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Agricultural insurance

A powerful tool for governments and farmers

- Linking small-scale farmers with markets
- Managing agricultural insurance in Brazil
- Paraguay taps its potential for biofuel production
- FONTAGRO funding potato projects

IICA

Agricultural Insurance
A powerful tool for governments and farmers

David Hatch [1]

Summary

Agricultural insurance, which provides indemnification for economic loss resulting from damage to or loss of crops and animals in the event of adverse natural and other phenomena, is a subject of great urgency that must be addressed by ministers of production and finance. This article focuses on agricultural insurance throughout the hemisphere and on how it contributes to reducing poverty and helps rural farmers recover more quickly from such phenomena. The mandate issued to IICA by its Member States on this topic is included.

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Key words: *agricultural insurance, IICA, Latin America, the Caribbean, natural disasters.*

Introduction

Insurance is defined as the equitable transfer of the risk of a loss from one entity to another in exchange for a premium. The risk bearing entity is the insurance company. The company assumes this liability once it accepts payment of a premium amount determined by the insurance company. The company carefully evaluates the risks and then determines adequate premiums to cover expected loss payments, administration expenses and a profit margin. The risk transferring entity is the purchaser of the insurance such as a car owner, homeowner, farmer or bank. This party has determined that the risk of loss is too great to assume and so for a certain payment (premium), the risk is now transferred to an entity or insurance company that can better afford the potential loss.

Insurance has become a fundamental risk finance tool for mitigating risks in developed countries ever since enterprising souls first developed marine insurance for ship owners in England centuries ago.

There are almost as many types of insurance as there are risks. For example, there is insurance in case a couple has twins and needs additional funds for clothing, food and professional care givers, outfitter insurance for wilderness guides or protection for movie stars (often purchased by studios) to protect against loss of income due to damage to their legs, voice, or any other marketable resource or any resource that can be exploited for their own benefit.

Individuals often times will purchase car insurance, life insurance, and home insurance to name a few. There are many types of insurance for businesses as well, such as property insurance, product liability insurance, directors and officer's liability insurance and so on. In fact, virtually every commercial entity in developed countries purchases insurance, either by choice or by legal requirement.

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Unlike Europe, the United States and many parts of Asia, insurance is not a widely available and purchased product in Latin America and the Caribbean. Many incorrectly look at insurance as a form of investment that is not value added unless the claims payments exceed the premium paid. More education is needed to help ministers, individual farmers and many others to gain a clear understanding of the true value and innumerable benefits insurance can offer, including the critical sequential linkage between insurance, lending capital and achieving a healthy and growing economy.

There are two fundamental concepts of insurance, regardless of the type of insurance: "adverse selection" and "moral

risk", which are explained below. Without sufficient safeguards in place to address both adverse selection and moral risk, no insurance program will be successful.

- **Adverse selection** occurs when only those parties who know they will need insurance purchase coverage. Insurance companies look for a "spread of risk" much like an investment portfolio spreads risk among a variety of investments. Insuring a single island in the Caribbean is much more problematic for an insurer because one loss could create losses far beyond the premiums generated over the years. Therefore due to adverse selection related issues a regional program for the Caribbean would be much more viable option.

- **Moral risk** is about fraud and corruption. Every insurance underwriter will want to make sure that in the program, the insured or agent does not misrepresent important information that could artificially reduce loss exposures and thereby reduce premiums or inflate actual losses by manipulating crop damage information.

Agricultural Insurance

Most commonly today, it is protection of specified crops and livestock against specified natural causes (e.g. drought, flood, pests and wind). It first began as insurance against hail in France and Germany during the 1820s. In the late 1800s, some farmers in the United States began a hail insurance program due to losses to their tobacco crops. This type of coverage still exists in many countries today.

Then in 1938, the United States started a program to protect against a wider range of natural disasters which became known as multi-peril insurance. On some occasions, programs offer protection against price risk. Covered losses can occur to crops, livestock, and even aquaculture, such as clams.

To the extent a country manages climate risk effectively it also helps to eradicate poverty.

Photo: CENTA

A few basic aspects to be considered in promoting insurance

1) *To the extent a country manages climate risk effectively it also helps to eradicate poverty*. Excellent research exists that clearly illustrates the dire levels of poverty that exist in most countries. In fact, one does not really need to do more research than to travel to a third world country to see pervasive poverty. What is less evident and well known is the role natural disasters play in perpetuating poverty.

> "Climate shocks can destroy crops, livestock and other productive household assets. Many rural households in low-income countries list weather risk as their number one concern. Weather risks and climate shocks are critically important constraints to wealth accumulation, particularly those in rural areas who are either engaged in agricultural activities or have their livelihoods tied to the wellbeing of the farming sector." (Columbia University, 2007).

While the poor seem to adapt to such catastrophes in relatively short order, it is only because they had so little to lose in the first place.

2) *The lack of insurance is a critical reason for continuing poverty*. Any producer who insures his or her crops and animals, would be making plans to rebuild shortly after a disaster occurs. Without it, producers will be lucky to build a shelter and provide food for his distraught family. Even more difficult will be rebuilding the business which took years to develop. The devastated producers will find themselves back in the poverty cycle now. The ability to adequately address the risk of loss cannot be over-emphasized. Because insurance is designed to address catastrophic risk, to an individual farmer or to a country, it too must become a pervasive risk management tool.

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A Status Report on Agricultural Insurance

3) *Insurance can provide sufficient collateral to secure loans*. In virtually every developed country there is some form of insurance available; otherwise, lenders would not put their capital at risk. Without adequate insurance, a lender's need for asset preservation would prevail over taking risks that would put their assets at significant peril. Lenders need some type of risk transfer mechanism to support their own business risk. What construction company would dare build a significant building without insurance in place? What manufacturing firm would carry out its business without a means to protect itself during the entire design and production process? Without a healthy lending industry, economies grow stagnant.

Every developed country has a sound and responsive insurance foundation, which plays a key role in economic expansion. The linkage that must be accepted is that insurance comes *first* in capital allocation decisions and once in place, lending steps forward to build upon that stability. Therefore, insurance is an essential financial instrument for private-sector growth which, in turn, becomes a significant revenue generator for governments.

Agriculture insurance began in the early 1930s in the United States to ensure yield or production loss to corn or wheat and has grown steadily ever since. Today, the US agriculture insurance program insures over $40 billion of production risk (both yield and price) to a wide range of crops and livestock. Many other countries in the western hemisphere, such as Argentina, Brazil, Canada, Mexico and Spain, have also instituted various forms of agriculture insurance.

It is important to note that even long-standing agricultural insurance programs have significant room to expand. For example, of the recorded farmland, only a small percentage is actually insured; Argentina (1%), Brazil (3%), Canada (55%), and Mexico (9%). Other Latin American and Caribbean countries are in various stages of development. Chile and Venezuela are relatively new to agricultural insurance, but made good progress in insuring farmland (2% and 4% respectively). For purposes of comparison, the United States insures over 75% of its farmland and continues to grow (Risk Management Agency Web site/USDA).

The remaining countries either have no agricultural insurance program (e.g. most Caribbean countries) or have extremely limited programs (e.g. Dominican Republic, Nicaragua). We are pleased to note that several countries are working aggressively to develop programs (e.g. Bahamas, Chile, Colombia, Honduras).

Different Types of Insurance

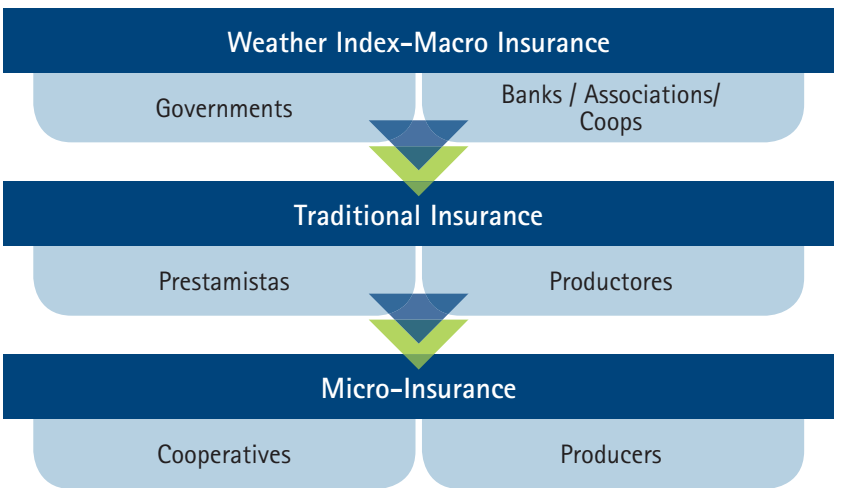

Figure 1. Three basic types of risk transfer (insurance) programs.

Inside figure 1, the first is a macro-level coverage employing a relatively new instrument called parametric or weather index. This instrument, largely purchased by governments or banks, is designed to protect against catastrophic losses (e.g. hurricanes). This risk transfer tool, which is growing rapidly, is of particular interest to the Caribbean.

A second approach employs the multi-peril coverage model developed in such countries as Canada, Mexico and the United States. This model provides protection against crop losses to specific farms. Individual farmers or cooperatives purchase this coverage.

The third tool is called micro-insurance. As the name implies, this protection is for the smallest of individual farmers. It basically uses the same model as micro credit. Though extremely new, it holds promise.

Because each country has a different risk profile, each country's risk management plan will be unique. Therefore each country should carefully evaluate each type of program and determine a tailored approach.

Governments can take the first steps

Research indicates that the most cost effective insurance programs have at their core a mutually beneficial relationship involving the support of the public sector, the involvement of the private sector and the strong participation by the farming community. It is a symbiotic relationship because each sector needs each other to succeed.

Since each government is the host of any private sector enterprise, it must take the first substantive steps to attract and retain for profit business. These steps are taken because the government knows the private sector is a potential strategic partner that brings expertise and financial resources not otherwise available. The first steps taken must address three fundamental components of a mutually beneficial public/private sector partnership; 1) sound regulatory framework, 2) adequate historical climate information and 3) adequate historical production experience, preferably with relevant loss data.

- **Sound Regulatory Framework.** Global financial institutions expect to operate in a stable political environment over the long term with regulatory provisions that reward them for ethical and effective performance. Critical points of evaluation include how the government addresses taxes and profits, oversight authority, immigration/residency provisions for selected professions, incentives to establish effective distribution systems such as cooperatives, and appropriate premium subsidy levels to attract

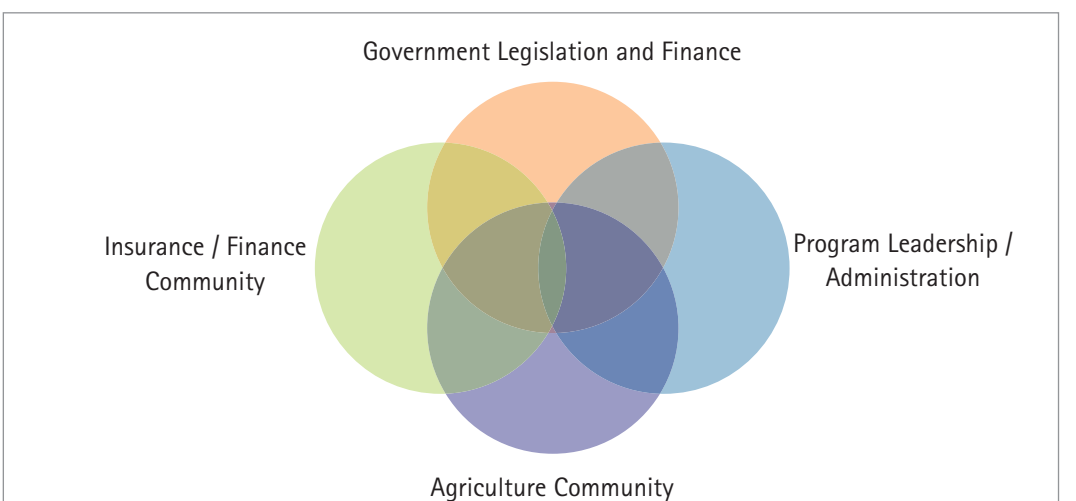

Figure 2. Venn Diagram of four parties involved

Global financial institutions expect to operate in a stable political environment over the long term with regulatory provisions that reward them for ethical and effective performance.

more participation by cooperatives and individual farmers. The insurance community will not participate if they determine the country's policies could change with each election. Legislation and central bank policy must be appropriate and enduring.

Government paid premium subsidies, a highly politically charged issue, must also be addressed so as to find some balance between promoting more trade while protecting its agricultural community from unfair competition. Because most farmers cannot afford the premium costs associated with an actuarially sound program, governments must determine at what level farmer premiums will be subsidized. Today, premium subsidies range anywhere from zero to up to 60% or more.

Last but certainly not least is the cooperation that must exist between the agriculture and finance ministers. Insurance is a financial instrument that has direct ties to the economy and government financial institutions, such as the Central Bank. This instrument is then applied to agriculture. Both ministries must understand and appreciate the critical role insurance plays and act in the long term interests of the program.

- **Appropriate historical information on climate.** Risk-bearing institutions also expect to have sufficient technical information to evaluate risks and then price accordingly (premiums) before it will assume a portion or all of the risk. Climate maps with multi-year weather related data and risk maps to include earthquake ratings are necessary.

- **Historical information on experience with production and loss.** As part of the information to be tracked over time, each country is expected to compile, organize and transfer precise data on the various crops and losses based on information technologies. Each country will also need to take all necessary steps to give the private sector confidence that such information is objective and sufficient. Absolute integrity is a must. In most cases, such information will need to be traced back to at least five years and, preferably, as much as 20-30 years. Without such information, adequate trending and pricing analysis is not possible or would be considered suspect.

IICA's Mandate for Insurance

At its Thirteenth Regular Meeting, held 1 September 2005 in Guayaquil, Ecuador, the Inter-American Board of Agriculture (IABA) instructed the Institute to undertake the effort to promote cooperation among its members to develop and expand agriculture insurance in the Western Hemisphere.

Specifically, the IABA adopted Resolution 411, entitled "Horizontal cooperation in the area of agricultural insurance and guarantee funds." More specifically it reads as follows:

(i) That one of the strategic actions called for in the AGRO 2003-2015 *Plan of Action is the promotion of innovative financial and non-financial and risk management systems for the rural milieu; (ii) That the development of the insurance market and guarantee funds may improve access to financial resources and considerably reduce the perception of risk in agriculture, thus improving financial conditions and favoring the attraction of investment; (iii) That the recurrence of natural disasters associated with climate variability affects the agricultural sector and the rural milieu of the Americas uniquely, and that, as a result of these adverse climatic events, production units repeatedly suffer from a loss of capital; and, (iv) That agricultural insurance is an important instrument for the management of risk, and also promotes the use of agricultural practices that are less vulnerable to natural hazards.*

The IABA resolved:

a) To ask the Director General of IICA *to promote and facilitate horizontal cooperation among the Member States, and the systematization and dissemination of successful experiences in the area of agricultural insurance and guarantee funds.*

b) To urge the Member States to contribute to the exchange of information and experts.

c) To ask the General Directorate to establish partnerships with public and private financial institutions and financial organizations, with a view to coordinating, and seeking complementarities among, efforts to develop and strengthen the agricultural insurance market.

The most recent IABA Meeting, held in Antigua, Guatemala.

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Résumé / Resumo / Resumen

L'assurance agricole: un outil puissant pour les gouvernements et les agriculteurs

L'assurance agricole, conçue pour protéger les cultures et le bétail contre les phénomènes néfastes, naturels ou autres, constitue une question très importante sur laquelle les ministères responsables de la production et des finances des pays doivent se pencher de toute urgence. Il est nécessaire d'examiner les méthodes et leurs portées pour comprendre le fonctionnement ou la mise en œuvre d'un système d'assurance agricole dans le continent, afin de contrecarrer les effets de ces phénomènes sur l'augmentation des indices de pauvreté et d'aider les producteurs ruraux de la région à relancer leurs activités. Figure également dans l'étude le mandat dicté à l'IICA par ses États membres au sujet de cette question.

Seguro rural: uma poderosa ferramenta para governos e agricultores

O seguro agropecuário, definido como a proteção de cultivos e animais contra eventos adversos de natureza ou de outra índole, constitui um tema de significativa urgência que deve ser atendido pelos ministérios da produção e das finanças dos países. É necessário considerar os processos e alcances para compreender seu funcionamento ou implementação no hemisfério, com o objetivo de contra-arrestar os efeitos gerados por esses eventos no aumento dos indicadores da pobreza e agilizar a recuperação dos produtores rurais na Região. Inclui-se o mandato outorgado ao IICA por parte de seus Estados Membros em relação ao tema.

Seguro agropecuario: poderosa herramienta para gobiernos y agricultores

El seguro agropecuario, definido como la protección de cultivos y animales contra eventos adversos de la naturaleza o de otra índole, constituye un tema de significativa urgencia que debe ser atendido por los ministerios de producción y finanzas de los países. Es necesario considerar los procesos y alcances de este seguro en el hemisferio, y su contribución para reducir los índices de la pobreza y agilizar la recuperación de los productores rurales en la Región. Se incluye el mandato otorgado al IICA por parte de sus Estados Miembros en relación con el tema.