

FARMERS' ATTITUDE TOWARD REDUCING PESTICIDE USE: WHAT FACTORS CAN SUPPORT CHANGE?



A case from Croatia

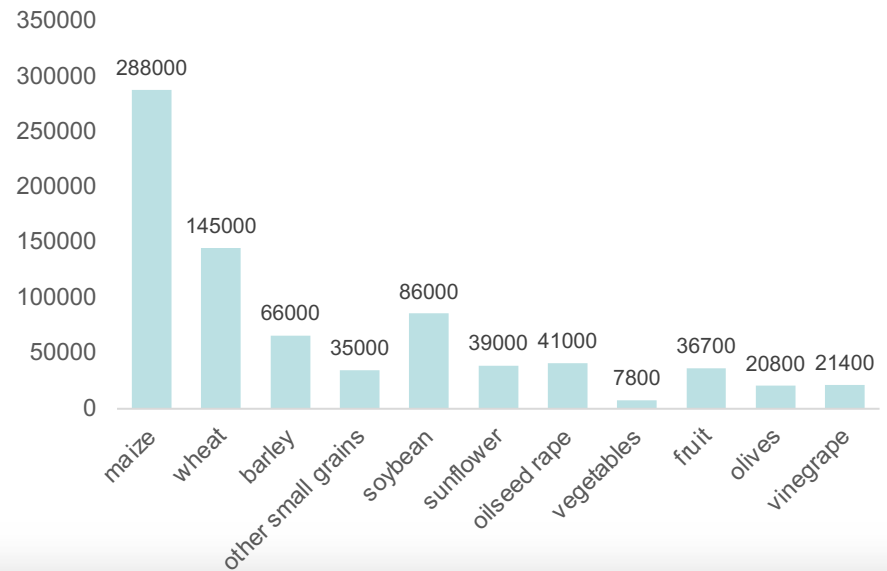
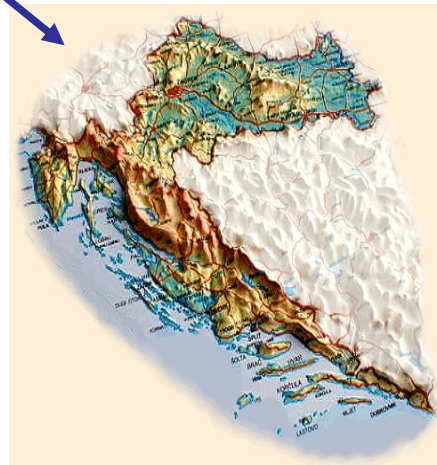
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Croatian agricultural production



- Croatia's geographical diversity led to different patterns of livelihood and culture → as a result, agriculture varies throughout the country's regions, influenced by regional climate
- agriculturally rich lowlands located in Croatia's northern part are dominated by the cultivation of wheat, maize, sunflower, soybeans, oilseed rape....
- while viticulture (the cultivation of grapes), fruit-growing, and olive-farming are popular in the coastal region (tourism)
- with pasture land and potatoes common in the mountainous areas



Series1

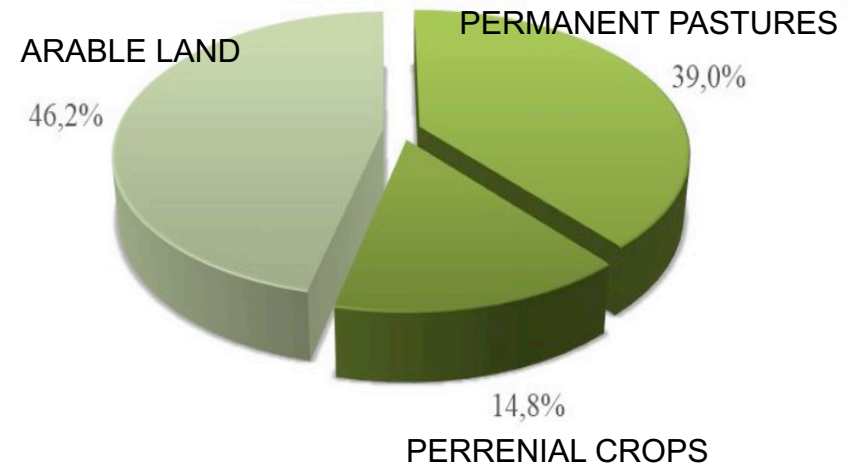
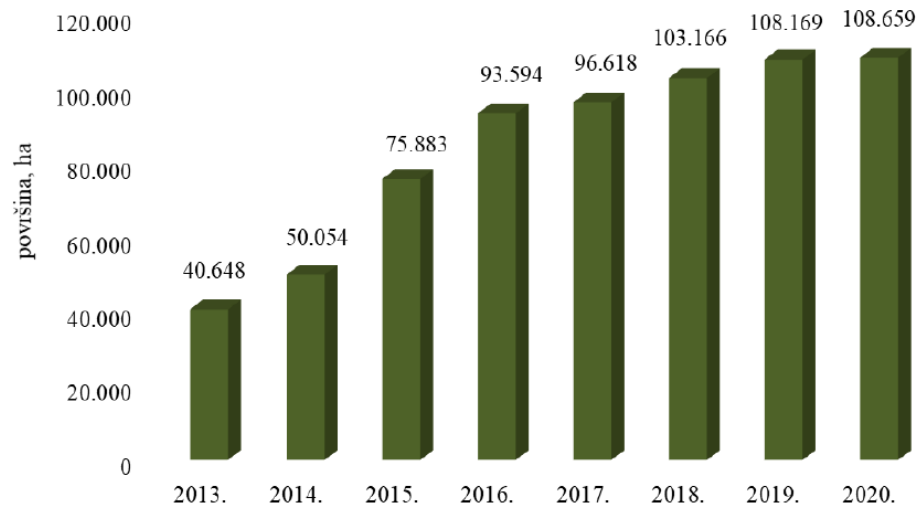
STRUCTURE OF AGRICULTURAL HOLDINGS



Organic farming



AREA UNDER THE ORGANIC FARMING



MOTIVATION FOR ORGANIC FARMING



Majority of farmers are motivated by financial support provided for organic farming through CAP funding scheme; They are not interested to change the production unless it is necessary to receive money.



RESULT: Very high ratio of permanent pastures in organic farming means that no specific measures have to be taken.

The rest of farmers are motivated by real awareness about the environment and human health. Those farmers understand the basic principles of organic farming and they are applying them in their everyday life.

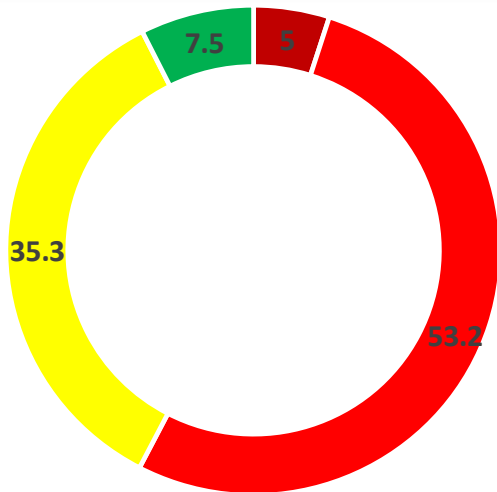


RESULT: Products of good quality placed on the market. Good production results.

Croatian farmers

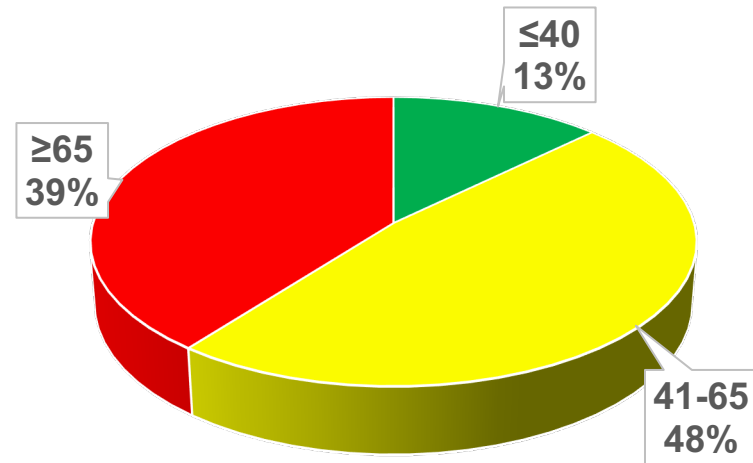


EDUCATION



- without elementary school
- elementary school
- secondary school
- high school

AGE STRUCTURE




THE HISTORY OF THE DEVELOPMENT OF IPM IN CROATIA- TILL EARLY 1990-ies



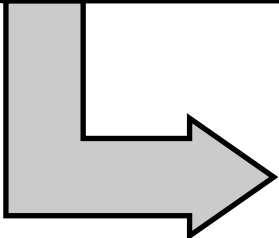
- 1983- **first course on IPM** established at Faculty of Agriculture-since then agronomist were trained on IPM through their education;
- 23% of agricultural land belonged to “big state farms” where **agronomists were responsible for plant protection measures**- in general they applied the basic principles of IPM (observing the pest population, the interventions were based on the situation in field...) and they were often advised by professionals working at universities;
- Small farmers were not educated but they **followed the agronomist** at state farms or they were organized in cooperatives where agronomists provided advices;
- No support for farmers to apply IPM;
- The incentive of fruit producers to introduce the logo for the fruit produced according to IPM principles was not very successful.

THE HISTORY OF THE DEVELOPMENT OF IPM IN CROATIA- 1994-2023



2011-
2012

- Ministry prepared the Order for IPM and created the system for farmers. Technical guidelines for IPM for different crops were developed



2012-
2015

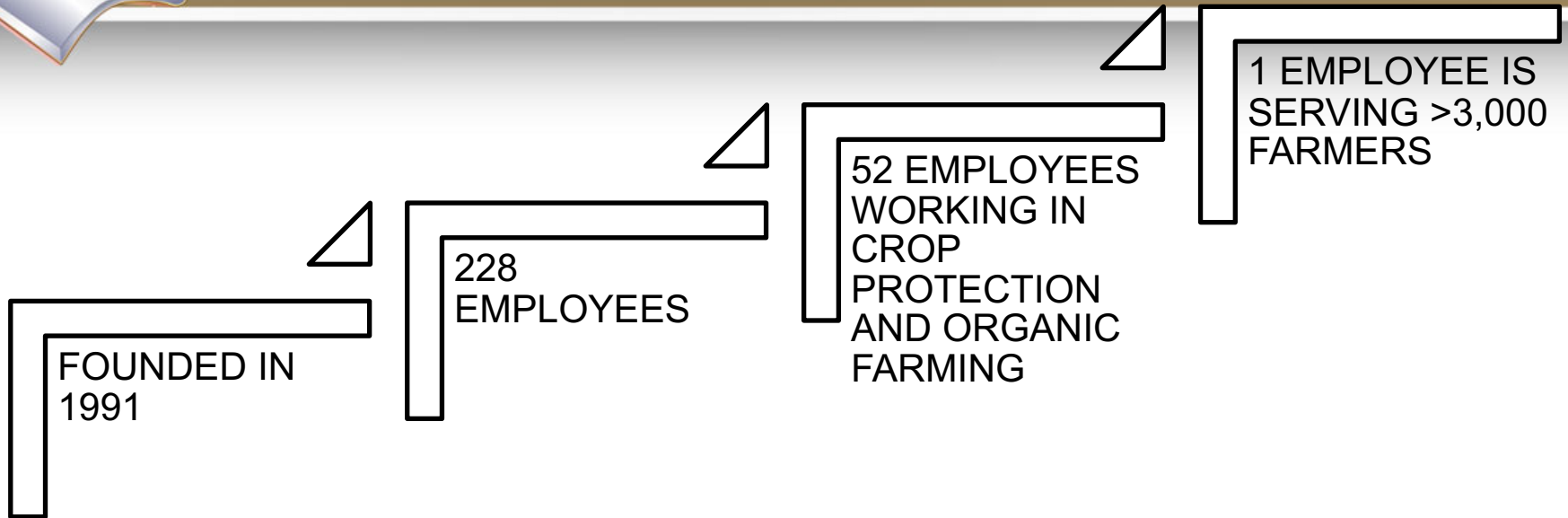
- Farmers were able to receive subsidies if they implemented IPM; Farmers started to learn about IPM and how to implement;



2016-
now

- IPM (some basic principles) is obligatory to receive subsidies

STATE EXTENSION SERVICE



PRIVATE EXTENSION SERVICE DOES NOT EXIST

FARMERS' ATTITUDE TOWARD THE PESTICIDE USE



THEY FIND PESTICIDES AS GOOD TOOL TO KEEP THE CROPS FROM PESTS!

DECISION ON APPLICATION IS MADE BASED ON EXTENSION SERVICE RECOMMENDATION, PREVIOUS EXPERIENCE OR BASED ON THE SITUATION IN THE FIELD (WITHOUT REAL SCOUTING)

NUMBER OF APPLICATIONS- SOMETIMES THEY IMPLEMENT **INSURANCE PEST MANAGEMENT**

FARMERS' ATTITUDE TOWARD THE REDUCING PESTICIDE USE



PESTICIDE BAN PUT THEM ON **UNSAFE SIDE** – THEY ARE ASKING FOR REPLACEMENT

VERY OFTEN THEY ARE USING **PESTICIDES LEFT ON THE STOCK** OR THEY ARE SEARCHING FOR **BLACK MARKET** (ILLEGAL IMPORT FROM BOSNIA AND SERBIA)

IN THE CASE OF THE RESISTANCE THEY ARE **USING HIGHER DOSES** AND FINALLY THEY ACCEPT THE FACT THAT THE PESTICIDE IS NOT EFFECTIVE ANY MORE

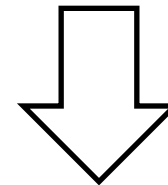
CHANGE



CHANGE OF THE HABITS \neq CHANGE OF THE ATTITUDE

- Pesticides are not used because they are not available on the market or if they are not effective any more (resistance);
- Farmers are trying to find alternative pesticide to solve the problems;

- Farmers are aware on all negative effect of pesticides and they understand what is behind the restrictions;
- Farmers are trying to find **alternative technology** to solve the problems;



LONG TERM EFFECT ON
AGRICULTURAL PRODUCTION

WHAT IS NEEDED TO SUPPORT THE CHANGE



- To support young professionals (high school and university education in agriculture) to take over farms from their parents;
- Until now Ministry did not put attention on farmers education and did not request any education (pragmatic political reasons);
- The CAP measures that could be implemented at voluntary base to put IPM at higher level shall be designed. This shall be done in a way to be attractive and not too demanding for farmers;
- Currently CAP measures are not specifically aimed to reduce the pesticides; The programming was very bad and monitoring is extremely demanding for farmers;

WHAT IS NEEDED TO SUPPORT THE CHANGE



- Education on IPM principles and practices shall be obligatory for all farmers if we really want to move forward;
- Education on sustainable use of pesticides is obligatory for each farmer; However, the official program is oriented to safe use of pesticides without paying too much attention on IPM (monitoring tools, decision tools etc.);
- Extension service shall be further empower with additional capacities;
- Too much administrative duties reduce the extension specialists availability to farmers;



THANK

YOU

