

Biocontrol as a solution to reduce the use of synthetic pesticides



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What we do?

- ▶ Distribution of bio plant protection, bio fertilizer, bio strengtheners
- ▶ We are constantly trying to find good and affective solutions for our organic farmers, together with farmers that want to implement regenerative agriculture
- ▶ Spreading awareness of pesticide free food production, the importance of implementing biopesticides in production
- ▶ Educate and advise people on biological (regenerative) plant protection as well as plant nutrition

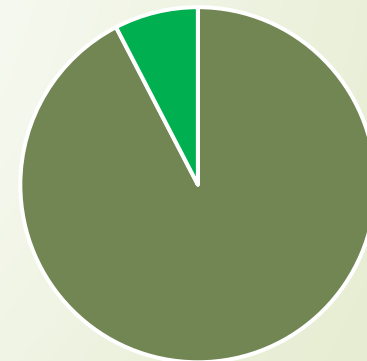
Our goal

- Our goal is to replace chemical pesticides with good biological alternatives, such as microbial products, natural substances, beneficial insects and traps.
- Educate and inform producers how to produce organic
- Implement as much as bio product to conventional production, find the synergy between two ways of producing (REGENERATIVE PRODUCTION)

Croatia market

- Organic production takes over 7 % of whole agricultural production
- Half of that number are pastures and cereal production
- Other $\frac{1}{4}$ is hazel nuts, and the rest are other crops

Agricultural areas 2021.(ha)



■ total 1.476,351 ■ ecological 121,924

Strategies - how we do it

- ▶ Very important to have in organic production – everything is connected- from fertilization to plant protection
- ▶ We lean a lot on plant potential and self defence mechanisms
- ▶ Education on life cycles of pest – to be aware of the timing
- ▶ Preventive spraying- always works better, especially for disease
- ▶ More spraying- myth that organic means no spraying (why would then orchard, apples get sprayed with pesticides 25 times?)
- ▶ Strengthening the plant- lots of field tests show us the importance of plant self defence
- ▶ NOT EASY at the beginning
- ▶ VERY MUCH POSSIBLE

Practical issues

- ▶ Not enough knowledge
- ▶ Lack of professional support, universities
- ▶ Too much paperwork for the producers
- ▶ Competition with chemical industry, very aggressive in trying to shut us down, ignoring the present of organic production
- ▶ Bad image because of the high subvention (some are doing it only because of subvention, no real products) giving the picture that there is no real organic production
- ▶ No good controls (meaning that people work in grey area as there are no control- production of cereals)
- ▶ Lack of market net, organic producers are on their own in selling

Possible solutions

REGENERATIVE AGRUCULTURE

- ▶ New products on the market and more trust in possibilities
- ▶ Costs of mutual recognition from other countries are acceptable, but long time of document evaluation
- ▶ Education
- ▶ Better control
- ▶ Better support from all sides
- ▶ Better support in marketing field, make a brand out of organic production
- ▶ Visiting producers to see how
- ▶ Organic food in kindergarten and schools?
- ▶ REGENERATIVE PRODUCTION- synergy between organic and conventional, implement biological products in conventional production

Sales

- ▶ Solid fertilizers- organic matter, from healthy soil comes healthy plants
- ▶ Liquid fertilizers- improve yields and strengtheners the plant
- ▶ Strengtheners – product that improve plant self defence
- ▶ Basic products- active ingredient that has some PP action but are not PP
- ▶ **Plant protection- in next few year we plan to register around 10 new ppp for organic and conventional agriculture**
- ▶ We have solution for almost every problem
- ▶ The cost are higher for some cultures, lower for others
- ▶ Yields are lower for some products, same or higher for others.
- ▶ On the market the final product (from producer)is 10-20% higher than the conventional production
- ▶ The real cost of producing organic grapevine is lower than producing conventional.



What we have?

- Equisetum
- Different plant extract
- Chitosano
- Algae
- Aminoacids
- Cooper
- Sulphur
- Kallij bikarbonat
- Lime sulphur
- Silicium and pottasioum
- Pottasium soap
- Kaolin
- Zeolit
- Cydia pomonella granulovirus
- 100% diatomaceous earth
- Soja extract, kumin extract
- Neem extract

Copper

- ▶ Myth that is wildly used in organic production
- ▶ Only used for winter spraying
- ▶ We have copper based products with Nano technology or on amino acid carrier that has only 5 % Cu
- ▶ In vegetation we prefer not to spray with copper



Thank you for your attention.