

COMPARATIVE ANALYSIS OF RISK MANAGEMENT TOOLS: THE UNITED STATES, THE EUROPEAN UNION AND THE CZECH REPUBLIC

Ing. Václav Vilhelm, CSc.

Ing. Sumudu Gouri Boyinová

Doc. Ing. Jindřich Špička, PhD.

**Institute of Agricultural Economics and Information,
Prague, Czech Republic**

Conference IERiGŽ

Stare Jablonki, 5. – 7.12. 2017

RISKS IN AGRICULTURE

- **Natural risks** (climate – hail, frost, fire, drought, floods etc., animal and plant diseases, crop pests etc. Now connected to the climate change too)
- **Price risks** (commodity price movements, agriculture inputs price volatility, risks regarding changes in rental prices or loans)
- **Legal, policy risks** (environmental rules connected risks, institutional risks, change in subsidy policies, legislative changes)

LAYERS OF RISKS

- **Normal risks** - managed by farmers as a part of normal business strategy – small accidents, minor management failures, normal weather volatility
- **Marketable risks** - handled through market tools (insurance, future markets, cooperative arrangements among farmers – with or without support from public sources)
- **Catastrophic risks**– government interventions handled through market tools with public support or directly by state
- This risk classification in agriculture is used, for example, by the OECD. State intervention in the area of normal risk is considered counterproductive, in the area of marketable risks appropriate to support market development and catastrophic risks as necessary

THE UNITED STATES

- Subsidized insurance is the most important part of the US agriculture policy
- There was a shift in the last decade from crop insurance to income insurance, now 70% of all premium subsidies account for revenue based insurance programs
- From 1981 to 2014:
 - Increase in participation rate from 15% to 90%
 - Increase in number of crops covered by insurance from 5 to 130

USA - FARM BILL 2014

- Public Law 113-79 of February 2014
- Leading role of Risk Management Agency
- Established agricultural and related policies for the period 2014-2018
- Includes new Commodity programs
 - Price Loss Coverage
 - Agriculture Risk Coverage
 - Dairy Margin Protection Plan
- Whole-Farm Revenue Protection policy

COMMODITY	FEDERAL CROP INSURANCE	FARM COMMODITY PROGRAMS	DISASTER ASSISTANCE
FEED GRAINS (CORN, SORGHUM, BARLEY, OATS), PEANUT, PULSES (DRY PEAS, LENTILS, CHICKPEAS, RICE, SOYBEANS, OTHER OILSEED, WHEAT)	YIELD OR REVENUE GUARANTEES BASED ON HISTORICAL YIELDS AND SAME-YEAR MARKET PRICES, PLUS COUNTY YIELD OR REVENUE GUARANTEE FOR SOME CROPS (SCO-SUPPLEMENTAL COVERAGE OPTION)	PRICE LOSS COVERAGE (PLC) AND AGRICULTURE RISK COVERAGE (ARC) -PRICE OR REVENUE GUARANTEE BASED ON HISTORICAL YIELDS AND MINIMUM PRICES (OR 5 YEAR HISTORICAL PRICES): NONRECOURSE LOANS WITH MIN. PRICES	-
UPLAND COTTON	SAME AS ABOVE, PLUS COUNTY REVENUE GUARANTEE (STACKED INCOME PROTECTION -STAX)	TRANSITION PAYMENTS IN 2014 (AND 2015 IF STAX IS NOT AVAILABLE): NONRECOURSE LOANS WITH MINIMUM PRICES	-
SUGAR	YIELD GUARANTEES BASED ON SAME-YEAR MARKET PRICES	IMPORT QUOTAS, NONRECOURSE LOANS WITH MINIMUM PRICES, ABD MARKETING ALLOTMENTS	-
FRUITS, VEGETABLES AND NURSERY	YIELD OR REVENUE GUARANTEES , AND OTHE RPRODUCTS, INCLUDIND WHOLE FARM	-	PAYMENT FOR LOSS OF FRUIT TREES AND VINES (ASSETS)
LIVESTOCK AND POULTRY	INSURANCE FOR LIVESTOCK PRICES, GROSS MARGINS, AND PASTURE/FORAGE	-	PAYMENT FOR LOSS OF ANIMALS, FORAGE AND FEED
DAIRY	INSURANCE FOR LIVESTOCK PRICES, GROSS MARGINS, AND PASTURE/FORAGE	MARGIN PROTECTION PROGRAM (MILK PRICE MINUS FEED COSTS)	PAYMENT FOR LOSS OF ANIMALS, FORAGE, AND FEED

Source: CRS Report IF00025, Overview of Farm Safety Net Programs (In Focus); costs from CBO.

THE EUROPEAN UNION

- Risk management mainly organized and/or supported on the national level
- Large differences between MS across EU
- Price risks are usually uninsurable
- Examples with high level of state support
 - Spain: Agroseguro (state reinsurance)
 - Austria: Crop insurance with broad scale of risks (including drought) supported by state and Ländern
 - etc.
- Direct payments guarantee for all the farmers certain income regardless the harvest performance

EU- CAP 2014-2020

Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)

- Article 36 Risk management
- Article 37 Crop, animal, and plant insurance
- Article 38 Mutual funds for adverse climatic events, animal and plant diseases, pest infestations and environmental incidents
- Article 39 Income stabilisation tool

Some of these Articles are implemented in only 13 programs of more than hundred RD in EU MS

		CROP, ANIMAL AND PLANT INSURANCES		MUTUAL FUNDS		INCOME STABILISATION TOOL	
		INTENSITY OF SUPPORT (%)	LOSSES (%)	INTENSITY OF SUPPORT (%)	LOSSES (%)	INTENSITY OF SUPPORT (%)	LOSSES (%)
PILLAR I.*	FRUIT AND VEGETABLES	80**	>30	10/8/4 %****	-	-	-
				5/4/2 %*****			
		50***	<30				
	WINE	80**	>30				
		50***	<30				
PILLAR II.		65	>30	65	>30	65	>30
GUIDELINES FOR STATE AIDS		65	-	65	>30	65	>30
REGULATION ABER		65	-	-	-	-	-

ABER (AGRICULTURE BLOCK EXEMPTION REGULATION)

*ONLY IN FEW MS

** ADVERSE CLIMATIC EVENTS ASSIMILATED TO NATURAL DISASTER

*** OTHER LOSSES CAUSED BY CLIMATIC EVENTS, ANIMAL OR PLANT DISEASES, AND PLANT INFESTATIONS

****PROPORTION OF THE CONTRIBUTION OF THE PRODUCER ORGANISATION TO THE MUTUAL FUND IN THE FIRST, SECOND AND THIRD YEAR OF ITS OPERATION FOR MS JOINING EU AFTER 2003

*****PROPORTION OF THE CONTRIBUTION OF THE PRODUCER ORGANISATION TO THE MUTUAL FUND IN THE FIRST, SECOND AND THIRD YEAR OF OPERATION FOR THE REST OF MS

Source: Bardají and Garrido (2016)

COMPARISON US-EU

- Estimated budget weights of programs within agriculture policies

TYPES OF SUPPORT	US	EU
RISK MANAGEMENT SUPPORT	47%	1%
SAFETY NETS	23%	5%
INCOME SUPPORT	0%	72%

Source: Cordier (2014)

RISK MANAGEMENT IN THE CZECH REPUBLIC

- Articles 36-39 are not implemented in the Czech Rural Development Program: mainly due to the 30% loss threshold in comparison to average of recent 3 years (or average of 3 years from recent 5 years with exclusion of minimum and maximum)
- Support of crop and livestock insurance (risks usually include hail, storm, fire, flood, spring frost, landslide, animal contagious diseases)
- Ad hoc state aids usually for uninsurable risks – the most important insurable risk is drought

IMPACTS OF 30 % THRESHOLD

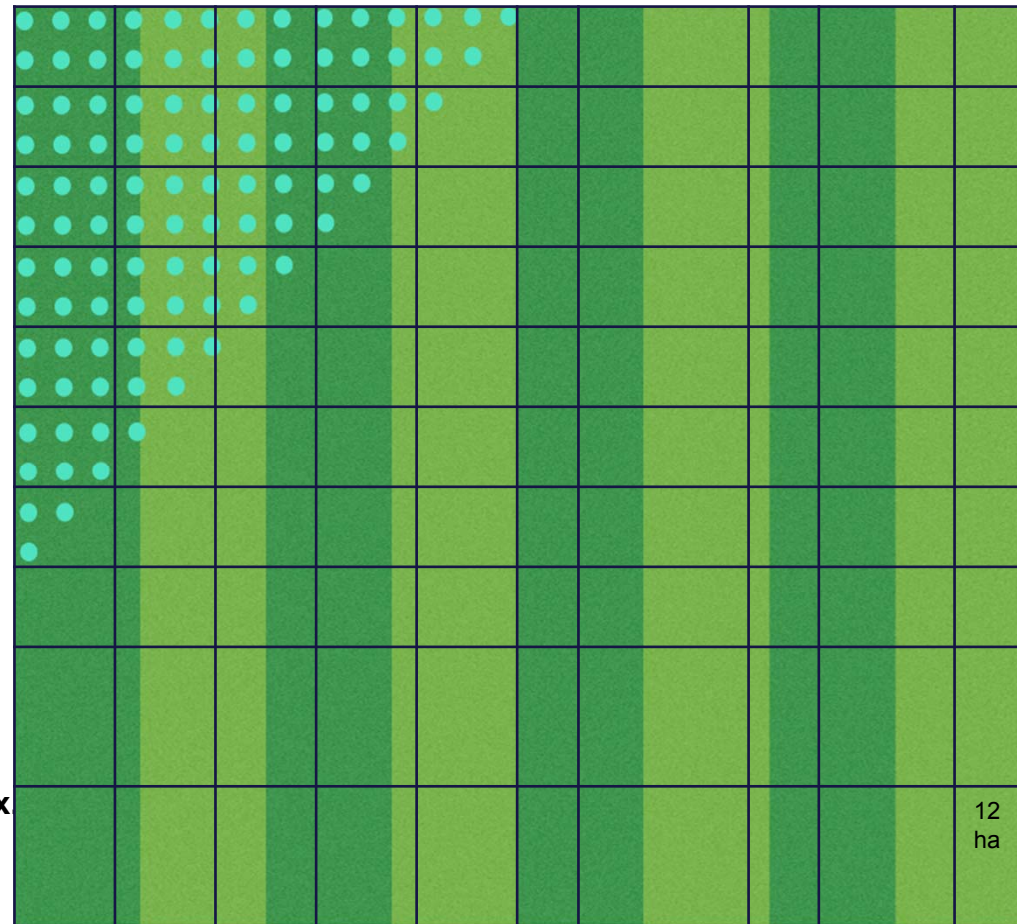
CASE I.

- **1 agricultural company (1200 ha)***
- Does not exceed 30 % damage per farm
- **Not eligible for compensation**

CASE II.

- **100 farms (12 ha per farm)**
- 20 farms suffered form hail damage
- Exceeds 30 % damage per farm
- **Farms are eligible for compensation**

*Hectar weighted median of Czech farms is aprox 1100 ha



RISK MANAGEMENT IN CAP POST 2020

- General vision: more significant role of risk management tools in CAP 2020+
- No closer proposals about implementation to the framework of CAP
- 30 % threshold is not acceptable for the Czech agriculture conditions
 - There are currently some proposal from various countries to decrease this treshold
- We can assume the needs for new legislative measures for the possibility to implement the future CAP risk management tools

LITERATURE

- [1] European parliament: Directorate General for Internal Policies, (2014). Comparative analysis of risk management tools supported by the 2014 Farm Bill and CAP 2014-2020. Brussels: UMR SMART- LERECO, Afrocampus Ovest INRA.
- [2] European parliament: Directorate General for Internal Policies, (2016). Management tools implemented by member states during the period 2014-2020: National and European frameworks. Brussels: UMR SMART- LERECO, Afrocampus Ovest INRA.
- [3] European parliament: Directorate General for Internal Policies, (2016). Reforma SZP po roce 2020- výzvy pro zemědělství. Brussels: UMR SMART- LERECO, Afrocampus Ovest INRA.
- [4] European parliament: Directorate General for Internal Policies, (2016). State of play of risk management tools implemented by member states during the period 2014-2020: national and European frameworks. Brussels: [3] European parliament: Directorate General for Internal Policies, (2016, Afrocampus Ovest INRA.
- [5] OECD. Managing risk in agriculture: A holistic approach, OECD, Paris, 2009. ISBN 978-92-6407-530-6.
- [6] Overview of Farm Safety Net Programs (In Focus); costs from CBO. (2017). .
- [7] Soliwoda, M., Špička, J., Vilhelm, V., Pawłowska-Tyszko, J. and Gorzelak, A. (2017). Is there a relationship between the prevailing model of agriculture and the structure of the crop and livestock insurance markets?. *Studies in Agricultural Economics*, 119(2), pp.77-84.
- [8] Špička, J., Boudný, J., Janotová, B.: The role of subsidies in managing the operating risk of agricultural enterprises. *Agricultural Economics - Czech*. 2009, Vol. 55, No. 4, p. 169 - 179. ISSN 0139-570X.
- [9] Vilhelm, V., Špička, J., Valder, A.: Public Support of Agricultural Risk Management – Situation and Prospects. *Agris on-line Papers in Economics and Informatics*, Volume VII, Number 2, 2015, ISSN 1804-1930

THANK YOU FOR YOUR ATTENTION

Ing. Václav Vilhelm, CSc.
Ing. Sumudu Gouri Boyinová
Doc. Ing. Jindřich Špička, PhD.

Ústav zemědělské ekonomiky a informací
(Institute of Agricultural Economics and Information)

Mánesova 75, Praha 2

Czechia