


# The Bitter Fruits of the Agricultural Insurance Pilot Program in RA

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**UDC:** 368.54; **EDN:** SCBBVN; **JEL:** G22;

**DOI:** 10.58587/18292437-2024.5-150

**Keywords & phrases:** Agricultural insurance, Pilot program, Crop insurance, Index insurance, Multi-commodity insurance

## ՀՀ-ում գյուղատնտեսության ապահովագրության պիլոտային ծրագրի դառը պտուղները

*Ներսիսյան Ներսես Ն.*

*ՀՊՏՀ բանկային գործ և ապահովագրության ամբիոնի ասպիրանտ (Երևան, ՀՀ)*

**Ամփոփագիր.** Գյուղատնտեսության ապահովագրությունը ներկա գիտատեխնիկական առաջընթացի բուռն զարգացման ժամանակաշրջանում էլ ավելի կարևորվում է և մեծ ուշադրության արժանանում:

Ներկայիս քաղաքակրթության հիմքում ընկած է գյուղատնտեսությունը, որն աջակցում է տնտեսություններին և պարենով ապահովում համայնքներին: Գյուղատնտեսությունը դա գոբալ տնտեսության ողնաշարն է, կարևոր դեր է խաղում սոցիալական և բնապահպանական լանդշաֆտների ձևավորման գործում: Այնուամենայնիվ, այն ունի աննախադեպ մարտահրավերներ, որոնք պետք է հաղթահարվեն բոլոր շահագրգիռ կողմերի համագործակցությամբ:

Հոդվածը առավել քան կարևորվում է հատկապես հենց այս շրջանում, երբ մեծապես շեշտադրվում է գյուղատնտեսության ոլորտի անխափան գործունեությունը տնտեսության զարգացման համատեքստում: Հոդվածում ներկայացվել է գյուղատնտեսության ապահովագրության պիլոտային ծրագրի արդյունքները ՀՀ-ում, թերացումները ու հատկապես շեղումները սկզբնապես սահմանված նպատակներից: Հաշվի առնելով Եվրամիության երկրների փորձը գյուղատնտեսության ոլորտում ապահովագրական համակարգերի ներդրման և զարգացման ուղղությամբ, հատկապես Հոլանդիայի գործող ագրոապահովագրության մեխանիզմները, կարող ենք ասել, որ հենց այս մեխանիզմները կիրառվում է ԵՄ մի շարք երկրներում: Եթե մի նախադասությամբ բնութագրենք Հոլանդիայում գյուղատնտեսության ապահովագրության իրականացման մեխանիզմները, ապա կարող ենք ասել, որ այն ավանդական բերքի ապահովագրություն է, որը հիմնված է վնասի փոխհատուցման վրա, որը ներառում է նաև եղանակային ինդեքսների ապահովագրության որոշ տարրեր:

**Հանգուցաբառեր և բառակապակցություններ`** Գյուղատնտեսության ապահովագրություն, պիլոտային ծրագիր, մշակաբույսերի ապահովագրություն, ինդեքսային ապահովագրություն, բազմատեսակ ապրանքների ապահովագրություն

## Горькие плоды пилотной программы агрострахования в РА

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**Аннотация.** Сельскохозяйственное страхование приобретает еще большее значение и ему уделяется все больше внимания в период бурного развития научно-технического прогресса.

Сегодняшняя цивилизация основана на сельском хозяйстве, которое поддерживает экономику и обеспечивает население продуктами питания. Сельское хозяйство является основой мировой экономики и играет важную роль в формировании социальных и экологических ландшафтов. Однако перед ним стоят беспрецедентные проблемы, которые необходимо преодолевать при сотрудничестве всех заинтересованных сторон.

Статья более чем актуальна особенно в этот период, когда большое значение придается бесперебойной деятельности аграрного сектора в условиях экономического развития. В статье представлены результаты пилотной программы агрострахования в РА, недостатки и особенно отклонения от первоначально определенных целей. Принимая во внимание опыт стран Евросоюза в направлении внедрения и развития систем страхования в сфере сельского хозяйства, особенно голландских механизмов агрострахования, можно сказать, что эти механизмы используются в ряде стран ЕС. Если описать механизмы реализации сельскохозяйственного страхования в Нидерландах одним предложением, то можно сказать, что это традиционное страхование урожая, основанное на компенсации, которое также включает в себя некоторые элементы страхования от погодных индексов.

**Ключевые слова и словосочетания:** сельскохозяйственное страхование, пилотная программа, страхование урожая, индексное страхование, многотоварное страхование

Agricultural interests are fundamental to food security, and local governments are the main stakeholders in agriculture and the best contenders for a sound financial solution - insurance. Of the 11 countries in Southeast Asia, only six (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam) have agricultural insurance programs. Agricultural insurance systems in the region are diverse and include mainstream public sector programs (as in Indonesia and the Philippines) and public-private partnerships (PPPs). The SWA has a wide range of institutional frameworks for agricultural insurance, including public sector crop insurance models in the Philippines and PPPs, which are becoming increasingly popular across the region [1].

Among the types used in agri-insurance, index insurance is widely known. However, it can be reduced by two different methods (Miranda and Farrin 2012), and it can be reduced by two different methods (Miranda and Farrin 2012). However, it can be reduced by two different methods (Miranda and Farrin 2012). The first is to offer a more comprehensive list of products for index insurance, which can be tailored to different niches. The other is to construct payout schedules that correlate with the policyholder's efforts. To achieve the objectives of the project, reliable and accurate data and information are needed, which are the foundation of the index. In the field of the index insurance, which is based on a set of specific conditions, there is a need for a comprehensive system of meteorological and climatic stations, which provides data with a focus on the requirements of the index insurance. Production and loss data at the farm level will also be crucial for determining the basis risk at the farm level using the area-based yield index. Weather index-based crop insurance is more economical and efficient than traditional agricultural insurance. It will reduce monitoring and transaction costs at the farm level.

The Netherlands implemented multi-peril crop insurance (MPCI) in 2010 as a result of increased premium subsidization options made possible by the Common Agricultural Policy (CAP) framework of the European Union (EU) [2]. Only a few crop insurance programs under Article 70 of Regulation (EU) No 73/2009 were put into place in France, Italy, and the Netherlands. At the moment, more than ten Member States are implementing insurance contracts with subsidies under Article 37 of Regulation (EU) No 1305/20131.

The MPCI is available in all EU Member States, but in some Member States just the standard

hail coverage is accessible. Differences between Member States in the availability and use of MPCI can be partly explained by differences in the availability and conditions of state support.

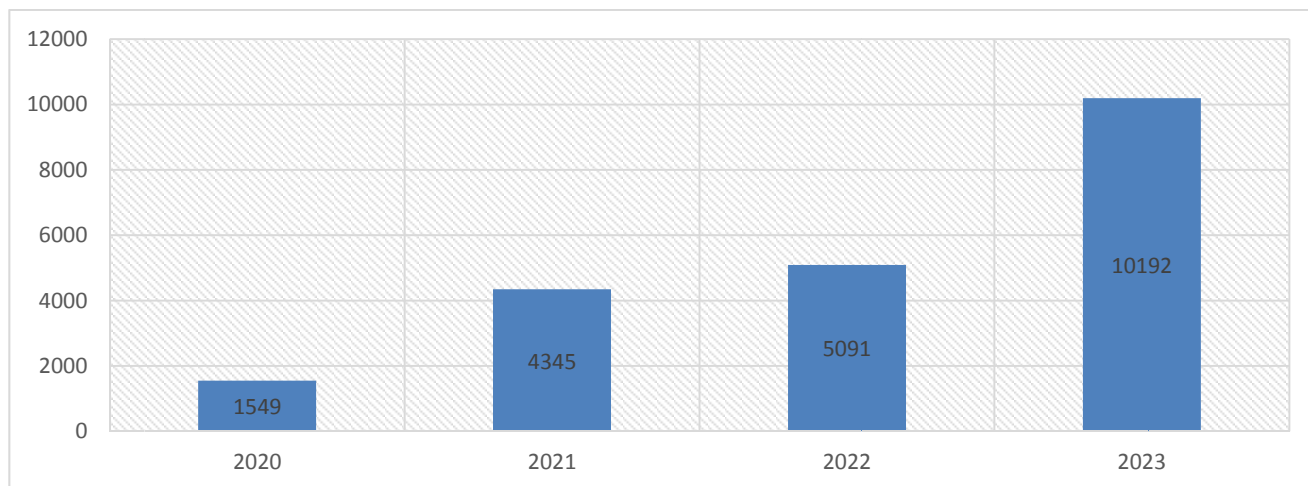
The Netherlands crop insurance market, as in most other Member States, is concentrated and dominated by only a limited number of players. However, BFAO6, Vereinigte Hagel7. Initially, five insurtechs started offering MPCI in 2010, but two insurtechs (subsidiaries) will leave the market, inserted due to low demand and inherent risk. As a result, the agricultural insurance market in the Netherlands is concentrated and competitive. Market shares are not published.

The initial MPCI insurance in the Netherlands scheme was collectively designed by farmers' organisations and insurers and supported by an independent research institute. This is traditional crop insurance based on uherb indemnity, but with some elements of weather index insurance. For a farmer to qualify for indemnity payments, two triggers must be present. First, a certain adverse climatic event (e.g., a threshold rainfall of x mm in x days) must occur in order for it to be declared an excessive rainfall event. Secondly, the bacterial damage to the crop must be at least 30% compared to the reference crop, as required by the EU regulation. The climatic threshold levels for each crop and soil type were established for each crop and soil type by determining the return period of the event, as well as modeling crop growth.

All of the insurers that are actively involved in MPCI e-commerce are considered complementary. Mutual insurers are usually low-cost non-profit organizations in which members (i.e. farmers) play a crucial role (i.e. policyholder and insured at the same time) [3]. Given the oligopolistic structure of the market, which is dominated by a few insurers, industry statistics can be too easily converted into statistics on individual companies [4].

Agricultural interests are fundamental in managing food security and local governments are major stakeholders in agriculture as well as the best contenders to partake in a robust financial solution—insurance. Of the 11 Southeast Asian countries, only six (i.e., Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam) have agricultural insurance programs. Agricultural insurance systems in the region are diverse and comprise the major public sector programs (as in Indonesia and the Philippines) and publicprivate partnerships (PPP). There is a wide range of institutional frameworks for agricultural insurance in SEA including the public sector crop insurance

models found in the Philippines and PPPs that are increasingly popular throughout the region.

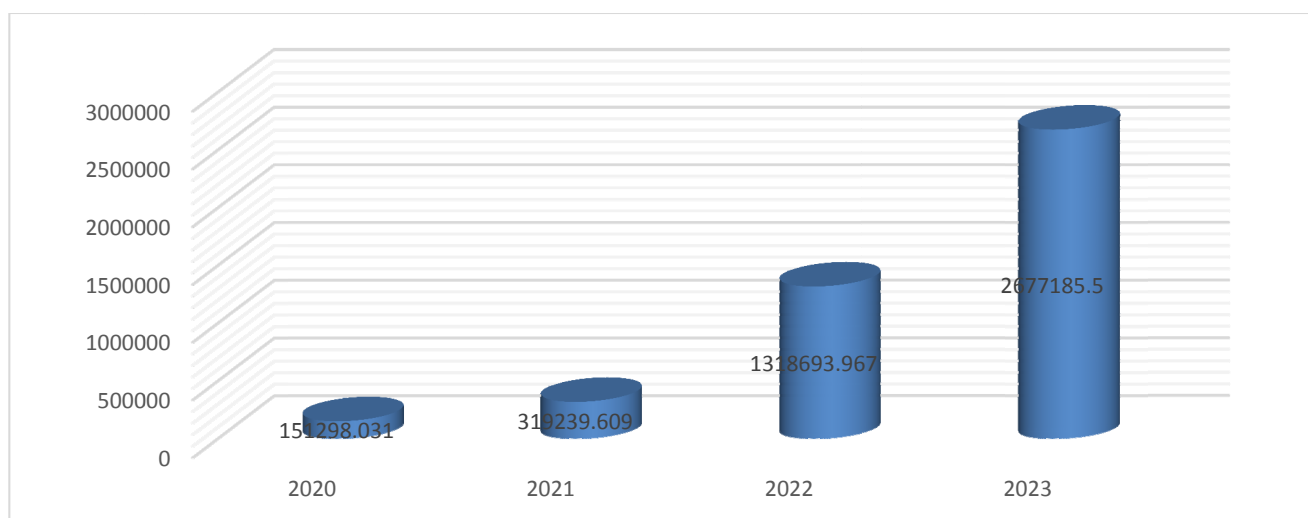


**Figure 1:** *The number of contracts concluded on insurance of agricultural crops (items) [5]*

As we can see, almost 3 times more agricultural crop insurance contracts were concluded in 2021 than in the previous year, and the growth trend continued this year. This indicates a growing interest of villagers in the introduction of insurance in the agricultural sector. Thus, as of September 2021, 4,345 agricultural crop insurance contracts were concluded. It should be noted that 1,515 insurance cases were paid out and farmers were paid 318,081 thousand drams. And in 2022, 5,091 contracts were concluded and 1,411 insurance cases were paid out. In 2023, the number of insurance contracts amounted to almost 10 thousand, which is 2 times more than last year. As we can see, from the beginning of the project to last year, there was a huge increase in the number of contracts. Which once again proves that farmers are showing great interest in agricultural insurance.

In 2020, apricot, grape, peach and apple orchards, as well as grain crops (autumn/spring

wheat, barley and oats) are insured against the risks of hail and fire, spring frosts. Six regions are covered by insurance of apricots and grapes against the risk of hail and fire: Armavir, Ararat, Aragatsotn, Tavush, Kotayk, Vayots Dzor, as well as all regions of the RA are insured for peach, apple and grain crops (autumn/spring wheat, barley and oats). In 2021, the list of insured crops and the coverage of marzes covered by the program have been expanded to include potatoes, plums, watermelons/melons. In 2022, a new insurance product was developed, which includes insurance of grain crops (winter barley and wheat, spring barley, wheat and oats) against the risk of drought. The list of insured crops was also expanded to include cherries. In 2023, apricots, grapes, peaches, plums, apples, cherries, watermelons, melons, potatoes, autumn/spring wheat, barley, oats are insured. The insured risks are: spring frosts, drought, hail and fire.



**Figure 2:** *Amounts of insurance benefits (thousand AMD) [6]*

As can be seen from the graph, there was a quantitative increase in insurance payments in 2020-2023. In parallel with the growth of insurance

contracts, from the beginning of the program to last year, insurance payments increased quantitatively by almost 17 times.

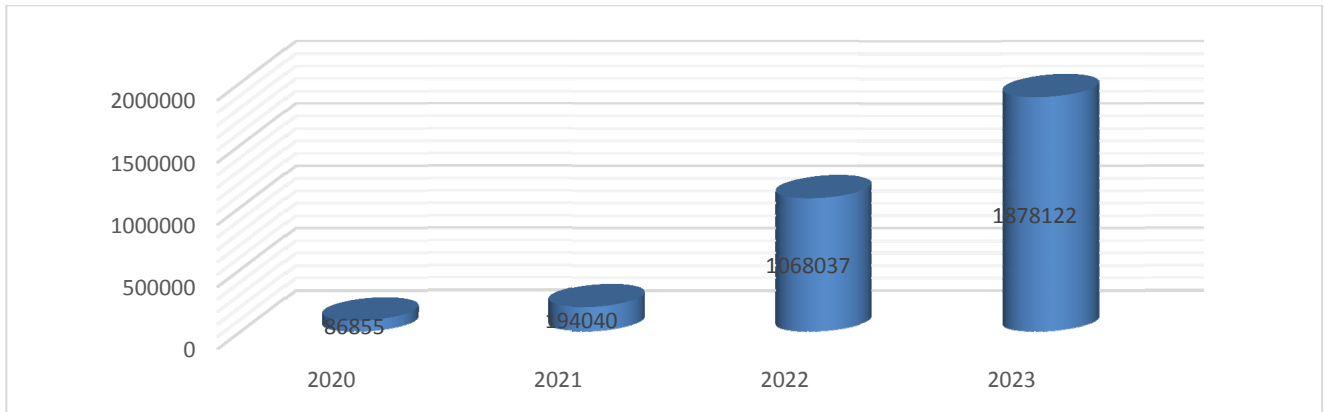


Figure 3: Amounts of insurance benefits for apricots and grapes (thousand AMD) [6]

Insurance benefits for apricots and grapes have also increased quantitatively. The question is whether there is any correlation between apricot and

grape insurance premiums and general crop insurance premiums.

Table 1: Correlation between apricot and grape insurance premiums and total insurance premiums

	X	Y	Xi <sup>2</sup>	XiYi	Yi <sup>2</sup>
2020	86855.0	151298.031	7543791025.0	13140990482.5	22891094184.5
2021	194040.0	319239.609	37651521600.0	61945253730.4	101913927954.5
2022	1068037.0	1318693.967	1140703033369.0	1408413948432.8	1738953778602.2
2023	1878122.0	2677185.5	3527342246884.0	5028080985631.0	7167322201410.3
Ընդամենը	3227054.0	4466417.107	4713240592878.0	6511581178276.6	9031081002151.4
Միջին արժեք	806763.5	1116604.3	1178310148219.5	1627895294569.2	2257770250537.9

$$r_{xy} = 0,99$$

The correlation coefficient is 0.99. Therefore, the relationship between the two indicators is strong. We can say that grapes and apricots have a large weight in the agricultural insurance pilot program, and in connection with their implementation, additional problems arose this year with the transmission of data from the Ministry of Economy.

Thus, summarizing the performance and main indicators of the insurance pilot program in the field of agriculture, we can record that, for the agricultural year of 2020, 1546 insurance contracts were sold by insurance companies, the insured area was about 2500 ha, the gross insurance premium was about 135 million drams. 300 insurance indemnities were given in the amount of around 151 million drams. For the agricultural year of 2021, 4279 insurance contracts were sold by insurance companies, the insured area was about 5832 ha, the gross insurance premium was about 474.6 million drams. 1,517 insurance indemnities were given, in the amount of about 319 million drams. For the

agricultural year of 2022, 5091 insurance contracts were sold by insurance companies, the insured area was about 6444 ha, the gross insurance premium was about 866.3 million drams. 2,167 insurance indemnities were given, with a volume of around 1.32 billion drams. For the agricultural year of 2023, 10,192 insurance contracts were sold by insurance companies, the insured area was about 11,662 ha, the gross insurance premium was about 1.8 billion drams. 3,864 insurance indemnities were given, with a volume of around 2.7 billion drams. For the 2024 agricultural year, peach, plum, apple, cherry, cherry, watermelon, melon, potato crops were insured against hail risk, cereal crops (wheat/barley/oats) against drought risk. 27 insurance contracts were sold by insurance companies, the total insurance premium was about 22 million drams [5].

As a result of the analysis, it can be stated that the volume of insurance indemnities for grape and apricot crops in the total volume of indemnities over

the past two years is almost 70-80 percent. And here, based on the correlation, we realized that the change of these types can greatly affect the effectiveness of the pilot program. Therefore, the exclusion of the pilot insurance program for the apricot and grape harvest is nothing more than a failure of the program. According to the information provided by the Ministry of Economy, in 2024 there were problems related to the implementation of the program, in particular, the withdrawal of the reinsurance company from the Armenian market and the loss of the program for insurance companies, as a result of which it started with a delay, and the terms of insurance of some crops for the agricultural year have already passed. In other words, it turns out that those crops whose insurance product is most interesting and in demand remain outside the program, reaping only the bitter fruits of agricultural insurance.

### CONCLUSION

One kind of non-life insurance is agriculture insurance. Usually, it protects against weather hazards and pays for the loss of crops, cattle, or fodder. Agricultural insurance can safeguard low-income farmers against revenue loss and help with reconstruction expenditures.

It's important to distinguish between parametric, or index-based, insurance and typical indemnity insurance when it comes to agricultural insurance. Rather than paying for actual losses, index-based solutions insure against the likelihood of a predetermined catastrophe occurring. Index-based insurance, in contrast to traditional insurance, pays out an agreed sum upon exceeding a parametric threshold, while traditional insurance reimburses a real loss caused by the loss or damage to a physical asset. Index-based insurance plans activate settlements when an event meets a predefined variable rather than a claim (e.g. a specified flood level, rainfall amount in a specific period, etc.). Indexes can be connected to vegetation growth or area yield in addition to the weather.

The Central Bank of Armenia's pilot program for agricultural insurance started in 2019. The 2019 initiative made it possible to insure apricot, grape, peach, and apple orchards and gardens, as well as some crops such as wheat, barley, and oats. Risks included are fire, hail and spring frost.

The pilot agricultural insurance program has already yielded remarkable results, but there have been many obstacles to its implementation. Farmers' interest in the pilot program has gradually increased, as evidenced by the 17-fold increase in the number of insurance contracts compared to the first year. But what prevents us from reaping the benefits of the pilot program and finally considering the introduction of agricultural insurance, at least in relation to crops? Based on the results of the analysis, it is recommended:

- Awareness needs to be raised to make the programme more inclusive

- Apricots and grapes are the main crops, without which it is impossible to imagine the creation of agricultural insurance, so pay more attention to these types, do the impossible to ensure that the insurance is fulfilled.

- For the project to be successful, it is necessary to take into account the changes that occur with great dynamics and respond to changes in time.

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*Содана/Հանձնվել է՝ 15.08.2024*

*Рецензирована/Գրախոսվել է՝ 22.08.2024*

*Принята/Ընդունվել է՝ 29.08.2024*