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Index Insurance in Ukraine: Opening Doors for Agribusiness

Agri-insurance is a financial product that protects farmers from potential losses resulting from weather events or disease. By enabling farmers to protect their businesses, agricultural insurance also reduces lending risks, which increases the amount of credit available in this vital sector. In Ukraine, IFC and Syngenta worked together to pilot-test index insurance—which bases claims on independently verifiable weather data—for wheat and corn. This SmartLesson explores the possibility of developing index insurance as a new and important financial instrument in Ukraine.

BACKGROUND

IFC has supported the development of the agriculture sector in Ukraine since 1995, when it launched the Ukraine Land Privatization Project. IFC played a key role in reorganizing 66 agricultural enterprises. The project created 128 new agricultural enterprises and more than 400 family farms. IFC continued several projects that strengthened the agricultural supply chain for fruits and vegetables, introduced standards for the agribusiness value chain, and improved the investment climate for the sector. In addition to the crop receipts project, IFC is strengthening access to finance for small and medium agribusinesses in Ukraine by developing agri-insurance and working with financial institutions to improve their capacity to lend in this important sector.¹

Agriculture is the most important sector in Ukraine's economy. However, despite optimal growing conditions, Ukrainian agriculture remains underdeveloped.

Limited access to finance is a major reason for this—lending to Ukrainian farmers is high-risk, in part because land cannot be used as collateral. Agri-insurance could potentially address this problem. However, it has had significant challenges in setbacks even with government subsidies. The problem is complex and systemic, and boils down to a few key issues, including lack of regulation, overly complex insurance for farmers, unclear methodology for assessing claims, lack of transparency in compensation and high product costs.

Farmers do not know if the policies they purchase will provide them the protection they need from extreme weather events, and so they have little incentive to use insurance products. This lack of insurance makes banks less willing to lend to farmers, which means that they have fewer resources to purchase the necessary inputs for crop production. With additional resources, individual farmers could produce much more and drive the development of the Ukrainian agribusiness sector forward.

¹ For further information see www.ifc.org/Ukraine.

Agri-insurance can reduce the risk of lending to farmers and is therefore a major focus of the Europe and Central Asia (ECA) Agri-Finance Project. The project tackles agri-insurance from two angles: first, the project addresses obstacles in the development of traditional insurance products for farmers. Second, it introduces a new, complementary financial product to Ukraine that could benefit farmers: index insurance.

What Is Index Insurance?

Index insurance is an instrument that helps farmers manage financial losses resulting from extreme weather events. It pays benefits according to a predetermined index instead of relying on insurance claim assessments. The index is based on deviations from normal parameters—for example, rainfall or temperature. This approach greatly simplifies evaluation and payout processes following a destructive weather event, making it attractive to both farmers and insurers. It also reduces financial risks to banks that lend to farmers, which increases access to finance in the sector.

Both technology and advisory services are important for index insurance to work. Long-term data, for example, on weather patterns, must be collected, analyzed and verified to develop statistically relevant indexes. As the impact of climate change increases, innovative new tools like index insurance are becoming increasingly important for the development of the agricultural sector. For Ukraine, where financial markets are evolving to meet the needs of farmers, this development is relevant and timely.

Developing a Pilot

IFC partnered with Syngenta, a global supplier of seeds, fertilizers and other agricultural inputs to develop a pilot index insurance project. Syngenta, recognizes the potential of the Ukrainian agribusiness sector, understands that farmers with reliable insurance are more likely to obtain credit and buys their products.

IFC and Syngenta introduced index insurance in three regions of Ukraine—Kirovograd, Kharkiv, and Dnipropetrovsk—to field-test the viability of the instrument. In preparation for the pilot, IFC collected data from the field and worked with farmers to introduce

the concept and obtain feedback. Key findings were as follows:

- By comparing farmers' experiences with historic weather data, the IFC team determined that the drought and temperature during critical phases of crop development posed the greatest risks for corn and wheat.
- Farmers lacked confidence in traditional insurance products, in part because of the complexity and the opaque nature of the assessment process. As index insurance payments are based on independent, publicly available weather data, farmers were more interested in participating.
- IFC developed and fine-tuned its index pricing models, running simulations based on historic weather data until there was a high correlation between weather events and impact on crops.

The pilot was rolled out in May and June 2016, with a total of 63 farmers growing corn or wheat. Syngenta advised farmers during the process, for example, in choosing pricing options based on planting times.

Results

Within the index insurance initiative in partnership with Syngenta in Kirovograd, Kharkiv, and Dnipropetrovsk, 20 farmers insured corn for drought resulting in 50 percent of farmers receiving an indemnity payment. The total payout was UAH 2.1 million, or about \$81,000, with a loss ratio of 152 percent. No significant losses for winter wheat were reported, due to good weather, resulting in one farmer receiving an indemnity payment of UAH 138,897, or about \$5,000. Most of the payouts were driven by high tempera-

Table 1: Key Performance Indicators (KPI) for Corn and Winter Wheat

KPI	Corn	Winter Wheat	Totals
Number of Application Forms	20	43	63
Number of Application Forms	10	1	11
Acreage covered, Hectares	5,820	43,136	48,957
Number of Application Forms	18,464,185	33,035,498	51,499,682
Acreage covered, Hectares	1,318,405	3,341,347	4,659,752
Number of Application Forms	2,103,167	138,897	2,242,064

tures affecting corn farmers, who received payouts exceeding the premiums paid.

Based on the success of the program, Syngenta is adding six new regions—Donetsk, Luhansk, Zaporizha, Odesa, Kherson and Mykolaiv, and two additional crops, winter and spring barley. Also, participating farmers were highly receptive to the approach. In interviews, farmers expressed support for the following reasons:

1. The financial risks of crop production are better distributed and easier to bear.
2. The process for determining payout following extreme weather events is transparent, based on observable data at the precise location of the farm.
3. The compensation process is quick: there is no need to wait for agents to make a site visit and evaluate the damage.
4. Farmers feel increasingly secure and can focus on growing their farms.

The pilot demonstrated that index insurance can work in Ukraine and that farmer demand is high. We therefore expect an increase in the uptake of insurance policies in the next reporting period.

LESSONS LEARNED

Though limited in scope, the pilot showed that index insurance is viable in Ukraine but needs further refinement to be scalable. It also provided valuable lessons necessary for expansion and scalability of the product in Ukraine and other countries.

Key lessons were as follows:

Lesson 1: The availability of good data is paramount for index insurance; if data and parameters are solid, the product can meet the needs of farmers and win their trust.

For index insurance to work, access to reliable, verifiable, independent data is a must. The project used data from Meteogroup, a global provider of weather data that impacts business decision-making. It is a private company that manages a weather network consisting of 1,600 weather stations. The team of over 100 meteorologists work with the most accurate

weather models in the world, which are well-known in the global agribusiness community. Most importantly, the data is available to the public, meaning that farmers can verify the data that is used to calculate any insurance payments made following an extreme weather event. The transparent relationship between data and insurance payouts is a key factor in winning over the trust of farmers, thereby overcoming a major barrier to the success of agri-insurance in Ukraine.

Lesson 2: Validating the data through modeling is critical.

Access to good data is important, but ensuring that the relationship between weather events and crop damage is accurate is critical. The validation process must be thorough and major parameters clearly defined. To do this, the project team developed an on-the-ground methodology for validation. The project team interviewed farmers, collected feedback, and conducted simulations. It used historical data to check the simulations and parameters. The input of agronomists was also important for linking all different data sources. This is necessary to understand the critical phases in the growing season (for example, a sudden drop in temperature may be devastating during one phase of the growing cycle, and harmless at another).

Lesson 3: Technical assistance is important to educate farmers and insurers on how index insurance works.

Index insurance is a new product in a country where quality agri-insurance has been unreliable even when available. Farmers and insurers do not have precedents for analyzing the value of this product. It is therefore important to build their knowledge and capacity so that they know how it works and how it can be of benefit to their businesses. They must have a solid grasp of how weather, data, crop damage, and payouts relate. Without this knowledge, farmers are unlikely to trust the product. The team therefore developed training programs targeting Ukrainian farmers and insurers to reduce the knowledge gap on this important product.

Lesson 4: A private sector partner adds depth and credibility to the pilot.

The project already had a relationship with Syngenta through its previous work in Ukraine, and the pro-

gram was largely developed through discussions about challenges facing the Ukrainian agri-insurance market. Syngenta's involvement was valuable at several levels. First, they provided the initial subsidy of premiums, without which few if any farmers would have participated. Second, they were familiar with index insurance, the needs of farmers, and the entire agricultural process. This helped in the design of technical assistance. Third, they understood that the availability of agri-insurance makes banks more willing to lend to farmers, which in turn increases the volume of agricultural inputs they can sell.

CONCLUSION

The pilot demonstrated that index insurance can work in Ukraine, even though it is a new and unknown product. Every business faces risks, but farmers are exposed to risks out of their control—for example, extreme weather events or disease—that can put them out of business. Agricultural insurance enables farmers to protect their investments—the cost of seeds, inputs, equipment, and labor necessary to produce a crop—from these risks. This in turn makes agricultural lending more viable.

Technology and advisory services are important for index insurance to work. Long-term data, for example, on weather patterns or livestock mortality, must be collected, analyzed, and verified to develop statistically relevant indexes. Mobile technology can make this data widely available to both insurers and farmers. Satellite technology is also proving valuable.

As the impact of climate change increases, innovative tools like index insurance will inevitably become more important for the agricultural sector.



DISCLAIMER

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