

# KRUS Prevention and Rehabilitation Fund as a tool for preventing accidents in agriculture

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## Abstract

The study presents issues related to the financing of KRUS prevention activities from the Prevention and Rehabilitation Fund, directions of prevention activities implemented by the Fund, statistical data on accidents and occupational diseases of farmers as well as the causes and circumstances of accident events. The conducted prevention activities are aimed at reducing the number of accidents and occupational diseases of farmers, preventing their occurrence and limiting their effects by increasing the level of knowledge about the risks associated with running farms and promoting the principles of safe and hygienic work.

The aim of the study is to discuss the sources of financing for prevention activities, including expenditure in 2017–2020, aimed at preventing/reducing accidents in agriculture.

**Keywords:** prevention activities, Prevention and Rehabilitation Fund, categories of accidents at agricultural work, KRUS, causes of accidents, accidents at work and occupational diseases of farmers.

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## Prevention and Rehabilitation Fund – planning, creation and tasks

The Prevention and Rehabilitation Fund, which is at the disposal of the President of KRUS, is part of the financial management of the Agricultural Social Insurance Fund<sup>1</sup>. It is intended to finance material costs of activities related to the prevention of accidents at work and occupational diseases of farmers as well as providing assistance to the insured and persons entitled to insurance benefits in using various forms of rehabilitation.

The tasks of the Prevention and Rehabilitation Fund result from Art. 80 sec. 1 of the act on farmers' social insurance, according to which this fund is intended to finance material costs resulting from the implementation of KRUS tasks referred to in art. 21b, art. 63 and art. 64 above acts, incl. such as: activities for the prevention of accidents at work and agricultural occupational diseases, including, in particular, analysing the causes of accidents and diseases, conducting voluntary, free of charge training and instruction for the insured on the principles of health and life protection on a farm and procedures in the event of an accident at work in agriculture, disseminating among the insured the knowledge about the risks of accidents at work and agricultural occupational diseases, as well as the knowledge of the principles of protection of life and health on a farm or the rules of conduct in the event of an accident, and making efforts to properly produce and distribute safe means used in agriculture and agricultural equipment and protective clothing for farmers<sup>2</sup>.

Planning of the Prevention and Rehabilitation Fund usually takes place at the turn of the second/third quarter in the year preceding the planning year. Pursuant to the Act on Farmers' Social Insurance, the Prevention and Rehabilitation Fund is created from a deduction from the Contribution Fund, amounting to 6.5% of the planned expenditure from this fund, from subsidies from the state budget, interests obtained from investing free resources from the Prevention and Rehabilitation Fund<sup>3</sup>. In the event of a shortage of this fund, it is covered by the Contribution Fund<sup>4</sup>.

1. Ustawa z dnia 20 grudnia 1990 r. o ubezpieczeniu społecznym rolników, Dz. U. 2021 poz. 266.
2. C. Nobis, *Fundusz prewencji i rehabilitacji KRUS jako instrument zapobiegania wypadkowości i niepełnosprawności w rolnictwie w latach 2006–2015 na terenie Polski*, Radom 2017.
3. Ustawa z 20 grudnia 1990 r. o ubezpieczeniu społecznym rolników, Dz. U. 2021 poz. 266, art. 80 ust 2.
4. Ustawa z 20 grudnia 1990 r. o ubezpieczeniu społecznym rolników, Dz. U. 2021 poz. 266, art. 80 ust 3.

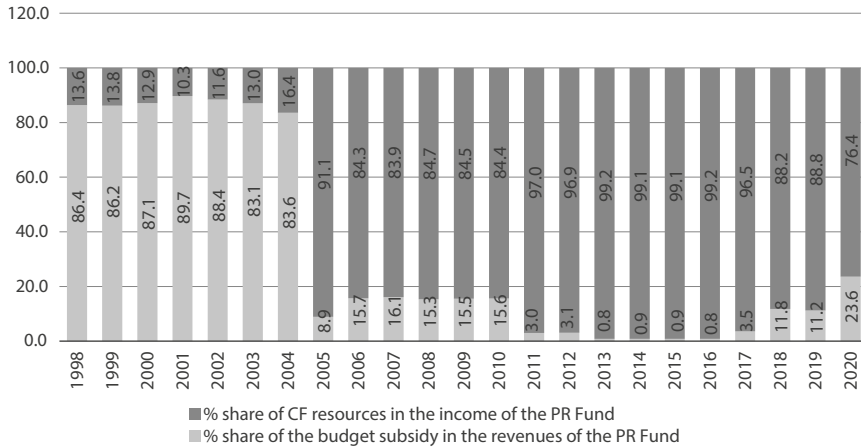
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Table 1. Prevention and Rehabilitation Fund (PRF) in 1998–2020 according to the structure of revenues, including a write-off from the Contribution Fund (CF) and a subsidy from the state budget (in PLN thousand)

Year	Write-off from the budget subsidy	% share of the budget subsidy in the revenues of the PR Fund	Write-off from CF	% share of FS resources in the revenues of the PR Fund
1998	18 410	86.4	2 910	13.6
1999	20 000	86.2	3 195	13.8
2000	21 140	87.1	3 125	12.9
2001	27 500	89.7	3 143	10.3
2002	27 000	88.4	3 544	11.6
2003	29 300	87.0	4 361	13.0
2004	29 100	83.6	5 698	16.4
2005	2 500	8.9	25 700	91.1
2006	4 000	15.7	21 532	84.3
2007	4 500	16.1	23 500	83.9
2008	5 000	15.3	27 724	84.7
2009	5 500	15.5	30 004	84.5
2010	6 000	15.6	32 454	84.4
2011	1 000	3.0	32 639	97.0
2012	1 038	3.1	32 900	96.9
2013	274	0.8	32 639	99.2
2014	283	0.9	32 922	99.1
2015	287	0.9	33 270	99.1
2016	292	0.8	34 863	99.2
2017	1 292	3.5	35 124	96.5
2018	5 000	11.8	37 462	88.2
2019	5 000	11.2	39 525	88.8
2020	10 324	23.6	33 484	76.4

Source: Agricultural Social Insurance Fund.

Chart 1. Prevention and Rehabilitation Fund in the years 1998–2020 according to the structure of revenues including the write-off from the Contribution Fund and a subsidy from the state budget (in %)



Source: Agricultural Social Insurance Fund.

Table 1 and Chart 1 show that the share of financial resources from the KRUS Prevention and Rehabilitation Fund has changed significantly over the years. Until 2004 the basis for financing the Fund’s preventive and rehabilitation activities was a subsidy from the state budget, from 2005 – a write-off from the Contribution Fund up to 5% (in 2005–2015), and from 2016 – up to 6.5% of the planned expenditure of this fund<sup>5</sup>. In the years 1998–2004, the share of the budget subsidy in the case of the Prevention and Rehabilitation Fund was over 80%. Since 2005, the basis for financing the preventive and rehabilitation activities of KRUS was a write-off from the Contribution Fund, which in the years 2013–2016 amounted to over 99%.

## Forms and directions of preventive actions

In Poland, the employer has been obliged to ensure safe working conditions for employees. Their duties are determined by the provisions of the Labour Code. The employer is also obliged to carry out prevention activities, including training of employees, both before allowing them to work and afterwards. Self-employed farmers do not have such statutory labour protection.

5. C. Nobis, *Fundusz prewencji i rehabilitacji KRUS...*, op. cit.

The Agricultural Social Insurance Fund has no right to prevention insight into the farmer's working methods until he has had an accident. In this situation, the activities carried out by the Fund consist in examining the circumstances and causes of accidents and occupational diseases and disseminating among the insured the knowledge about the risks associated with agricultural work and the principles of safe performance of this work<sup>6</sup>. The participation of farmers in prevention activities is voluntary and free of charge, and non-participation does not result in any sanctions.

The Act of 20 December 1990 on social insurance for farmers precisely defines the framework of the prevention activities of the Agricultural Social Insurance Fund. In art. 63, the legislator obliged the Fund to:

- a) analyse the causes of accidents and occupational diseases;
- b) conduct voluntary, free of charge training and instruction for the insured on the principles of health and life protection on the farm;
- c) disseminate among the insured persons the knowledge about the risks of accidents at work in agriculture and occupational diseases, as well as the principles of health and life protection;
- d) make efforts to ensure the proper production and distribution of safe products used in agriculture as well as equipment and protective clothing for farmers.

The main objective of prevention activities carried out by the Fund's local units is to disseminate the "Principles of health and life protection on a farm", which are recommendations regarding farm equipment, securing persons working on it and the manner of performing work related to agricultural activity. The content of the document, determined by the President of KRUS in consultation with the Farmers' Council and ministers competent for health, social security and rural development, was first published in 1995, and in 2008 and 2020 – amended. The need to update the "Principles of health and life protection on a farm" resulted from the need to adapt individual provisions to the legal regulations and good agricultural practices in force in the European Union countries. The latest version includes topics related to work organization, environmental protection, fire protection, handling of harmful substances (such as plant protection products, fuels and fertilizers), as well as recommendations on the psychophysical condition of the farmer and his well-being at the time of starting work. The dissemination of these principles is the main goal of prevention activities carried out by the local units of the Fund.

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6. W. Kobielski, *Wypadki przy pracy i choroby zawodowe rolników – wybrane problemy*, "Ubezpieczenia w Rolnictwie. Materiały i Studia" 2005, nr 26/27.

Based on the analysis of the causes and circumstances of accidents and occupational diseases reported to KRUS in 2019, the President of KRUS established the following directions of KRUS prevention activities:

- a) disseminating the “Principles of health and life protection on a farm and the List of particularly dangerous activities related to running a farm, which may not be entrusted to children under 16” among farmers, their families and children, and people associated with the rural environment;
- b) inducing the elimination of threats and prevention of the most common accidents from the following groups: “falling of people”, “being caught and struck by moving parts of machines and devices”, “hit, crushed and bitten by animals”, “falling objects” and “other events” by popularising:
  - improvement of the surface condition of yards and communication routes on farms;
  - using PPE items;
  - use of platforms and ladders with protection against tilting and sliding when working at the height;
  - elimination of doorsteps and faults in buildings and passages;
  - correct way to get on and off agricultural machinery;
  - taking care of equipping machines and devices with covers and securing their moving parts;
  - getting acquainted with the operating instructions for the machines and devices used;
  - rules for disabling the drive of machines and devices during their repairs and adjustments;
  - proper securing of machines, devices and tools during standstill and in motion;
  - application of the principles of safe timber harvesting for the needs of an agricultural farm;
  - safe aggregation of agricultural machinery and equipment;
  - the need to ensure the welfare and treatment of animals, and to understand their physiology and natural behaviour;
  - care for the psychophysical condition of the farmer – healthy lifestyle, diagnostics and disease prevention, proper organization of work, including counteracting the accumulation of works and fatigue, as well as ways to prevent overloading of the motion system;
- c) influencing the proper production and distribution of agents used in agriculture, as well as protective equipment and clothing by:

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- informing farmers about products marked with the “KRUS Safety Mark” and with trade fair awards of the President of KRUS entitled “Product increasing work safety on farms” and encouraging their purchase and use;
  - conducting preventive and recourse proceedings in order to eliminate from the market products whose design defects, workmanship or incorrect information in the manual were or may cause an accident or pose a threat to users;
- d) informing farmers about methods of preventing occupational diseases – mainly about preventing bites by ticks and about procedures to be followed in the event of a bite;
- e) familiarising farmers with the rules of conduct in the event of an accident and the basic methods of providing first aid<sup>7</sup>.

The Fund disseminates the “Principles of health and life protection on a farm” and “List of particularly dangerous activities related to running a farm, which may not be entrusted to children under 16 years of age” by:

- training, meetings and talks on health and safety on the farm;
- competitions about occupational health and safety knowledge on a farm;
- competitions for a safe farm;
- farm and field work inspections;
- pre-medical aid demonstrations;
- OSH knowledge Olympics for agricultural school students;
- test, art, photo and other competitions for children;
- KRUS information and prevention stands during mass events for farmers;
- popularising materials (brochures, guides, leaflets, calendars, films, posters, press articles, materials for children) and letters, appeals of the President of KRUS;
- popularising the principles of occupational health and safety through the mass media – press, radio, television, internet portals;
- conferences, seminars and meetings on occupational safety;
- individual instruction during the inspection of accident sites;
- expositions and exhibitions in customer service rooms at KRUS Regional Banches and local offices.

During these prevention activities, the Fund tries to convince farmers to introduce changes that significantly reduce the risk of an accident on the farm. Most of them do not require large financial outlays and make the working and living

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7. KRUS, *Wypadki przy pracy i choroby zawodowe rolników oraz działania prewencyjne KRUS w 2020 roku*, Warszawa 2021.

environment of the farmer and his family safer. Among the low-cost changes promoted by KRUS, the following can be mentioned:

- keeping farm yards clean and tidy;
- using the right footwear;
- correct mounting and dismounting of agricultural machines;
- use of a safety ladder;
- care for the completeness of guards and protections of the moving parts of agricultural machines and devices;
- compliance with all the recommendations contained in the operating instructions;
- shutdown of the drive during repairs and adjustments;
- getting to know the habits of animals, treating them friendly and applying the principle of limited trust;
- using labour protection.

As part of activities to prevent accidents at work and occupational diseases of farmers, KRUS makes efforts to ensure the proper production and distribution of safe products used in agriculture, as well as protective equipment and clothing for farmers.

The President of KRUS grants safe machines and devices the “KRUS Safety Mark” and awards the fair distinction “Product increasing work safety on a farm”.

Since 2000, producers and suppliers of these products have been awarded the DOBROŚLAW statuette, symbolizing protection of the health and life of farmers.

KRUS acquaints farmers with products marked with the “KRUS Safety Mark” and with the trade fair distinction “Product increasing work safety on a farm”. It presents them during trainings, fairs, conferences, seminars and shows, and encourages farmers to purchase them.

Another form of influence is carrying out prevention activities aimed at eliminating from the market technical means of production that may be the cause of accidents (e.g. when finding structural defects of agricultural machinery and equipment or improperly performed services).

If the cause of the accident at agricultural work was the defectiveness of the means of production used or the irregularity of the service provided, the President of KRUS in recourse proceedings may request the suppliers of defective products and services to return the paid post-accident benefits and require the removal of any structural defects and other risks<sup>8</sup>.

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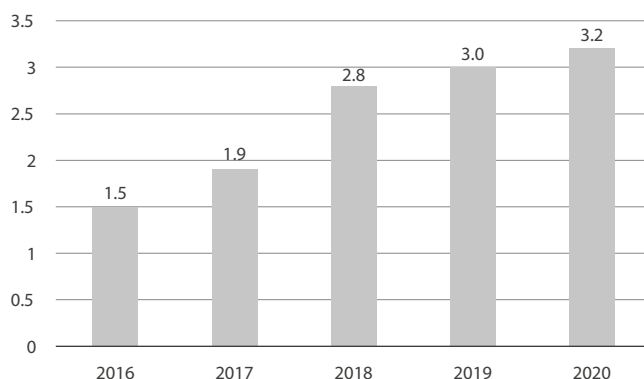
8. C. Nobis, *Fundusz prewencji i rehabilitacji...*, op. cit.



## Structure of expenditure in 2017–2020

Due to the fact that the prevention activities of the Agricultural Social Insurance Fund contribute to reducing the number of accidents at work in agriculture, eliminating their causes, preventing occupational diseases and other occupational risks to farmers, it was reasonable to increase the financial resources from the Prevention and Rehabilitation Fund for the above-mentioned statutory activities of KRUS. Hence the planned increase in expenditure on prevention activities from 2018, and thus an increase in expenditure per one insured person.

**Chart 2. Amount spent on prevention activities of KRUS per one insured in the years 2016–2020**



Source: Agricultural Social Insurance Fund.

The data for the period 2016–2020 show that in recent years the amounts spent on prevention activities by KRUS per one insured present an upward trend.

Thanks to the increased financial resources for prevention, KRUS has the opportunity to intensify its activities to disseminate knowledge among farmers about the risks and protection against accidents and occupational diseases.

In the years 2017–2020, from PLN 2 368 000 up to PLN 3 668 000 was spent annually on the implementation of prevention tasks. The funds were allocated to:

- purchase of competition prizes organized by the Regional Branches and the KRUS Headquarters (from 49.2% in 2017 to 27.5% in 2020 of total expenditure on preventive measures);
- purchase of prevention materials and materials popularizing the principles of health and safety to conduct prevention activities along with the purchase of pre-medical rescue kits (from 13.9% in 2017 to 33.5% in 2020);

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- making materials and their projects popularizing the principles of work safety on a farm (from 20.6% in 2017 to 29.7% in 2020);
- participation in agricultural events, organization of KRUS information and prevention stands (from 10% in 2017 to 4.1% in 2020).

A detailed list of data on the disbursement of funds from the Prevention and Rehabilitation Fund is presented in the table and graphs below.

**Table 2. Expenditure from the Prevention and Rehabilitation Fund in 2017–2020 (in PLN)**

<b>Prevention activities</b>				
<b>Allocation of expenses</b>	<b>amount of expenses in the year:</b>			
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Occupational health and safety competitions for farmers	472 608.57	504 651.33	1 131 657.93	546 018.27
National Competition "Safe Farm"	281 284.48	331 995.40	357 090.68	0.00
National Art Competition for Children	150 189.61	159 491.50	189 642.44	212 238.62
Other competitions	261 231.94	220 909.44	248 471.41	248 877.86
Purchase of prevention materials and materials promoting the principles of health and safety to conduct prevention activities	189 787.41	856 183.98	175 582.72	1 051 528.06
Pre-medical rescue kits	139 860.00	128 457.00	186 800.00	177 270.00
Participation in agricultural events, organization of KRUS information and prevention stands	236 492.73	296 025.10	319 713.40	152 179.91
Preparation of materials and their projects popularizing the principles of work safety on a farm	487 990.99	944 782.87	938 278.85	1 088 693.10
Other services	92 998.15	16 117.27	56 359.04	150 855.38
Purchase of materials enabling the conduct of prevention actions, e.g. an exhibition tent, a stand	56 054.54	26 567.31	27 036.66	40 428.03
<b>In total</b>	<b>2 368 498.42</b>	<b>3 485 181.20</b>	<b>3 630 633.13</b>	<b>3 668 089.23</b>

Source: *Agricultural Social Insurance Fund*.

In 2020, there is a clear decrease in expenses allocated to the purchase of competition awards and expenses related to participation in agricultural events and the organization of information and prevention stands. This was due to the COVID-19 epidemic. Due to sanitary restrictions, some of the planned measures to prevent accidents at work and occupational diseases of persons insured in KRUS were not

implemented. Due to the guidelines of the Chief Sanitary Inspector and the Government Crisis Support Team, activities requiring direct contact with farmers were cancelled: e.g. the 18th edition of the National Safe Farm Competition (implementation of this project has been postponed to 2021), training for farmers and their family members, as well as other competitions and shows. Fewer information and prevention stands and safe work demonstrations were organized due to the cancellation of most mass events.

At the same time, in response to the COVID-19 pandemic in 2020, additional prevention activities were taken. In order to popularize among the youngest rural inhabitants the e-learning course entitled “We are safe in the countryside – we prevent falls”, which in a modern form introduced the children to the risk of accidents in the farm yard, for the second time scooters were drawn among children who had completed the course.

The first edition of a competition for a nursery rhyme for children about farm safety was organized. The authors of the 20 best works received prizes, and the remaining children were given puzzles and colouring pages illustrating particularly dangerous activities related to running a farm, which should not be entrusted to children under 16.

The first “National Test Competition for Safe Work on a Farm – Safe Handling of Farm Animals” was also carried out. To implement this project, the moodle platform was used – an online tool that, in the conditions of a pandemic, enables educational activities among farmers without the need for direct contacts. The subject of the competition concerned a prevention campaign to reduce the number of accidents at work and occupational diseases of farmers related to handling animals, under the slogan “You do not risk when you know and respect”.

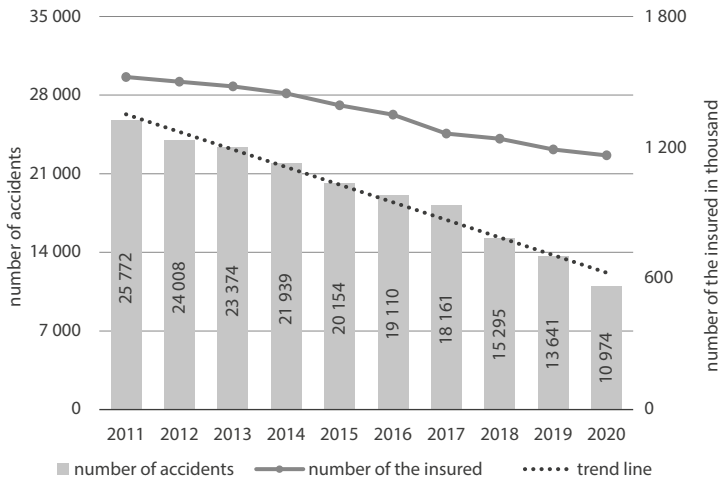
## **Accidents at work and occupational diseases of farmers in 2011–2020**

Data on accidents at farms of individual farmers were first collected by KRUS in 1993. At that time, almost 66 000 reported accident events were recorded. Since that time, the number of reported accidents and the total number of accidents at agricultural work and those resulting in the payment of one-off compensations have been gradually decreasing.

*Accidents reported*

In 2020, 10 974 accidents were reported to KRUS, by 2 667 (19.6%) less than in 2019, with a drop in the number of insured persons by 26 809 (2.3%): from 1 191 044 to 1 164 235. In 2011, the number of reported accidents decreased by 14 798 (57.4%), and the number of insured persons by 352 073 (23.2%).

**Chart 3. Number of accidents reported as accidents at agricultural work in 2011–2020 as compared to the number of insured persons**

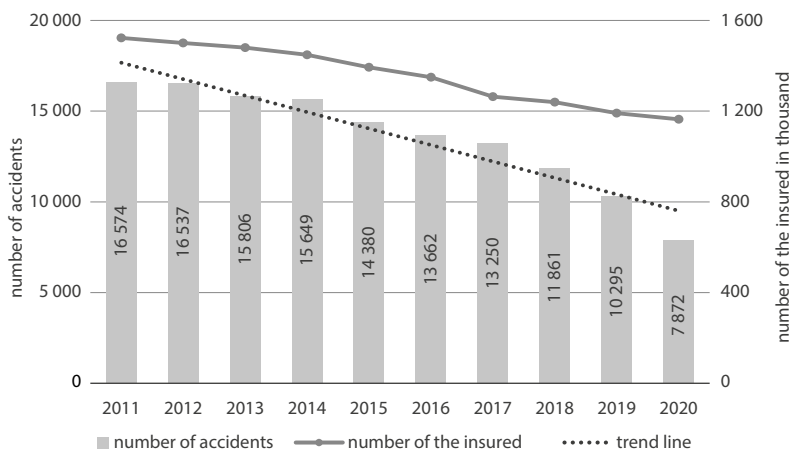


Source: Agricultural Social Insurance Fund.

*Accidents culminating in payment of one-off compensations, type of incidents and their health effects*

The number of accidents resulting in the payment of one-off *compensations* decreased from 10 295 in 2019 to 7 872 in 2020, i.e. by 2 432 (23.5%) less than in the previous year. Over the last ten years (from 2011), it has decreased by 8 702 (52.5%) accidents.

**Chart 4. Accidents resulting in the payment of one-off compensations in 2011–2020 as compared to the number of the insured**

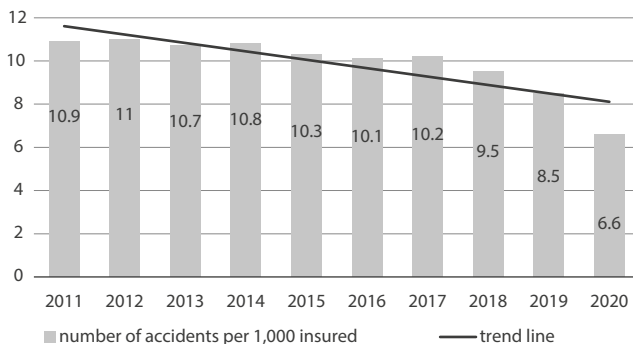


Source: Agricultural Social Insurance Fund.

### Accident rate

In 2020, the accident rate in individual agriculture (the number of accidents resulting in the payment of one-off claims per 1 000 insured) decreased from 8.5 in 2019 to 6.6 in 2020, i.e. by 1.9. Over the last 10 years, the accident rate has decreased from 10.9 to 6.6, i.e. by 4.3.

**Chart 5. Number of accidents per 1 000 insured in 2011–2020 (according to decisions resulting in the payment of one-off compensations)**

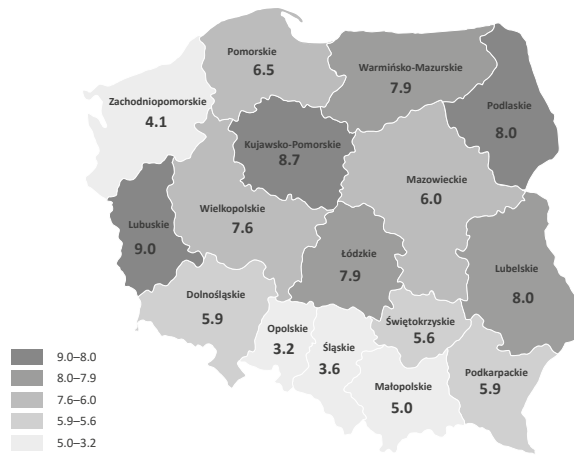


Source: Agricultural Social Insurance Fund.

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For many years, KRUS has noticed a large variation in the accident rate between voivodships. The highest accident rate was recorded in the following voivodships: Lubuskie (9.0), Kujawsko-Pomorskie (8.7), Podlaskie and Lubelskie (8.0), Łódzkie and Warmińsko-Mazurskie (7.9), and the lowest in the following voivodships: Opolskie (3.2), Śląskie (3.6), Zachodniopomorskie (4.1) and Małopolskie (5.0). The reasons for these differences between voivodships include topography, climatic conditions of the region, specificity of agricultural production in a given area and the economic situation of farms.

Chart 6. The accident rate in 2020



Source: Agricultural Social Insurance Fund.

Table 3. Age and sex of victims of accidents in 2020

Details		In total	Number of accidents in age groups							
			<18	18–19	20–29	30–39	40–49	50–59	60–64	65 and more
a – number of victims										
b – % share in accidents in total:										
Women	a	2 350	1	1	84	356	785	1 042	56	25
	b	29.9%	0.1%	0.1%	1.1%	4.5%	10.0%	13.2%	0.6%	0.3%
Men	a	5 522	0	12	532	1 019	1 504	1 846	566	43
	b	70.1%	0.0%	0.2%	6.8%	12.9%	19.1%	23.5%	7.1%	0.5%

Source: Agricultural Social Insurance Fund.

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Most of the victims in 2020 were men (70.1%), mainly in the age groups: 50–59 years old (23.5% of all victims), 40–49 years old (19.1% of all victims) and 30–39 years old (12.9% of all victims). Among women, the greatest number of victims was recorded in the age groups: 50–59 years (13.2% of all victims), 40–49 years (10.0% of all victims).

### *Breakdown of accidents by groups of events*

The breakdown of accident groups (by events causing injuries) has been similar for years. The vast majority in 2020 were events from the following groups:

- falls of persons – 3 718 injured, which accounted for 47.2% of all one-off compensations paid out;
- hit, crushed, bitten by animals – 958 injured, i.e. 12.2% of accidents;
- being caught and hit by moving parts of machines and devices – 958 injured, i.e. 12.2% of accidents;
- other events – 958 victims, i.e. 12.2% of accidents.

**Table 4. Breakdown of accidents in 2020 by accident groups**

Detailed breakdown	Number of accidents resulting in the granting of a one-off compensations	
	2020	% share in 2020
<b>In total including:</b>	<b>7 872</b>	<b>100.0</b>
falls of persons	3 718	47.2
the fall of objects	438	5.5
contact with sharp hand tools and other sharp objects	376	4.8
hit, crushing by materials and mechanically transported items	164	2.1
being run over, hit, caught by a moving means of transport	122	1.5
being caught and hit by moving parts of machines and devices	958	12.2
hit, crushed, bitten by animals	958	12.2
fire, explosion, natural forces	55	0.7
exposure to extreme temperatures	40	0.5
exposure to harmful materials	9	0.1
sudden illness	76	1.0
other events	958	12.2

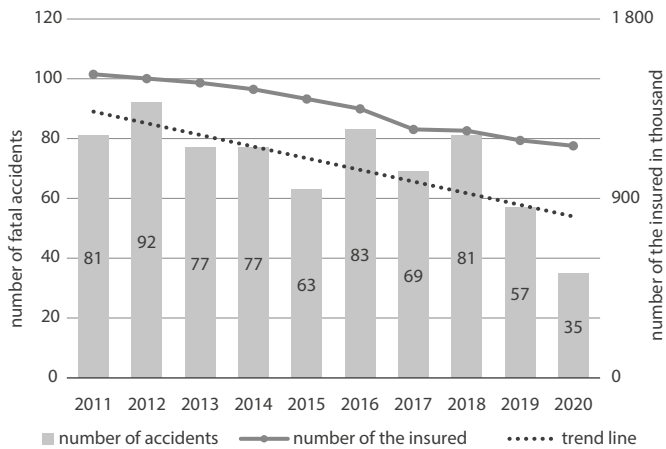
Source: *Agricultural Social Insurance Fund*.

For many years, the most numerous group of accidents have been “falls of persons”, they account for approx. 50% of all accidents. The next numerous accident groups are: “hit, crushed, bitten by animals”, “caught and struck by moving parts of machines and devices”, “other events”.

### Fatal accidents

One-off *compensation* payments were made for death as a result of 35 accidents at agricultural work, 22 (38.6%) less than in 2019. The number of fatal accidents resulting in the payment of one-off *compensations* has decreased since 2011 by 46 (56.8%) – from 81 in 2011 to 35 in 2020. Fatal accidents accounted for 0.44% of all accidents resulting in the payment of benefits. The frequency of these accidents was 3.0 per 100 000 insured.

**Chart 7. Fatal accidents culminating in the payment of one-off compensations in 2011–2020 compared to the number of insured**



Source: Agricultural Social Insurance Fund.

In 2020, most of the fatal accidents occurred in the following accident groups: “being run over, hit and caught by a moving means of transport” (9 victims), “falling objects” (7 victims) and “being caught and hit by moving parts of machines and devices” (6 victims).



Table 5. Breakdown of fatal accidents in 2020 by groups of events

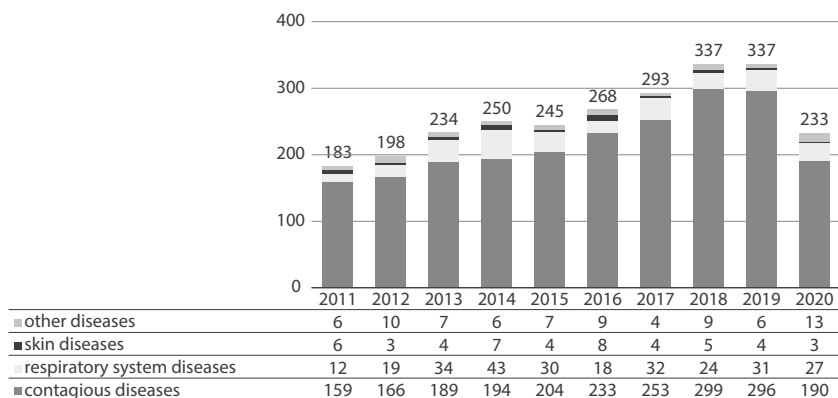
Detailed breakdown	Number of fatal accidents resulting in the granting of a one-off compensation	
	2020	% share in 2020
<b>In total including:</b>	<b>35</b>	<b>100.0</b>
the fall of people	2	5.7
the fall of objects	7	20.0
contact with sharp hand tools and other sharp objects	0	0.0
hit, crushing by materials and mechanically transported items	0	0.0
being run over, hit, caught by a moving means of transport	9	25.7
being caught and hit by moving parts of machines and devices	6	17.2
hit, crushed, bitten by animals	4	11.4
fire, explosion, natural forces	0	0.0
exposure to extreme temperatures	0	0.0
exposure to harmful materials	0	0.0
sudden illness	4	11.4
other events	3	8.6

Source: Agricultural Social Insurance Fund.

### *Occupational diseases of farmers*

In 2020, 233 one-off compensations were awarded for health impairment caused by an occupational disease, compared to 2019 the number of award decisions decreased by 104 (30.9%).

Among them, there were 190 cases of infectious diseases (including 185 Lyme disease), 27 cases of respiratory system diseases, 11 cases of diseases of the peripheral nervous system and the locomotor system caused by the way work was performed, 3 cases of skin diseases, 1 case of bilateral permanent sensorineural hearing loss and 1 case of the disease eyesight caused by a physical, chemical or biological factor.

**Chart 8. Number of occupational diseases resulting in the payment of a one-off compensation in the years 2011–2020**


Source: Agricultural Social Insurance Fund.

In most cases (82% of cases), the damage to health due to occupational diseases did not exceed 10%.

**Table 6. The breakdown of health detriment for diseases/disease groups in 2020**

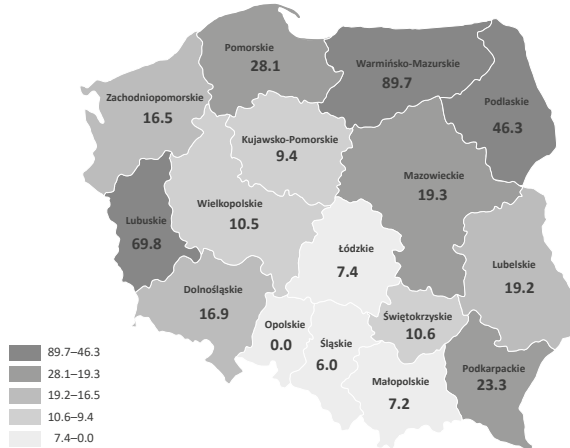
% damage to health	Bronchial asthma	Extrinsic alveolitis	Allergic rhinitis	Skin diseases	Iilateral permanent sensorineural hearing loss of the cochlear or sensorineural type caused by noise	Chronic diseases of the locomotor system caused by the way of work	Diseases of the visual system caused by physical and chemical factors or biological	Contagious or parasitic diseases or their sequelae	Total
Up to 5%	0	1	0	2	0	4	1	114	122
6–10%	6	6	2	1	0	5	0	49	69
11–30%	3	9	0	0	1	2	0	26	41
31–60%	0	0	0	0	0	0	0	1	1
Above 61%	0	0	0	0	0	0	0	0	0
Total	9	16	2	3	1	11	1	190	233

Source: Agricultural Social Insurance Fund.

The number of occupational diseases resulting in the payment of a one-off compensation per 100 000 insured in KRUS decreased from 27.8 in 2019 to 19.6 in 2020. The highest incidence of occupational diseases of farmers was found in the following

voivodships: Warmińsko-Mazurskie (89.7), Lubuskie (69.8), and Podlaskie (46.3). The lowest in the following voivodships: Śląskie (6.0), Łódzkie (7.4), Kujawsko-Pomorskie (9.4), Wielkopolskie (10.5) and Świętokrzyskie (10.6). No occupational diseases were reported in the Opolskie voivodship.

**Chart 9. Number of occupational diseases per 100 000 insured in 2020 (according to decisions granting one-off compensation)**



Source: Agricultural Social Insurance Fund.

## Analysis of the causes and circumstances of accidents and occupational diseases of farmers

Pursuant to the statutory instruction of Art. 63 sec. 1 point 1 of the Act of 20 December 1990 on social insurance for farmers, the Agricultural Social Insurance Fund analyzes the causes and circumstances of accidents at work and occupational diseases of farmers each year. During the post-accident investigation, prevention inspectors inspect the places and objects related to accidents, assess the methods of work and the technical condition of the means of production used, and familiarize themselves with medical documentation related to first aid and documentation provided by law enforcement agencies, as well as obtain information from victims and witnesses about the circumstances and course of the event. During the evidentiary proceedings, the causes of the accident are identified, and on their basis, prevention recommendations are issued to the injured or their families in order to reduce the

risk of the accident recurrence. Information obtained in the evidentiary proceedings regarding the reported accident is processed and analysed to determine the directions of KRUS prevention activities for the whole of Poland, as well as for local needs.

**Table 7. The most common causes of accidents in 2020**

Category of causes	Number of causes	Share in %
	2020	2020
Poor condition of the surface (uneven, slippery, boggy)	1 146	11.7
Failure to wear suitable work footwear	861	8.8
Improper manipulation of the limbs in the danger zone	672	6.9
The narrowness and aggression of animals not resulting from their physiology (e.g. heat, first lactation, childbirth, mastitis, etc.)	525	5.4
Improper grasping, holding of tools, means and objects of work	478	4.9
Insufficient concentration of attention on the activity performed	473	4.8
Improper way of handling animals, including not being particularly careful when handling dangerous animals	467	4.8
Incorrect way of getting on (and getting off) agricultural machines, trailers, carts, etc.	300	3.1
Structural defects in buildings, stairs and animal stalls, unprotected dump holes and manure channels, door sills, surface level differences, etc.	277	2.8
Failure to use ladders, platforms and scaffolding or the wrong way of climbing and descending from them when working at height	251	2.6
Improper pace of work, haste	226	2.3
Improper operation and use of agricultural machinery and equipment (adjustment, repairs, aggregation, etc.)	190	1.9
Incorrectly constructed ladders (e.g. lack of protection against tilting and sliding, wrong spacing of rungs, etc.)	190	1.9
Lack of work clothes and footwear	185	1.9
Surprise by an unexpected event	178	1.8
Lack of or inadequate guards and protection of moving parts of agricultural machines and devices	159	1.6
Other in total	3 192	32.7
In total	9 770	100.0

Source: Agricultural Social Insurance Fund.

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## Summary

The Agricultural Social Insurance Fund (Kasa Rolniczego Ubezpieczenia Społecznego) was established by the Act of 20 December 1990 on social insurance for farmers. Establishment of KRUS as an organization ensuring the implementation of previously dispersed tasks in the field of servicing social insurance for farmers and undertaking new tasks not previously carried out by any insurance institution, e.g. in the field of prevention and rehabilitation, required taking actions aimed at disseminating these activities in the rural environment. The financial basis for the Fund's operations in the field of accident prevention as well as medical rehabilitation is the Prevention and Rehabilitation Fund (Article 80 of the Act on social insurance for farmers)<sup>9</sup>.

This fund is created from a write-off from the Contribution Fund (financing benefits from sickness, accident and maternity insurance) in the amount of up to 6.5% of the planned expenses from this fund (from 2016) as well as subsidies from the state budget<sup>10</sup> and interest obtained from investing free funds from the Fund Prevention and Rehabilitation<sup>11</sup>.

Statistical data on the number of accidents of farmers at work confirm the effectiveness of all preventive measures carried out by the Agricultural Social Insurance Fund. From 1993 to 2020, the number of reported accidents decreased from 66 thousand up to 11 thousand (by over 80%), also the number of one-off compensations paid decreased from 42 thousand to 7.9 thousand, including those due to fatal accidents from 286 to 35.

The accident rate (the number of accidents resulting in the payment of one-off compensations per 1 000 insured) has decreased since 1993 from 24.6 to 6.6 in 2020 (by 18 less).

To sum up, the funds spent on prevention activities aimed at increasing the awareness of farmers and their families about the principles of health and life protection on the farm and the risks of accidents contributed to the reduction of the number of benefits paid out<sup>12</sup>.

The practice of defining the directions of prevention activities adopted by KRUS on the basis of the analysis of the causes and circumstances of accidents, the ongoing monitoring of accident hazards on farms, and, consequently, the adaptation of

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9. Ibidem.

10. Ibidem.

11. Ustawa z 20 grudnia 1990 r. o ubezpieczeniu społecznym rolników, Dz. U. 2021 poz. 266, art. 80 ust 2.

12. C. Nobis, *Fundusz prewencji i rehabilitacji...*, op. cit.

the topics and forms of prevention activities to the current, local needs made KRUS activities effective and attractive for various groups of recipients from the countryside. Thanks to the educational activities of KRUS, the awareness of farmers about the risk of accidents increased and the number of accidents on farms decreased<sup>13</sup>.

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13. Ibidem.

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