Zeitschrift: Agrarwirtschaft und Agrarsoziologie = Économie et sociologie rurales [1980-2007]

Herausgeber: Schweizerische Gesellschaft für Agrarwirtschaft und Agrarsoziologie

Band: - (2001)

Heft: 1

Artikel: Risk management tools for EU agriculture

Autor: Jung, Vinzenz

DOI: https://doi.org/10.5169/seals-966262

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Mehr erfahren

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. En savoir plus

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. Find out more

Download PDF: 21.11.2025

ETH-Bibliothek Zürich, E-Periodica, https://www.e-periodica.ch

Risk Management Tools for EU Agriculture

Vinzenz Jung, Bundesamt für Landwirtschaft, Bern

The European Commission has recently published a working document "Risk Management Tools for EU Agriculture – with a special focus on insurance[1]". The following article is based on this report. It starts out by providing an overview of the different types of risk that agriculture faces. After looking at the tools available to manage agricultural risk, it goes on to examine the reasons and possibilities of government intervention and summarises the policy instruments selected EU-Member States and other countries use to assist their farmers in dealing with risk exposure. The lessons that can be learned from existing public involvement in agricultural risk management form the basis for reflections concerning the potential of applying risk management policies at the EU-level.

Keywords: Risk management, EU agriculture, production risk, price risk, risk management strategies

1. Introduction

The agricultural sector is characterised by a strong exposure to risk. While this has always been the case, risk exposure is still likely to increase. *Price risk* is likely to rise because of agricultural trade liberalisation. *Production risk* is expected to increase due to rising quality requirements for some products and stricter rules as regards the use of inputs and medicines for animals (Meuwissen, Huirne and Hardaker 1999a). Growing mobility of people and trade in animals and animal

[1] European Commission, Agriculture Directorate-General (2001): Risk Management Tools for EU Agriculture - with a special focus on insurance, Brussels. The author of the article, who is working for the Swiss Federal Office for Agriculture, has contributed to this report while on secondment to Agriculture Directorate-General.

products can result in an increased spreading of animal diseases across national borders, thereby also increasing production risk (FAO 2000). The same phenomenon applies to plants. Climate change will have an impact on production risk as well. It is very likely that the frequencies and intensities of summer heat waves will increase throughout Europe, likely that intense precipitation events will increase in frequency, especially in winter, and that summer drought risk will increase in central and southern Europe, and possible that gale frequencies will increase (Parry 2000). Furthermore, specialisation in European agriculture is expected to continue, thus increasing both producers' production *and* price risk.

2. Types of risk

Farmers have many risks in common with other businesses, others are unique to farming. The most important risks can be classified as follows (Hardaker, Huirne and Anderson 1997; USDA 1999):

- **Human or personal risks** relate to death, illness or injury of the farm operator and/or its labour force. These risks are common to all business operators and employees. In the European Union, basic coverage for personal risk is normally provided by sector specific or general social security systems. Additional coverage is available on insurance markets.
- **Asset risks** are those associated with theft, fire and other loss or damage of equipment, buildings and other agricultural assets used for production. Losses are normally covered by insurance or, in case of catastrophic events, public disaster aid may contribute to reduce asset losses.
- **Production or yield risks** are often related to weather (excessive/insufficient rainfall, hail, extreme temperatures), but also include risks like plant and animal diseases. Yield risk is measured by yield variability, the randomness relative to the mean value in a yield series. Yield variability for a given *crop* differs considerably from region to region depending on climate, soil type and production method. It can be measured at farm, regional or country level. Aggregate data can, to a considerable extent, mask variability at lower levels of aggregation or at the individual farm level. "Yield" risk is smaller in the *livestock sector* for most producers, as weather has a smaller influ-

ence. The risks mainly stem from disease, mechanical failure in confinement operations and variability in weight gain.

- **Price risk** is the risk of falling output and/or rising input prices after a production decision has been taken. Price risk is measured by price randomness. Unlike yields, prices do not follow clear trends. Price volatility, of course, is for many products mitigated by measures of public price support. In open markets, prices are generally more highly correlated across different regions than yields.
- **Institutional risk** is the risk associated with changes in the policy framework (agricultural *and* other policies) which intervene with production and/or marketing decisions and in the end negatively affect the financial result of a farm. Institutional risks also include contracting risk, e.g. the risk of breach of contract.
- **Financial risks** include rising cost of capital, exchange rate fluctuations, insufficient liquidity and loss of equity.

The various risks are often interrelated. For example, the institutional risk of a change in price support has an influence on price risk. Likewise, new environmental restrictions may have an impact on yield risk.

3. Risk management strategies

In a first step, risks have to be quantified and the effectiveness of different measures has to be assessed. The adoption of a strategy basically requires the evaluation of the trade-off between the costs of reducing risk exposure and expected returns (USDA 1999). The adopted strategy will differ according to the relationship between the various risks faced, the costs of the various instruments, the farmer's income and wealth (his capacity to bear risk) as well as his risk perception (Meuwissen 2000).

The following types of risk management strategies can be distinguished (Meuwissen, Huirne and Hardaker 1999a):

- **On-farm strategies** concern farm management and include selecting products with low risk exposure (e.g. products benefiting from public intervention), choosing products with short production cycles, holding sufficient liquidity or diversifying production programmes. Evidence suggests that European agriculture is not adopting the

strategy of diversification. Between 1975 and 1997, the share of non-specialised farms fell from 32 to 17 per cent.

- **Risk-sharing strategies** include concluding marketing and production contracts, vertical integration, hedging on futures markets, participation in mutual funds and insurance.
- **Diversification** through increasing the share of income from sources outside agriculture.
- Relying on **public assistance** (disaster aid).

4. Market-based risk management tools

Ideally, markets should provide a wide range of risk management tools. The most important markets for risk coverage are futures markets and insurance markets:

- **Futures markets** help to reduce short term **price risks** and at the same time increase price transparency. In the EU, futures can be traded on five exchanges. Traded volumes are still relatively low. However, American trade volumes show the long run potential. Uptake in Europe is slow because the use of futures requires considerable investment in know-how and infrastructure and traders will only move to the European futures market once they have reached a minimum liquidity. In addition, the development of futures markets in Europe has been hampered by CAP-induced price stability. As price-volatility on the European markets is likely to increase with possible further trade liberalisation, the conditions for the development of futures markets and other market-based risk management tools are expected to improve (cf. Table 1 for an overview of volumes traded on selected exchanges in Europe, Northern America and Australia, and Box 1 for the conditions which have to be fulfilled for a successful establishment of futures and options markets).

Table 1: Volume traded on selected exchanges relative to production in the respective country 1992-99 (in %)

Commodity	Exchange	Country	1992	1993	1994	1995	1996	1997	1998	1999
Wheat	CBOT	USA	709	630	780	1135	1182	1019	1115	1427
Wheat	KCBT	USA	272	281	324	357	402	390	394	504
Wheat	LIFFE	UK	45	49	63	71	72	86	64	67
Wheat	MATIF	France						2.0	5.2	5.8
Wheat	WTB	Germany								2.0
Wheat	SFE	Australia					1.1	1.3	1.6	1.4
Barley	LIFFE	UK						20	17	10
Corn	CBOT	USA	546	904	574	1021	1063	922	809	833
Rape-seed	WCE	Canada	431	354	323	334	530	434	408	372
Rape-seed	MATIF	France				95	105	109	139	156
Rape-seed	WTB	Germany								1
Soybeans	CBOT	USA	2054	3115	2137	2440	2990	2704	2268	2361
Potatoes	AEX	Netherlands	28	50	81	56	23	24	35	21
Potatoes	LIFFE	UK						7.2	7.7	4.5
Potatoes	WTB	Germany							1.2	0.8
Hogs	AEX	Netherlands	30	26	25	19	31	42	27	25
Hogs	WTB	Germany							1.1	3.5

Source: European Commission, Directorate-General Economic and Financial Affairs (2000)

Box 1: Conditions for a successful establishment of futures and options markets

- Substantial commodity price variability. Without price variability market participants would have no incentive to use the market for hedging and the market would not attract any speculators, as potential profits would be small.
- Large number of potential traders and speculators (to ensure liquidity of the market). If the trade volume is too small, there is a danger that few transactions can influence the price significantly.
- Products with standardised grades and quality. Futures relate to standardised commodities (size, grade, place of delivery, date of maturity). Products with a large number of grades and quality variations are therefore not entirely suitable for successful futures contracts (e.g. rice, as opposed to soybeans, wheat, corn)
- Limited government intervention in pricing and trade. Transactions in commodity markets must be unhindered by physical or legal barriers and government controls.
- The existence of a regulatory body to safeguard the integrity of the markets and prevent fraud and manipulation
- Good transportation and telecommunications systems
- A well-functioning financial system
- An effective legal environment
- Political and macro-economic stability

Source: Sarris 1997

- **Production risks** can be covered by **insurance**. Risks are insurable, if the following basic conditions are fulfilled (Skees 1997, Skees and Barnett 1999):
  - Symmetric information: The insurer and the insured have (nearly) the same information as regards the probability distribution of the risk (the probability of a bad outcome). This is normally not the case, the main problems being moral hazard and adverse selection. Therefore, insurance solutions are only viable and can be offered at reasonable cost, if these problems can be adequately dealt with (cf. Box 2).
  - Independent risks: Risks should be (nearly) independent across insured individuals. If risks are systemic (dependent), special

measures have to be taken in order to make insurance solutions viable (cf. Box 2).

- Large number of exposure units: The law of large numbers allows an accurate prediction of average future losses and the calculation of the premium.
- Calculable chance of loss: In order to fix the premium rates, the insurance company must be able to estimate both average frequency and average severity of loss. For low-probability risks with potentially catastrophic outcomes it is difficult to fix a rate.
- Actual losses occurring must be determinable and measurable.
- In the perception of the potential buyer of insurance protection, potential losses must be significant, otherwise he/she will bear the risk him-/herself. At the same time, premia must be economically affordable.

Mutual funds are a special case of insurance. Mutual funds are owned by the participants and cover losses of members either through money already available in the fund and/or through an additional collection among participants.

Box 2: Asymmetric information and systemic risk

Asymmetric information

Asymmetric information relates to the problem that the buyer of insurance and the insurance company may not have the same information as regards the probability of losses occurring. Asymmetric information has two dimensions:

Adverse selection occurs if those more at risk buy more insurance than others, without the insurance company being aware of this. A common tool insurance companies use to minimise adverse selection is to ask the insured to disclose any factors that may lead to above normal risk. Based on that information premia can be differentiated for different classes of risk.

Moral hazard: In the case of insurance, moral hazard refers to an individual´s change in behaviour after having taken out an insurance policy. The change in behaviour results in an increase in the potential magnitude and/or probability of a loss. Tools insurance companies generally use to minimise moral hazard include:

- Deductibles or co-payments (the insured has to bear part of the loss: a fixed amount or a percentage of the total loss);
- No-claim bonuses (premium discounts when over a certain period of time no claims are made);
- Checks to verify whether the insured takes the precautionary measures agreed upon to prevent losses;
- Indemnification based on an objective index which cannot be influenced by the insured.

Systemic risk

As opposed to risks like fire and burglary, systemic risks are dependent risks: a lot of people suffer a loss at the same time. Systemic risks result in many people making a claim at the same time with the effect that the premia paid into a pool are not sufficient to cover the loss incurred, which may threaten the solvency of the insurance pool. An example for a largely systemic risk is price risk. All producers suffer from price downturns at the same time. Measures insurance companies can take to deal with systemic risks include re-insurance, geographic spreading and the use of capital markets.

Many agricultural risks are considered to be *in-between risks* which are neither perfectly independent nor perfectly correlated (systemic), for example yield and price risk. Insurance solutions for agriculture also have to include provisions to deal with problems of asymmetric information (moral hazard and adverse selection).The classical example of an insurable agricultural risk is hail.

Catastrophic losses as a result of natural disasters or epidemic diseases pose special problems for insurance. Natural disaster risk within a certain region is a highly correlated risk between the farmers of that region, with a low probability of very high losses. There are several reasons why it is difficult to develop insurance products to cover such risks (Skees 1997):

- Systemic nature of the risk. If re-insurance or state guarantees are not available, the nature of the risks makes it necessary for an insurance company to charge high premia (which may make the product unaffordable for many farmers) and to build up substantial capital reserves.
- Insufficient relevant historical data is available to calculate a sound premium due to the infrequency of such events.
- Crowding out by Government providing ad-hoc disaster payments which stifles the development of insurance products.

As natural disasters, epidemic diseases have a systemic character and little data concerning the outbreaks is available due to the infrequency of such events. In the case of animal diseases and as opposed to natural disasters, farmers can influence the chance of an outbreak of a disease by taking appropriate precautionary measures. Moral hazard poses therefore a significant problem for the insurance company. Furthermore, state involvement is important with respect to both legislation and covering direct losses resulting from outbreaks of animal diseases (value of destroyed animals). As governments normally cover direct losses, losses which need to be covered by insurance are those resulting from business interruption (empty buildings), supply and delivery problems (because of movement restrictions) and repopulation (Meuwissen, Huirne and Hardaker, 1999a; Meuwissen 2000). The development of such private insurance products depends on whether sufficient data is available for calculating premia, whether the significant moral hazard problems can be dealt with and whether sufficient re-insurance capacity or state guarantees are available to protect against the systemic nature of the risk.

5. Incomplete or missing markets for risk management tools

If markets for risk management tools are incomplete or missing, public intervention might be justified. Reasons can be found both on the supply and the demand side.

The main reasons on the **demand side** are:

- **Know-how** to make use of certain risk-management tools (e.g. futures and options markets) can be acquired only at high start-up transaction costs and is, therefore, not always available to farmers.
- Farmers perceive risks they face as being smaller than they actually are, resulting in low demand for risk-management tools ("**Cognitive failure**"). Events of low probability, which are associated with high potential losses (catastrophes), are very likely to be neglected in individual decision making.
- Even if farmers do not underestimate the risks they face, they might count on **other safety nets**, including off-farm income and therefore might not use available risk management tools.

On the **supply side**, the reasons vary from product to product:

- **Insurance products** might not be offered on the market because the conditions for insurability (independence of risk, symmetry of information) are not sufficiently fulfilled.
- **Re-insurance** is often necessary in order to cover big natural hazard risks. However, re-insurance can be very expensive, especially after catastrophes have happened, making an insurance product commercially inviable. Furthermore, agricultural re-insurance markets are limited, because of the special know-how involved and because the expected returns for covering the high set-up costs might not be attractive enough.
- The conditions for a successful establishment of **futures and options markets** are not always fulfilled. Not only do farmers need a certain amount of know-how, there is also a need for substantial price variability, sufficient traders and speculators and products with standardised grades and quality.

Public policy can intervene at different levels: A field of action can be to set-up the necessary legal framework for the creation of markets for risk coverage. Public policy can also provide incentives for the development of such markets (e.g. by encouraging training in the use of risk man-

agement tools) or lower the costs of such tools (e.g. by providing subsidies for insurance premia). Finally, governments can also provide risk coverage themselves (e.g. by providing re-insurance).

6. Systems of agricultural insurance in EU-Member States and other countries

An overview shows that there are considerable differences in insurance coverage, public sector involvement and farmers' up-take between countries (EU-Member States and other countries):

- **Greece** has a predominantly public system. The state, through its public insurance organisation, collects compulsory contributions, administers the programme and guarantees coverage of losses. By virtue of this, the role of the private sector is limited (system under reform).
- **Spain and Portugal** have "public-private partnership"-systems, where the state plays a key role, providing both premium subsidies and re-insurance. The private insurance industry is integrated into the system; it takes care of programme administration and covers a share of the risk.
- **Italy, France, Austria and Germany** have systems of agricultural insurance, which are predominantly private. The four countries differ considerably with respect to subsidies for insurance premia. While Germany is not providing any premia subsidies, Italy grants considerable amounts.
- In the **US**, a comprehensive system of crop insurance is in place within which state involvement takes four principal forms: (1) subsidising insurance premia; (2) covering administration expenses of the private insurance sector; (3) reimbursing acquisition costs of the private sector; and (4) providing reinsurance. Although two thirds of the country´s total planted acreage of field crops (except for hay) is insured (1998) substantial emergency aid has been paid since 1998.
- **Canada** has a crop insurance programme (CI), a subsidised savings programme for farmers (NISA) and an anti-cyclical income safety net (AIDA) which secures individual whole farm income at 70 percent of the historical three-year average income.

7. Lessons from existing public-private systems of agricultural insurance

The following lessons, based mainly on the US experience, can be learnt from existing public-private systems of agricultural insurance:

- **Coverage and participation**: Even for well-developed agricultural insurance systems the coverage in terms of products and participation rates remains limited. This is true even for products which are specifically designed to provide basic safety net coverage for every farmer and which are provided at very low cost. In Spain, 30 per cent of the farmers participate in the system resulting in 30 per cent of crop production and 10 per cent of animal production covered. In the US, 20 per cent of farmers participate in the system, while two thirds of the country's total eligible acreage is covered.
- **Incentive structure and efficiency**: Covering a wide range of perils at a level of protection which is interesting to the farmer seems to require considerable state involvement (US, Spain). Questions arise as regards the efficiency of programmes, which are based on a public-private partnership.
- **Programme design**: Publicly supported insurance programmes can be under (political) pressure to provide products which have not been sufficiently tested and which can therefore undermine the soundness of the system.
- **Complexity**: Changing demands and necessary programme adjustments increase complexity and decrease transparency. This makes it easier for the various stakeholders to engage in rent-seeking.
- **Limits of comprehensiveness**: Even insurance systems benefiting from considerable public support do not have universal take-up rates. Farmers´ needs vary widely and no system can be tailored to meeting everyone's needs. Therefore, the (political) demand for providing ad-hoc aids remains considerable.
- **Equity and influence on production**: Since premia subsidies are normally set as a percentage of premia, farmers and regions facing the highest risk receive the highest subsidies. Because of these subsidies, producers might not abandon production in high-risk areas, which can result in significant costs for society as a whole.

8. Availability of off-farm instruments to cope with risk exposure in the EU and the potential of applying risk management policies at the EU-level

Table 2 summarises the availability of off-farm instruments to cope with risk exposure in the EU.

In all Member-States, some private off-farm instruments to cope with risk exist. Some instruments have reached maturity and are widely available (mainly hail insurance), whereas others are less developed (futures and options markets, mutual funds). Some insurance systems are private, whereas others rely heavily on public involvement. Instruments which cover a combination of production and price risk (revenue risk) are in their infant stages. The main public measure is disaster aid. Member States are also active in risk prevention (sanitary and phytosanitary measures)[2].

Table 2: Current off-farm responses to risk exposure in EU Member States

	Risk	
Response	Production	Price
Private	**Insurance** (mainly hail) **Mutual funds**	**Futures and options markets**
Public	**Disaster aid** **Sanitary and phyto-sanitary measures**	**(CAP)**
Public-private	**Insurance (multi-peril)** (mainly crops)	-

Market support, direct payments and rural development measures (diversification) in the framework of the CAP have a major impact on farmers´ risk, even if their main goal may be income stabilisation and not risk reduction. In particular, the price support mechanisms play a role in reducing price risks for key products. EU measures explicitly targeted at production risk include sanitary and phytosanitary measures as well as guidelines for Member States´ disaster aids and insurance subsidies.

[2] Furthermore, income tax averaging systems are in force in some Member States.

The perspective of rising risk-exposure in Europe raises the question whether the EU has a role to play in risk management, which goes beyond its current role. This question has to be examined in the context of the fact that the core CAP instruments have an impact on farmers´ risk exposure, as mentioned before. It also has to be remembered that specific risk management policies cannot replace income support policies. The goal of risk management policies is not income support but only to reduce fluctuations of income or its components. Risk management instruments cannot reverse long-term income trends.

The case for introducing additional risk management instruments can be made, if it can be shown:

- that markets for risk-reduction are missing or incomplete;
- that risk reduction is not sufficiently achieved by existing income stabilisation policies;
- that Community action provides value-added as compared to national or regional initiatives/action.

8.1 Price risk

Although market intervention remains important even after Agenda 2000, the lower price floor for beef and cereals increases the scope for private instruments to manage price risk, i.e. the use of futures and options for commodities with standardised grades. Although the traded volumes are still low on EU futures markets, a dynamic development can be observed, with an increasing range of products.

The EU has an active interest in well-functioning futures and options markets. Firstly, as price support is being reduced, new instruments are needed to help farmers across Europe to cope with the increasing price volatility. Secondly, futures and options markets contribute to market transparency, which favours the functioning of the internal market. The development of futures markets can already be promoted through education and training measures under Rural Development policies. In addition, an active encouragement at the EU-level might be needed in order to prepare the ground for a wider use of such instruments.

8.2 Production risk

Traditionally, Member States have been at the forefront of helping producers to cope with production risk (disaster aid, sanitary and phyto-

sanitary measures, public-private systems of agricultural insurance, insurance subsidies). The Community´s role has been limited to setting the overall framework (i.e. sanitary and phytosanitary measures), providing some financial support (e.g. disease control), and – most importantly – applying state aid disciplines with a view to avoid market distortions.

EU guidelines on state aids give Member States a considerable margin of manoeuvre in responding to the various needs of their farmers. As a result, existing agricultural insurance systems vary widely among Member States with respect to organisation, coverage, complexity and state involvement. The Spanish experience shows that a comprehensive system of agricultural insurance could be developed within the common framework on state aids.

Three conclusions can be drawn from existing public-private systems of agricultural insurance:

- Firstly, initiatives have to be based on a ”bottom-up approach” in order to be successful. Insurance products have to be tailored to the needs of farmers which vary among countries and regions.
- Secondly, a system has to be given time to develop. With growing experience, it can become more and more comprehensive (regarding both products and risks covered).
- Thirdly, strong and close public surveillance is needed in order to avoid growing complexity leading to unjustified rent-seeking and losing track of the original purpose of providing insurance.

If the case for introducing insurance solutions can be made according to the criteria mentioned earlier, such insurance solutions should be primarily developed at the Member State level. The main reason is the need for a ”bottom-up approach”. Two further reasons support this conclusion:

- Insurance could increasingly replace national ad-hoc disaster aids. This would stabilise expenditure and reduce negative effects of disaster aids (e.g. delayed payments, discouraging private risk management and encouraging irresponsible management decisions).
- Member States are best placed to target public funds spent in the framework of such systems to certain groups of farmers, reflecting specific needs.

A cautious approach regarding the EU´s involvement beyond its current one seems therefore advisable. The EU might have a role where production risks are to a large extent systemic (probability of high losses in any given year), which prevents insurance products from being offered

on the market or makes them very expensive and therefore commercially inviable. A private solution for this problem could be for insurance and reinsurance companies across Europe to jointly cover such risks by creating insurance/re-insurance pools. The EU could accompany such a process by providing the appropriate legal framework, where needed. The issue of risk-pooling across regions and commodities is equally relevant for farmer-owned mutual funds.

The EU could also investigate further into the potential of participating in insurance systems. Major trade partners use such instruments and there might be a certain prospect for getting these instruments accepted as modestly trade distorting within a future WTO agreement on agriculture. In the long term, a more substantial involvement would be possible under two conditions: Firstly, an instrument would have to fit into the overall policy-mix of the CAP. Essentially, this would require that there is no overlapping with other instruments addressing the problem of risk exposure in agriculture. Secondly, sufficient funds would have to be made available.

References

European Commission, Directorate-General Economic and Financial Affairs (2000), *The Use of Futures in Agricultural Risk Management,* Doc. ECFIN/651/00-EN, Brussels.

European Commission, Agriculture Directorate-General (2001): *Risk Management Tools for EU Agriculture - with a special focus on insurance*, Brussels 2001 (http://www.europa.eu.int/comm/agriculture/publi/insurance/index_en.htm).

FAO (2000), *Without effective veterinary services animal diseases could spread globally, Press Release 00/54,* Rome.

Hardaker, J. B., Huirne, R. B. M. and Anderson, J. R. (1997), *Coping with Risk in Agriculture*, CAB International, Wallingford.

Meuwissen M. P. M., Huirne B. M., Hardaker J. B. (1999a), *Income Insurance in European Agriculture*, European Economy No 2, Luxembourg.

Meuwissen M. P. M. (2000), *Insurance as a risk management tool for European agriculture*, Wageningen.

Parry, M. L. (Ed.), (2000), *Assessment of Potential Effects and Adaptations for Climate Change in Europe: The Europe ACACIA Project, Sum-*

mary and Conclusions, Jackson Environment Institute, University of East Anglia, Norwich.

Sarris, A. H. (1997), *Price Variability in Cereal Markets and Risk Management Strategies for Market Participants*, Report presented to OECD Group on Cereals, Animal Feeds and Sugar of the Working Party on Agricultural Policies and Markets, Paris (AGR/CA/APM/CFS(97)8).

Skees J. R. (1997), *Agricultural insurance in a transition economy*, Proceedings of Seminar on agricultural finance and credit infrastructure in transition economies, OECD, Paris.

Skees J. R. and Barnett B. J. (1999), *Conceptual and practical considerations for sharing catastrophic/systemic risks*, Review of Agricultural Economics.

USDA, Economic Research Service (1999), *Managing Risk in Farming: Concepts, Research and Analysis,* Washington, D.C.

Additional Bibliography

Cf: European Commission, Agriculture Directorate-General (2001): *Risk Management Tools for EU Agriculture - with a special focus on insurance*, Brussels (http://www.europa.eu.int/comm/agriculture/publi/insurance/index_en.htm).

Zusammenfassung

Der Landwirtschaftssektor zeichnet sich durch eine hohe Risikoexponiertheit aus. Die EU-Kommission geht davon aus, dass in der Landwirtschaft sowohl Preis- wie auch Produktionsrisiken weiter zunehmen werden. Die wichtigsten Marktinstrumente zur Absicherung von landwirtschaftlichen Preis- respektive Produktionsrisiken sind Warentermingeschäfte respektive Versicherungen. Während in Europa zu erwarten ist, dass sich die Bedingungen für die Entwicklung von Warenterminmärkten mit zunehmender Handelsliberalisierung verbessern werden, werden Versicherungsmärkte für landwirtschaftliche Risiken weiterhin unvollständig bleiben, weil viele landwirtschaftliche Risiken nicht oder nur schwierig versicherbar sind. In den EU-Mitgliedstaaten hat sich auf privater Basis lediglich die Hagelversicherung überall durchgesetzt. Eine breite Palette an Versicherungsinstrumenten zur Abdeckung von landwirtschaftlichen Produktionsrisiken wird nur in denjenigen Ländern angeboten, wo der Staat sich an Versicherungssystemen beteiligt (Spanien, Portugal). Alle Mitgliedstaaten, wie auch die EU selbst, sind aktiv im Bereich der Prävention (sanitarische und phytosanitarische Massnahmen).

Bezüglich Preisrisiken sieht die EU-Kommission keinen spezifischen Handlungsbedarf auf Stufe EU, da die Landwirtinnen und Landwirte vielfältige Möglichkeiten haben, ihre Preise kurzfristig abzusichern und in der EU eine dynamische Entwicklung der Warenterminmärkte für landwirtschaftliche Produkte zu beobachten ist. Die einzige Möglichkeit sieht die Kommission in der Unterstützung von EU-weiten Ausbildungsprogrammen zur Verbesserung der Kenntnisse bezüglich der Funktionsweise von Warentermingeschäften.

Bezüglich Produktionsrisiken haben die Mitgliedstaaten einen grossen Handlungsspielraum, den sie auch ausschöpfen (sanitarische und phytosanitarische Massnahmen, Unterstützung von Versicherungssystemen, Katastrophenhilfen). Versicherungssysteme mit staatlicher Beteiligung sind nur dann sinnvoll, wenn sie streng auf die Bedürfnisse der Landwirtinnen und Landwirte ausgerichtet sind und aus der Nähe überwacht werden. Deshalb kommen regionale Lösungen eher in Frage als EU-weite. Ein längerfristiges Engagement der EU würde eine vertiefte Abklärung der Effizienz solcher Systeme erfordern und auch davon abhängen, ob sich ein

derartiges Instrument harmonisch in die Massnahmenpalette einer weiterentwickelten GAP einfügen würde und ob die WTO derartige Instrumente in Zukunft als nicht-handelsverzerrend einstuft.

Anschrift des Verfassers:

Vinzenz Jung
Bundesamt für Landwirtschaft
Mattenhofstrasse 5
CH-3003 Bern

E-Mail: Vinzenz.Jung@blw.admin.ch