictwie. Materiały i Studia" 1999, No 2, pp. 50-51.

interest[25] which is a separate unit within the framework of a mutual association, also raises formal doubts. For the group's autonomy to be legitimised it must generate a definite financial result as well as have clear rules for surplus division or participation in covering the shortages, which means carrying out separate accounting closures. Mutuals do not possess their own assets (which according to the decree are the sources of finance to cover the loss) and in the light of the current legal regulations there is no possibility of separating their assets from the assets of the whole association. Thus, the only acceptable solution seems to be the form of a small mutual insurance association. Within the Polish law, a small mutual is recognised as such when its operations are limited due to a small number of participants, a small number of contracts or low insurance amounts or, finally, a limited territorial range of operations. For a small mutual to be recognised by a supervisory authority it must collectively fulfil the following terms[26]:

- the association insures its own members exclusively
- the members of the association belong to a definite circle of entities performing a given occupation or a group of occupations or a definite type of business activity or operating on a certain area,
- the annual premium income does not exceed €5m

Consequently, as a mutual insurance association is recognised as "small", prudential norms are reduced:

- regulations concerning creation, amount, embracing, repayment and reduction of share capital do not apply
- there is no need to set the capital reserve
- exemption from the obligation to comply with norms relating to own funds, solvency margin and guarantee capital.

According to sections 6 and 7 of article 71 the state may only co-finance (up to 65 per cent of the sum[27]):

– administrative costs of creating the fund spread over a maximum of three years

– repayment of capital and interest of commercial loans taken in order to pay the indemnities

– amounts of financial compensation paid by the fund from the primary capital.

[25] Common insurance interest is referred to by the authors as business interest connected with creating a separate insurance fund and covering losses from that fund.

[26] Article 43 section. 2 of the bill of 22nd May 2003.on insurance activity (Dz. U. No 124, entry 1151).

[27] Except for the contribution limit of 65 per cent of the amount the decree allows the member states to set the upper cost limits which qualify for a contribution to be granted as well as set the limit for funds or suitable single limits.

The essential benefit that can be drawn from adapting this solution to the local conditions is the possibility of co-financing the contributions to mutual associations by the EU from the public funds.

Insurance mutuality and a substantial participation of public funds in reimbursement of indemnity payments seems to be an opportunity for dynamic growth in agricultural insurance. Insurers may also be encouraged to introduce pioneering insurance of risks which are not supported with sufficient statistical data.

Prospects

The increase in the engagement of public funds in subsidising agricultural insurance may bring a side effect in the form of a significant rise in the number of concluded insurance policies, the value of the insured crops or livestock, which in turn may result in overabundant and unplanned increase in the public funds allocated to subsidise agricultural insurance[28]. During the crisis a large reduction occurred in the budget funds planned to subsidise insurance. Actual subsidies, however, realised according to the agreements signed by the ministry with particular insurers have been increasing systematically over the years: in 2006 it was PLN 9.81m, in 2007 – PLN 31.33m, while in 2008 PLN 61.25m, in 2009 – PLN 79.19m, and in 2010 – PLN 96.62m.

The introduction of regulations of decree 73/2009 may lead to reduction in rates used by insurers and consequently allow to limit premium subsidies from the state budget. One thing is certain, though, namely the trust to crop insurance will be violated because of this change. As a result, larger areas of land will remain without any insurance protection and the possible damage will cause asserting claims against the state by the society.

Therefore it is vital to aim at leaving the present system of premium subsidies unchanged with regard to the events where damage is not catastrophic. In Poland such events include: hail, rainstorm, the effects of wrong wintering, spring ground-frosts, hurricanes, thunderbolts, landslides, avalanches. Introduction of the second pillar in the form of catastrophic risk insurance will reduce the state's total burden of expenses incurred on agriculture. In Poland, however, such catastrophic risks involving damage of over 30 per cent produce in a farm are droughts and floods.

Additionally, public funding of insurance premium subsidies may activate moral hazards, and what is more, the degree of moral hazard rises along with the growing financial involvement of the state. In agricultural insurance it is not only connected with indemnity beguilement but also intentionally lower investments in production (fertilisers, pesticides etc.)[29]. Such situations enforce laying additional duties on insurers and creating additional formal requirements. The solution to that problem could become insurance mutuality which naturally lowers the moral hazard among the insured members and whose role is supported by the regulation in article 71 of the decree.

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[28] See more in J.W. Glauber, K.J. Collins, *Crop Insurance, Disaster Assistance, and the Role of the Federal Government in Providing Catastrophic Risk Protection*, "Agricultural Finance Review", Fall 2002, pp. 82-98

[29] See. C.G. Turvey, M. Hoy, Z. Islam, *The Role of Ex Ante Regulations In Addressing Problems of Moral Hazard in Agricultural Insurance*, "Agricultural Finance Review", Fall 2002, pp.103-115