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## Agricultural risk and its insurance in Italy

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### Abstract

The paper focuses on some problems of agricultural risk management in Italy (insurance coverages cost and poor diffusion of policies) proposing some possible ways of intervention such as introduction of forms of alternative risk transfer, as complementary measure to insurance, and other instruments ordered to improve the number of policies.

*Key words:* insurance, agricultural risk, natural catastrophes

### 1. PREMISE

The agricultural risk management in Italy presents some critical situations which need new measures of intervention.

The first and the second paragraphs dedicated to the normative system of funding and subsidizing in case of natural catastrophes affecting agricultural enterprises. Farmers are exposed to increasing economic and environmental risks as a consequence of climate change. In this context, the effective management of risks has an increased importance for farmers. Thus risk management measure should be set up to assist farmers in addressing the most common risks faced by them. Such measure should help farmers to cover the premiums they pay for crop, animal and plant insurance as well as help with the setting up of mutual funds for losses suffered as a result of adverse climatic events, the outbreak of animal or plant diseases, pest infestation or environmental incidents.

Of course Insurance represents the most important measure of agricultural risk management. The third paragraph focuses on some criticalities of agricultural

insurance in Italy: insurance coverages costs and poor diffusion of policies.

The fourth paragraph is dedicated to some possible ways of intervention: introduction of alternative risk transfer and more links between loan agreements and contracts of insurance in agriculture.

### 2. THE ITALIAN SYSTEM OF FUNDING AND SUBSIDING IN CASE OF NATURAL CATASTROPHES AFFECTING AGRICULTURAL ENTERPRISES

The risk in agricultural business is particular, as the effects of the decisions made by the entrepreneurs in this sector are conditioned by a series of events over which they have limited possibilities of intervention.

To address these risks, the agricultural enterprise is faced with two possible lines of action: they can adopt strategies to support the risk and manage it directly and / or they can transfer the risk to other private traders as insurance companies.

In this perspective, we can't understate how climate change has emphasized the problem by imposing a reflection on agricultural risk management.

As highlighted by many scholars, climate change is the greatest unknown of the agricultural sector worldwide (Cafiero, et. al. 2007a, 1; Glauber, 2004a, 1179-1195; Corleto, 2009, 1-26; Sarris, 2010, 140-179; Turvey, 2001, 333-351).

In Italy, several projects on climate scenarios indicate a rise in average temperatures of about 1.5 to 2 degrees Celsius in 2050 in particular in Southern Italy and a simultaneous reduction of annual precipitation, with a worsening desertification in Mediterranean areas of the country. Policies and measures adopted to mitigate these changes are not yet sufficient (Prospettive della gestione del rischio in agricoltura, 2013, 14).

The offer of insurance contracts to cover risks production in agriculture is notably conditioned by

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two problematic aspects: information asymmetry and systematic risk.

The first is determined by the fact that the insurance companies do not know perfectly the Risk profile of agricultural businesses.

The second problem is given by the high correlation and dependence between damages and costs of individual policyholders.

The above issues were addressed in Italy according to a combination of public and private intervention with a progressive containment of public compensatory measures.

Italy was one of the first European countries to have faced, in a systematic way, risk management in agriculture with the establishment of the National Solidarity Fund (thereafter: FSN) occurred with the Law no. 364 of 25 May 1970. FSN institutionalized the principle of solidarity by supporting economically businesses suffering damage caused by variables outside of its control.

Volumes of insurance and their public facilities showed a steady, though gradual, growth, until reaching reform of FSN with the Legislative Decree no. 29 March 2004 n. 1024, adopted in implementation of the law n. 38 of 7 March 2003 on the „Financial measures in support of agricultural enterprises.”

This Act updated national rules on agricultural risk management, especially in order to adapt it to the new guidelines and modernize tools risk management at the disposal of agricultural enterprises.

The Decree. N. 102/2004 has introduced important changes from the operating point of view providing forms of subsidizing of the premium (Tangermann, 2010, 13). An argument often invoked in favour of subsidization of agricultural insurance schemes is the systemic nature of many risks in agriculture. In particular, where bad weather has depressed yields, most farmers in the country or region concerned suffer from that same damage simultaneously, which makes it difficult for insurance companies to diversify their risk and exposes them to potentially large indemnity payments that may be beyond their capacity to shoulder. However, there is the possibility of reinsurance, and it can well be argued that yield liabilities, while potentially large in themselves, are small relative to the global reinsurance market (Glauber, 2007). Hence, the systemic nature of many risks in agriculture is, also, not a defensible reason for subsidizing agricultural insurance schemes. As a matter of fact, the systemic nature of weather-related risk in agriculture can actually be exploited in a constructive way to reduce transaction costs, by developing index insurance that covers a relevant risk factor, for example the amount

of rainfall (Garrido, et. al. 2003, 20). Governments can contribute to the development of such innovative forms of insurance through investment in weather stations and research on appropriate indexes. Governments can contribute to the development of such innovative forms of insurance through investment in weather stations and research on appropriate indexes (Cafero, et. al. 2007b, 419–441; Coble, et. al. 2004, 309–330; Garrido, et. al. 2003, 11; Garrido, Bielza, 2008, 20; Glauber, 2004b, 1179–1195; Glauber, 2007; Goodwin, et. al. 2004, 1058–1077; Headey, 2011, 136–146; Tangermann, 2010; Young, et. al. 2001, 1196–1203).

The actions that can be triggered by the FSN are essentially of two types: measures to encourage the conclusion of insurance contracts and compensatory measures only in the case of uninsurable risks.

The Insurance plan in agriculture is adopted annually, after the evaluation of proposals discussed by a specific technical committee, by decree the Minister of agriculture and forestry. The Plan identifies the types of policy, the land areas, the products and all the other variables of interest for the purposes of concession and quantification of the public contribution on awards.

### 3. THE LAST ITALIAN AGRICULTURAL PLAN

The final insurance plan approved by decree of the Ministry of agriculture distinguishes insurance coverages in: catastrophic adversity, frequent adversity and incidental adversity.

Among catastrophic adversities there're: floods, drought and frost. Frequent adversities may include: hail, high winds, excessive snow and excessive rain. Incidental adversities are sunstroke, warm wind, the thermal shock.

Subsidies of government under Rural development (Regulation (EU) No 1305/2013) are feasible through the specific measures contained in the National rural development program (NRDP), for the following types of support:

– Crop insurance and animals accordingly with art. 37 of the Regulation (EU) No 1305/2013.<sup>33</sup>

<sup>33</sup> „Support under point (a) of Article 36(1) (financial contributions to premiums) shall only be granted for insurance contracts which cover for loss caused by an adverse climatic event, or by an animal or plant disease, or a pest infestation, or an environmental incident or a measure adopted in accordance with Directive 2000/29/EC to eradicate or contain a plant disease, or pest which destroys more than 30 % of the average annual production of the farmer in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and lowest entry. Indexes may be used in order to calculate the annual production of the farmer.

– Mutual funds for adverse climatic events, animal and plant diseases, pest infestations and environmental incidents accordingly with art. 38 of the Regulation (EU) No 1305/2013.<sup>34</sup>

The calculation method used shall permit the determination of the actual loss of an individual farmer in a given year. The measurement of the extent of the loss caused may be tailored to the specific characteristics of each type of product using: (a) biological indexes (quantity of biomass loss) or equivalent yield loss indexes established at farm, local, regional or national level, or (b) weather indexes (including quantity of rainfall and temperature) established at local, regional or national level.

2. The occurrence of an adverse climatic event or the outbreak of an animal or plant disease or pest infestation or an environmental incident has to be formally recognized as such by the competent authority of the Member State concerned. Member States may, where appropriate, establish in advance criteria on the basis of which such formal recognition shall be deemed to be granted.

3. As regards animal diseases, financial compensation under point (a) of Article 36(1) may only be granted in respect of diseases mentioned in the list of animal diseases established by the World Organization for Animal Health or in the Annex to Decision 2009/470/EC.

4. Insurance payments shall compensate for not more than the total of the cost of replacing the losses referred to in point (a) of Article 36(1) and shall not require or specify the type or quantity of future production. Member States may limit the amount of the premium that is eligible for support by applying appropriate ceilings.

5. Support shall be limited to the maximum rate laid down in Annex II.”

<sup>34</sup> „In order to be eligible for support the mutual fund concerned shall: (a) be accredited by the competent authority in accordance with national law; (b) have a transparent policy towards payments into and withdrawals from the fund; (c) have clear rules attributing responsibilities for any debts incurred.

2. Member States shall define the rules for the constitution and management of the mutual funds, in particular for the granting of compensation payments and the eligibility of farmers in the event of crisis, as well as for the administration and monitoring of compliance with these rules. Member States shall ensure that the fund arrangements provide for penalties in case of negligence on the part of the farmer. The occurrence of incidents mentioned in point (b) of Article 36(1) (i) must be formally recognized as such by the competent authority of the Member State concerned.

3. The financial contributions referred to in Article 36(1) (b) may only relate to: (a) the administrative costs of setting up the mutual fund, spread over a maximum of three years in a degressive manner; (b) the amounts paid by the mutual fund as financial compensation to farmers. In addition, the financial contribution may relate to interest on commercial loans taken out by the mutual fund for the purpose of paying the financial compensation to farmers in case of crisis. Support under point (b) of Article 36(1) (financial contributions to mutual funds to pay financial compensations to farmers) shall only be granted to cover for loss caused by the outbreak of adverse climatic events, an animal or plant disease, a pest infestation, or a measure adopted in accordance with Directive 2000/29/EC to eradicate

– Income stabilization tool accordingly with art. 39 of the Regulation (EU) No 1305/2013.<sup>35</sup>

The new agricultural plan provides a mechanism for calculating the parameters for the determination of the contribution is more favorable to agricultural enterprises as it is based on the average expenditure

or contain a plant disease or pest or an environmental incident, which destroy more than 30 % of the average annual production of the farmer in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and lowest entry. Indexes published in the *Official Journal of the European Union*, 20.12.2013, L 347/518 may be used in order to calculate the annual production of the farmer. The calculation method used shall permit the determination of the actual loss of an individual farmer in a given year. No contribution by public funds shall be made to initial capital stock.

4. As regards animal diseases, financial compensation under point (b) of Article 36(1) may be granted in respect of diseases mentioned in the list of animal diseases established by the World Organization for Animal Health or in the Annex to Decision 2009/470/EC.

5. Support shall be limited to the maximum support rate laid down in Annex II. Member States may limit the costs that are eligible for support by applying: (a) ceilings per fund; (b) appropriate per unit ceilings.”

<sup>35</sup> „Support under point (c) of Article 36(1) (income for stabilization tools) shall only be granted where the drop of income exceeds 30 % of the average annual income of the individual farmer in the preceding three-year period or a three-year average based on the preceding five-year period excluding the highest and lowest entry. Income for the purposes of point (c) of Article 36(1) shall refer to the sum of revenues the farmer receives from the market, including any form of public support, deducting input costs. Payments by the mutual fund to farmers shall compensate for less than 70 % of the income lost in the year the producer becomes eligible to receive this assistance.

2. In order to be eligible for support the mutual fund concerned shall: (a) be accredited by the competent authority in accordance with national law; (b) have a transparent policy towards payments into and withdrawals from the fund; (c) have clear rules attributing responsibilities for any debts incurred.

3. Member States shall define the rules for the constitution and management of the mutual funds, in particular for the granting of compensation payments to farmers in the event of crisis and for the administration and monitoring of compliance with these rules. Member States shall ensure that the fund arrangements provide for penalties in case of negligence on the part of the farmer.

4. The financial contributions referred to in point (c) of Article 36(1) may only relate to: (a) the administrative costs of setting up the mutual fund, spread over a maximum of three years in a degressive manner; (b) the amounts paid by the mutual fund as financial compensation to farmers. In addition, the financial contribution may relate to interest on commercial loans taken out by the mutual fund for the purpose of paying the financial compensation to farmers in case of crisis. No contribution by public funds shall be made to initial capital stock.

5. Support shall be limited to the maximum rate laid down in Annex II.”

of the current year. Art. 5 provides that „eligible contribution is equal to the lower value resulting from the comparison between the cost of insurance premiums obtained by applying the parameters calculated by the Institute for services in the agricultural and food markets (*Istituto di Servizi per il Mercato Agricolo Alimentare* – ISMEA)... .And the spending awards resulting from the certificate of insurance.”

#### 4. SOME PRESENT CRITICISMS

Although the national legislation contains mechanisms to promote the spread of insurance policies, agricultural risk coverage level still is not high.

It could seem strange considering that the Legislative Decree 102 excludes, for all productions and events included in the national insurance plan, the possibility to activate compensatory measures of compensation or allowances granted in case of an adverse event. Only 1,677 farms are insured for a complexive value of EUR 55.98 million (ISMEA, 2012). Some are insured for arable (26.638 million euros), some for vineyards and fruit (25.819 euros), some for farms and facilities (3.19 million euros and 422.948 euros). Data show low familiarity of our farms with the culture of risk management both for economic and cultural factors.

The main critical factor can be identified in the cost of premiums that is linked to the reduced dissemination of policies.

There was a vicious circle: the cost of premiums reduces the attractiveness of insurance products, but this in turn negatively affects the cost of premiums.

Moreover, as said, the agricultural sector is characterized by information asymmetry and systematic risk.

The first is determined by the fact that the insurance companies do not know perfectly the profile of the insured party and the second depends on the high correlation between damages and costs of individual policyholders. These two conditions cause a situation of adverse risk selection, which in turn determines increase in premiums: only farmers who know to be more exposed to risk are insured.

##### 4.1 Some possible ways of intervention

The fact that there are still many areas of the agricultural sector not covered by insurance reduces the activities of risk pooling which is technically important in order to reduce premiums. Moreover agricultural consortia, which usually conclude collective policies joining various farmers, have low power in negotiations

with insurance companies due to the low number of policies.

It should be important to propose products that may attract even those farmers who see a reduced risk, for example, because they do other activities in addition to the agricultural business or because the type of crop they exerted hardly arrive in percentages of damage that triggers the insurance coverages. This target of farmers might be interested in a combination the compensation of the damage and assistance in case of damaging events.<sup>36</sup>

It should be also important to reduce premiums in order to improve the numbers of policies. A tool of premiums containment could be the adoption of instruments of risk management by farmers. Let's think to some instrument of so called „alternative risk transfer”, that could be used in combination with insurance policies in order to reduce the risk and in turn the premium. Regard this, we can consider, for example, the inclusion of conditions of insurance coverage providing that the insured farmer must adopt a differentiation of crops or special tools to reduce their vulnerability.

Tools for risk management in agriculture are distinguished in strategies concerning: diversification of the production programs, risk sharing strategies by contracts between farmers, hedging on futures markets, the participation in mutual funds.

The main advantage of the calamities funds is that they avoid big distortions of the government budget. Funds sometimes receive also contributions from the private sector, usually in the form of compulsory levies to production or levies to premiums.

Mutual funds are owned by the participants. If mutual funds are organized regionally, the advantage is that farmers organize their own cross-control reducing moral hazard and adverse selection. The disadvantage of regionally organized mutual funds is the possibility that many or even all farmers incur losses at the same time. On the other hand farmers are not always sufficiently well organized to set up an efficient mutual structure.

Solutions for this problem could be insurance, as complementary measure covering the part of damages

<sup>36</sup> This type of contract is provided in art. 175 of the Italian Insurance Code:

„1. Assistance insurance is a contract by which an insurance undertaking undertakes, against the prior payment of a premium, to make aid immediately available to the insured party, within the limits set out in the contract, where that person is in difficulties following the occurrence of a chance event.

2. The aid may consist in benefits in cash or in kind. The provision of benefits in kind may also be effected by means of the staff and equipment of third parties.”

not covered by insurance, or the cooperation with mutual schemes in other regions which would cover a share of the loss.

Another way to improve the number of agricultural risk coverages in agriculture could be the connection between credit instruments and insurance instruments. It could be provided, as in the field of real estate loans, clauses that make the signing of insurance contract mandatory for access to agricultural credit. The connection between loan and insurance contracts is a delicate operation from a legal standpoint. We remember how the link between investment contracts and insurance policies was subjected to detailed regulation designed to reasons of investors' protection, particularly in terms of costs and effectiveness of the guarantees.

Such operation presents a case of so called „cross selling“. As well-known, cross-selling is typically subdivided into the practices of: „tying“, that means offering of one or more ancillary services with an insurance service or product in a package; and „Bundling“ that means offering of one or more ancillary services with an insurance service or product in a package, where this insurance service or product is also made available to the consumer separately, but not necessarily on the same terms or conditions as when offered bundled with the ancillary service.

With regard to „business-to-consumer contracts“ National Supervisory Authorities (NSAs), members of the EIOPA stakeholder group and Insurance and Reinsurance Stakeholders Group (IRSG), reported consumer detriment arising in a variety of ways due to cross-selling practices.<sup>37</sup> These insurance products are often not suitable for the consumer they have been sold to. Consumers are not free to choose the products they like. Consumers often lack information or find the information too complex for making informed choices.

We could simply answer that agricultural insurance is not a „business-to-consumer“ contract, but it is a „business-to-business“ contract. Actually we don't think that such strict distinction is possible, because some situations of weakness of a party of the contract

<sup>37</sup> „Consumers not always being aware that they are buying an insurance product due to inherent information asymmetries, coupled with poor product disclosure and selling practices, so they do not activate the policy in the event of a claim. Competition for the add-on product not being effective. Consumers are less likely to shop around for the add-on cover and are less sensitive to its price. This may lead to consumers overpaying significantly for the add-on product, given a lack of price competition“ (Third Consumers Report Trend, EIOPA, December 2014).

can be found also in „business-to-business“ contracts (Hesslink, 2010, 57–102<sup>38</sup>).

In any case with regard to agricultural insurance linked to a loan we have to consider that: 1) the

<sup>38</sup> As he notes On 8 October 2008 the European Commission published its proposal for a consumer rights directive. The proposed directive is the provisional outcome of the review of the consumer *acquis* that the Commission launched with its Action Plan in 2004.2 The aim is to revise the four directives that according to the Commission regulate 'the contractual rights of consumers,' namely the directives on doorstep selling, unfair contract terms, distance contracts, and the sale of consumer goods and guarantees. The overall purpose of this review, according to the Commission, is to achieve 'a true internal market for „business-to-consumer“ trade (b2c). The proposal contains nothing about business-to-business (b2b) agreements and refers to a new beginning in the area of the contractual rights of consumers.

The proposed directive fits very well with a sharp distinction between b2c and b2b contracts and comprises several features that, especially as a combination, provide an optimal basis for a future European consumer (contract) code. The same characteristics that make the directive a good preliminary step toward a European consumer law code progressively complicate implementation of consumer contract law in the Civil Code by the national legislator. Still, nothing in the directive renders further distinction between b2c and b2b compulsory. National legislators may extend the scope to other parties (e.g. sole traders and small businesses), when it is of the opinion that they merit the same protection, and even to all parties, by including the directive in general private law. Nor is the European legislator bound to further deepen the distinction between b2c and b2b at the European level: EC Treaty Article 95, the intended legal basis of the directive, does not demand such a measure. Both the directive and its implementation are thus matters of political choice. This raises the question as to whether a rigid, categorical distinction between rules governing b2c and those governing b2b contracts is desirable. No substantive ground justifies such a categorical distinction. Non-consumers, especially small businesses, often encounter situations identical to those usually invoked to justify consumer protection. In such cases the equality principle requires that the legislator extend the protection prescribed for consumers to include this group. The European legislator is unlikely to elect this option. The Commission, the Council and the Parliament have already expressed support (without substantiating this position) for distinguishing between b2c and b2b contracts. On the other hand, certain Member States probably still favour preserving the unity of private law, their layered system with various levels of abstraction and the associated *lex specialis* idea. In this respect greater transparency may be expected from the European Commission. How does the Commission view the future: does a European Code of Consumer Law lie ahead? The Council of the European Union and the European Parliament should ask the Commission for guidance here and should adopt a clear position themselves. This is important for two reasons. The first is that prior to transposition of this directive, Member States should know what to expect. The second is that if a European Code of Consumer Law ever materializes, it will need to be the outcome of a deliberate decision to this effect.”

adequacy of the policies is guaranteed by the control on the content of contracts. In fact the subsidized insurance must be conform to a standard model of contents approved by ministerial decree every year; 2) the lack of information it is usually cover by the intervention of Agricultural Consortia which stipulate insurance contracts in the form of „Insurance on behalf of third parties” (Civil Code, Art. 1891); 3) of course if the insurance policy is mandatory for borrowers, we have a lack of freedom of contract. But we have to consider the social value of such compulsoriness and that, according to Italian Constitution, private autonomy „may not be carried out against the common good or in such a manner that could damage safety, liberty and human dignity. The law shall provide for appropriate programs and controls so that public and private-sector economic activity may be oriented and coordinated for social purposes” (Perlingieri, 2006; Galgano, 1979).

## 5. CONCLUSIONS

Farmers are exposed to increasing of environmental risks as a consequence of climate change. In this context, the effective management of risks and insurance coverages have an increased importance. The Italian legislator provides forms of subsidizing of the premiums, but many of the problems related to insurance coverage of agricultural risk (asymmetric information, adverse selections of risks, premium costs) can't find solution in the economic intervention of States.

It's important firstly to stimulate insurance coverages in order to facilitate risk pooling and increase the power of negotiation of Agricultural Consortia. In turn premiums will decrease.

A way to improve the number of agricultural risk coverages in agriculture could be the connection between credit instruments and insurance instruments. Moreover it is evident that there is a functional link between such contracts (loan and insurance). Adequate coverage of agricultural risk leads to greater security for lender in case of default the borrower where the agricultural enterprise (the borrower) faces adverse events that may have affected production.

Thus great penetration between the credit market and the insurance market in the agricultural sector could well lead to new synergies fundamental for the development and production growth.

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