

# AGRICULTURE INSURANCE LATIN AMERICA

Aspen Re

Ramiro Iturrioz  
Vice President – Non Property Lines

Casualty Actuarial Society - Seminar on Reinsurance  
New York, May 21, 2014 - May 22, 2014



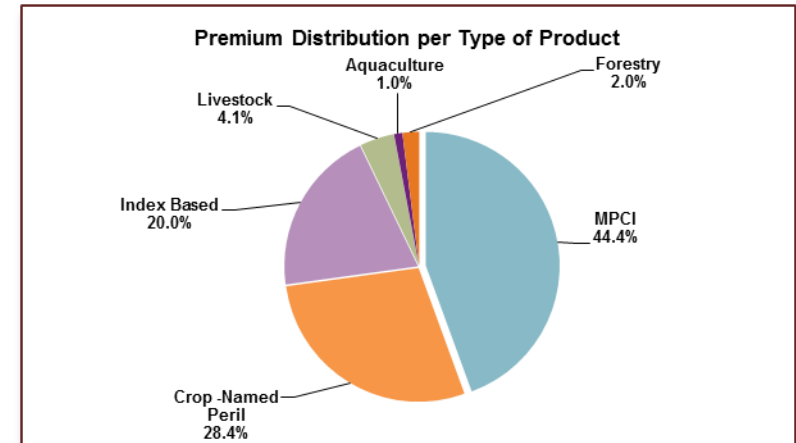
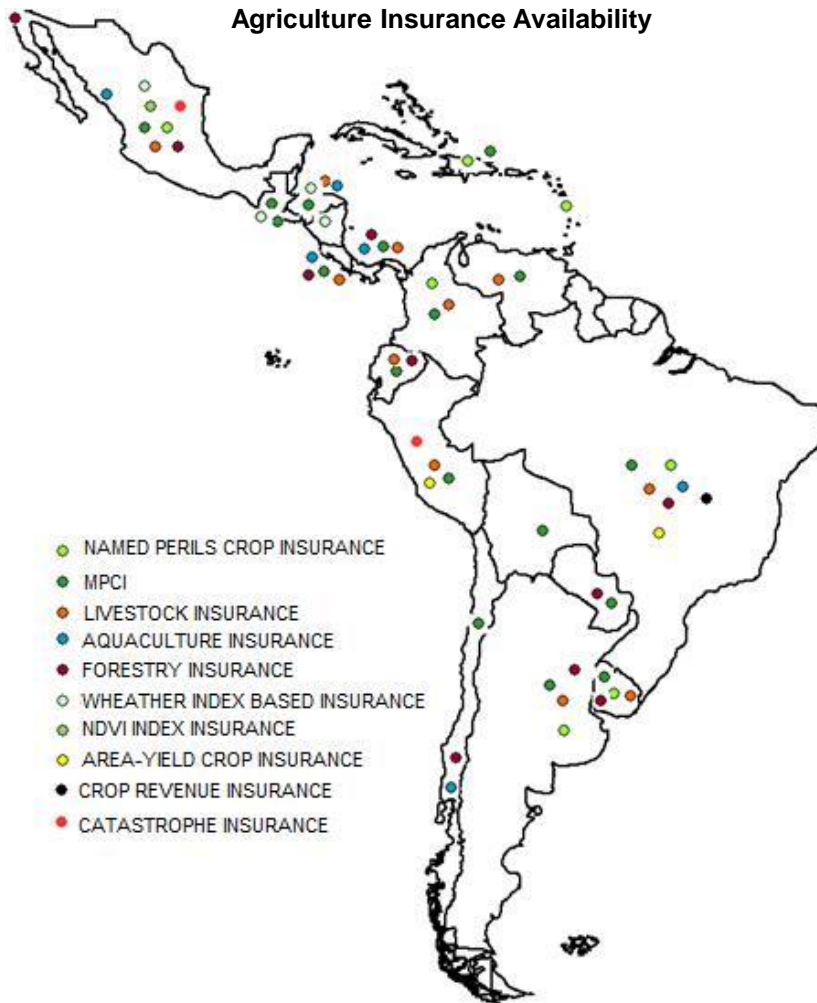


## CONTEXT

- Latin American Countries will have to play a major role in ramping up food production.
  - The contribution of agriculture and agroindustry account for 25% of the regional GDP. (IADB, 2011)
  - Farmers generate more agriculture value added than in other developing regions (World Bank, 2010)
- As a result of Latin America's growing share of global agricultural output, efficient ways to protect crop and livestock production have become increasingly important.
- Governments have shown greater interest in supporting the development of agricultural insurance, either by providing subsidies or by constructing specific policies for the sector.
- The agriculture insurance market is innovating and developing tailored risk transfer solutions that meet the needs of the different boundaries of the agribusiness value chain.
- The Latin American agricultural insurance market has considerable growth potential, either from an increase in insurance penetration or the introduction of new products.



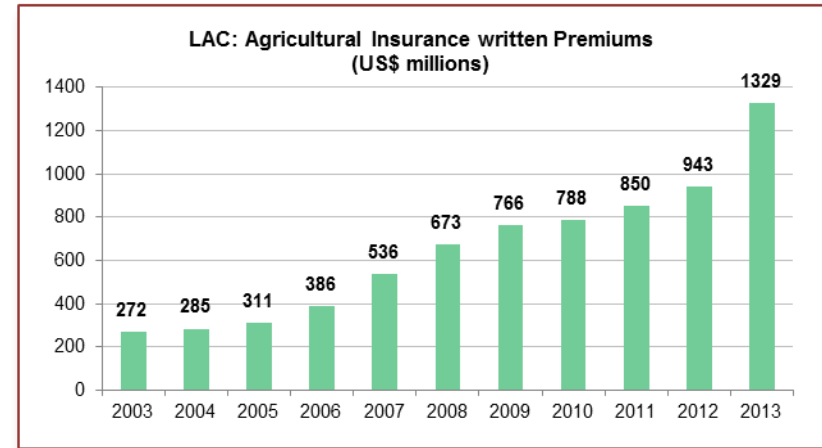
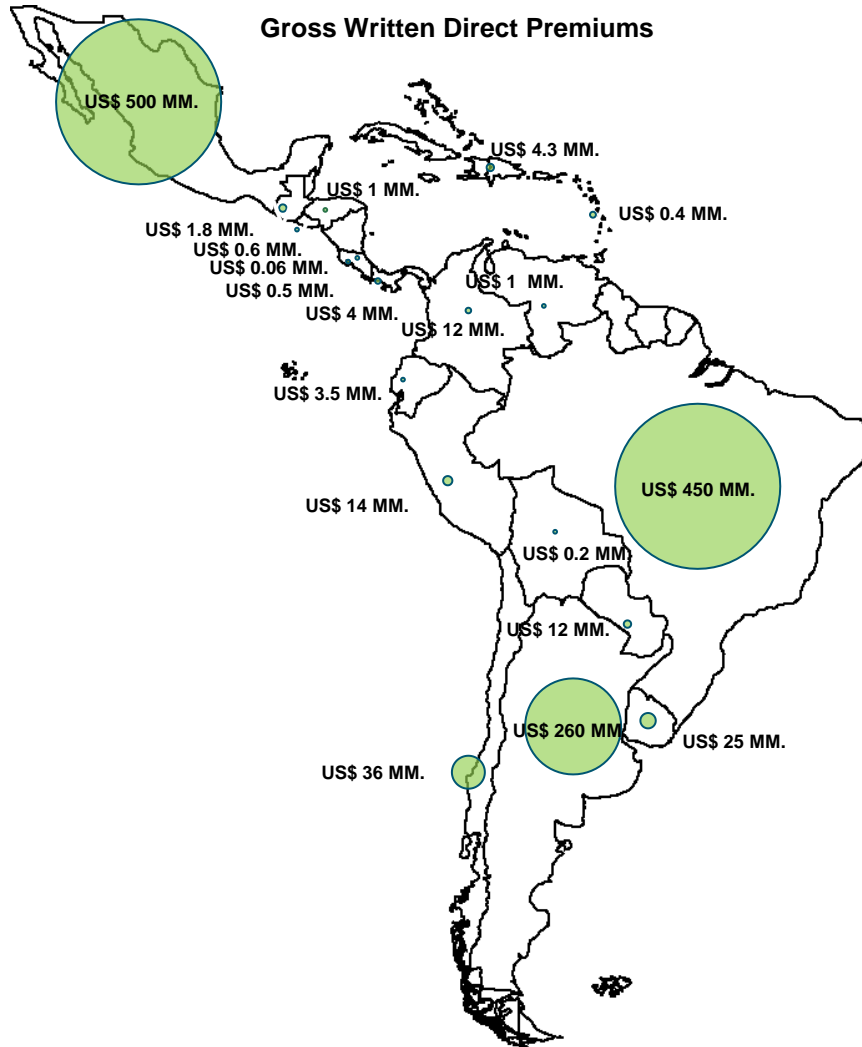
# AGRICULTURAL INSURANCE AVAILABILITY IN LATIN AMERICA



- Agricultural Insurance is available in 18 /25 countries with agricultural basis in LATAM.
- 80 insurance companies and 15 reinsurers are currently offering agricultural (re)insurance.
- Main policies sold are crop MPC I, crop named perils, and index based insurance.
- Agricultural risks mostly reinsured through proportional with stop loss over cedant retentions.



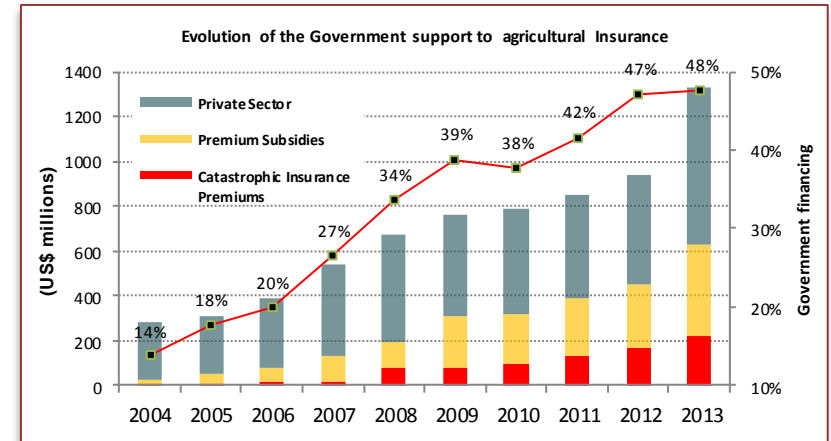
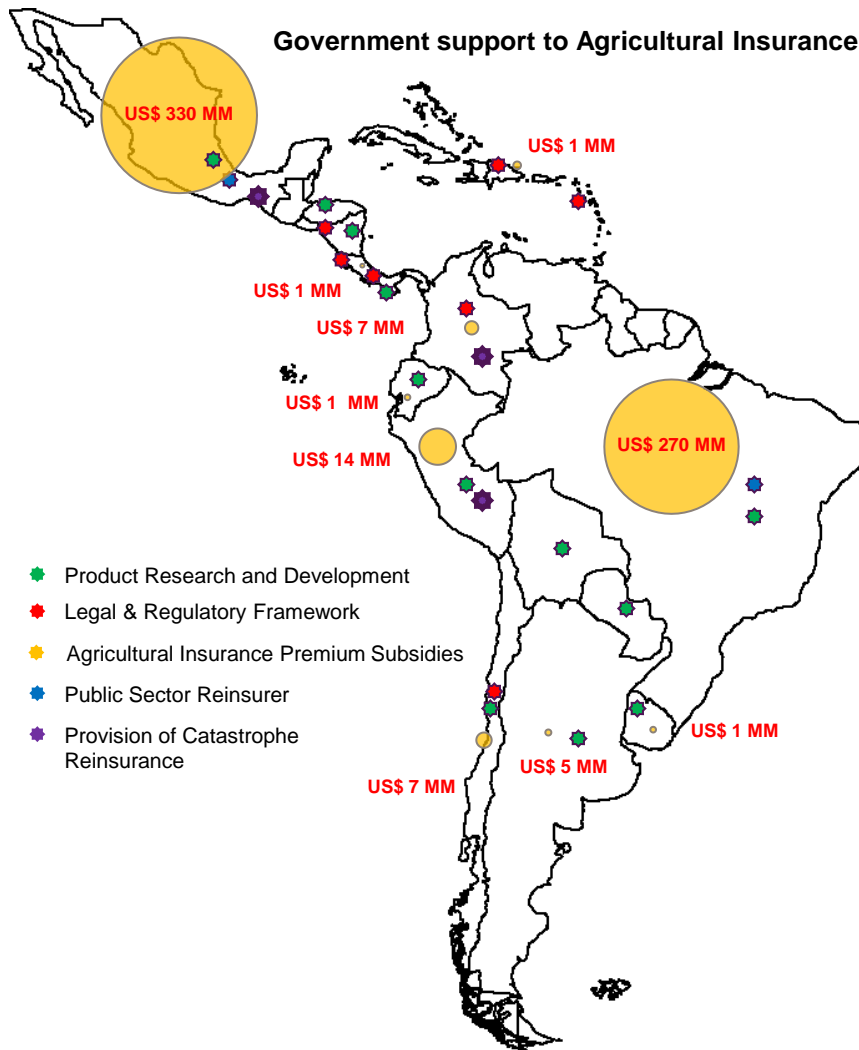
# AGRICULTURE INSURANCE MARKET IN LATIN AMERICA



- Premium Volume 2013: US\$ 1.3 billions ,out of which 60% is ceded to reinsurers
- The premium distribution across the region is uneven (Brazil, Argentina and México account for 90% GWP, the remaining 10% GWP s split over 15 countries.)
- Sustained market growth in the last decade and , in particular, from 2012 to 2013.
- Main drivers of the growth process ::
  - High agriculture commodity prices.
  - Rise of risk awareness
  - Increase in Government Support



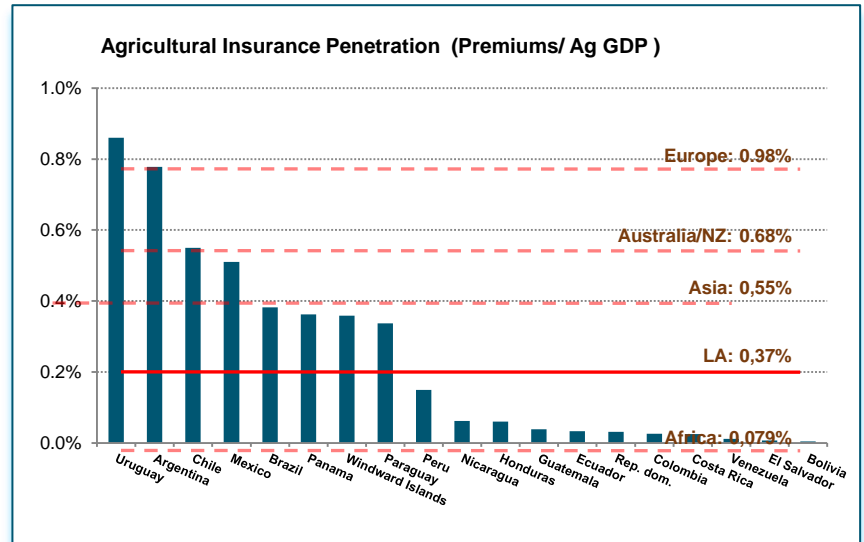
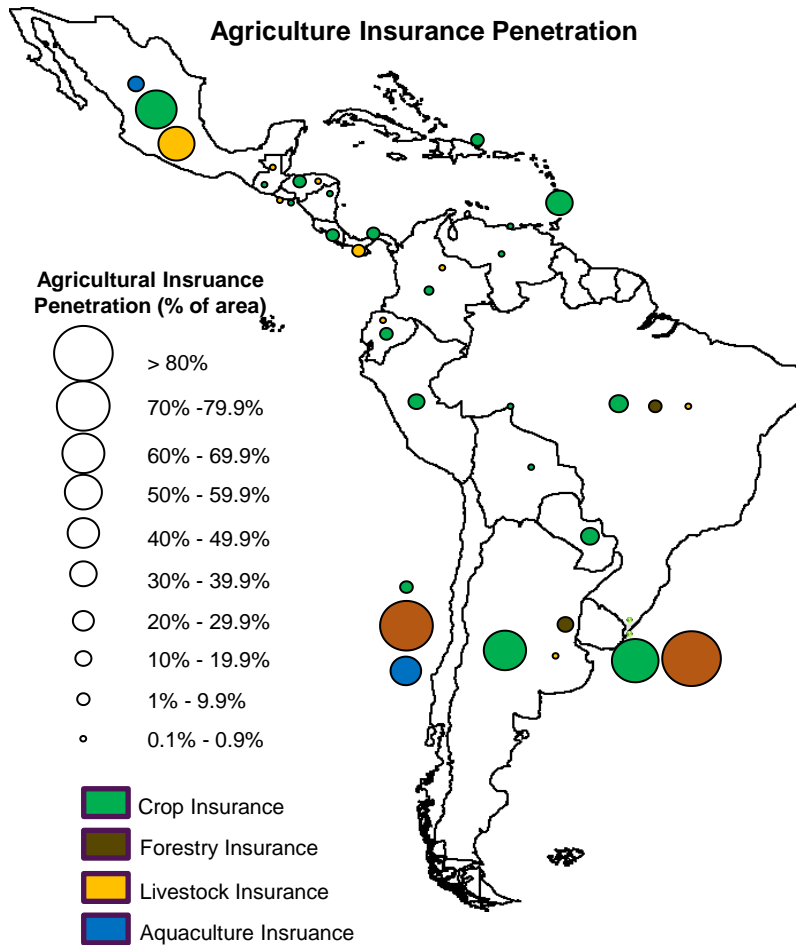
# LATIN AMERICA: PUBLIC SECTOR SUPPORT TO AGRICULTURAL INSURANCE



- Different mechanism for public support to agricultural insurance coexist in the region.
- Total government expenditures in agricultural insurance amounting to US\$ 630 million
- Brazil and México account together for 90% of government expenditures in agriculture insurance
- Agricultural insurance premium volumes are greatly reliant on government support.



# AGRICULTURAL INSURANCE PENETRATION



- The penetration of agriculture insurance is still far from the penetration in other regions
- Uneven penetration of agriculture insurance across the region
- Agricultural Insurance penetration in LAC:
  - 24% of the crop area is insured.
  - 19% of the forested area is insured.
  - 1,3% of the livestock is insured
  - 28% of aquaculture production is insured

**Ag Ins. Premiums/ Ag. GDP= 0,37%**



# AGRICULTURE INSURANCE IN LATIN AMERICA: SWOT ANALYSIS

## Strengths:

- Agriculture is a key economic component for most of the countries
- The region is well endowed with resources for production.
- Well developed agribusiness sector in some countries in the region,

## Weaknesses:

- Weak agriculture market infrastructure in some countries
- Government Policies, with few exceptions, are still weak or inexistent.
- Lack of standardization in product design, wordings and procedures.

## Opportunities:

- Increase of farmers awareness towards agriculture risk management
- Increase of Government Support for Agriculture Insurance
- Agribusiness value chain is demanding for suited risk transfer solutions

## Threats:

- Regional economic downturn might, eventually, reduce government support
- Weak legal frameworks make very easy for governments to change their policies
- Increase in the frequency and severity of extreme weather events.



## CHALLENGES FOR ACTUARIES


- The lack of good crop production and livestock statistics is a serious hurdle in the region.
- Weather network in the region is insufficient . Weather information is expensive and has a huge number of missing data.
- Moral hazard and adverse selection are still serious issues in the region. To price these components of the risk from the actuarial perspective is very challenging.
- In several markets, agriculture insurance portfolios are still very immature and, too often, change their composition from one year to the other.
- Different type of direct insurance policies coexist in the same market. In addition to this, it is not uncommon that the original terms and conditions of the direct insurance policies issued by one company change for one year to the other.
- Increase of the incidence of extreme weather events in agriculture production and uncertainties about whether this is a change on the climate pattern or just a climate cycle.
- Lack of standardized exposure models or industry base PML studies.

As a result, most of the agriculture insurance programs from that are priced are based on AS IF assumptions that are mostly judgmental



## TAKE AWAY

- Agriculture Insurance has a great potential for development in the region, but it has still a long way to walk to express its full potential.
- The current degree of development of agriculture insurance is very heterogeneous from country to country.
- Legal and institutional frameworks for the development of agriculture insurance in the region are, with few exceptions, still weak or inexistent.
- Some countries in the region still lack of infrastructure for the development of agriculture insurance (i.e.: quality statistics, trained loss adjusters, etc.).
- Pricing agriculture risk from the region presents several challenges for actuaries
- A good pricing approach for and agriculture insurance program, in the context of Latin America, should consist in a right blend of the actuarial science with the underwriter understanding of the underlying risk and the knowledge about the cedant.



I would like to thank my colleague,  
Davide Guarini, Senior Pricing Actuary  
at Aspen Re, for his insightful views  
about actuarial pricing of agriculture  
risks in Latin America

**MUCHAS GRACIAS**

[Ramiro.Iturrioz@aspn-re.com](mailto:Ramiro.Iturrioz@aspn-re.com)