

Dear Conference board, dear speakers, dear participants.

I will represent Aplicative research project from the year 2013. It is so breakthrough innovative, that even now, in the year 2019 is possible to represent it to the such eminent audience as it is now here.

Products Cora agrohomeopathie® technology regarding my self developed product Cora agrohomeopathie® is very advanced, breakthrough innovative quantum technology, which use biofields of appropriate selected plants, minerals and their complexis which in form of watered spray from our products entry and affect directly to biofields of sprayed plants and soil to strengthen their vitality and thus implicate also their own resistance to plant diseases, plant plant pests, plants resistance to drought, to biotic and abiotic stress, to adaptability of plants to the changing and extreme weather, climate and rising frequencies of light forces circumstances. This is this is achieved by proper transfer of biophotons - that is, living quantum particles and simulates the natural concept of homeodynamics at the level of the forces of life. In our products assortment there is around 100 od special products, 61 of them are in Slovenia confirmed, that are allowed in biological mode of farming. And- products are on the Slovenian market as products for general use in the category of products for plants strengthening.

My name is Majda Ortan, per profesion ingeneer of chemistry technologies. My carier was indeed not boring – from teacher of chemistry and lab skills, to expert on the fields of Quality management and Environmental system management, to the entrepreneur, where I was cca 7 year ago merged ME with my hoby, my skills, my experiances, my knowledge. Basically I am very creative human being, with advanced creations. I am proud that I am mother of two already adult sons. Ok, that's me.

This our applicative research project deals about field trial and confirmation, that with use of appropriate combination of natural, energized bio-quantum homeodynamic products Cora agrohomeopathie®, is possible to grown also hop without use of any pesticide and harvested good yield per quality and quantity. It confirms that this is possible even in condition of severe drought and heat waves, without any irrigation or watering fields with growing crops. This presented project's with great result confirms, that we have very promising, effective and advanced solution with our natural, quantum, clean and sustainable products and technology.

Because of very complex content of this presentation, I decided to will be available on my english web site. Because of limited time here will be presented very briefly. Thank you in advance for your attention.

My home country is Slovenia.

It is small county inside EU. Hop growing is in Slovenia long lasting tradition and represent approximately 3% of global hop production.

Slide nr. 12. It is directly exposed to world market influences and majority of production nowadays follows integrated pest management plant protection methods. **Slide nr. 8.** The search for more sustainable production in the world resulted in introduction of organic farming technologies. Due to the great need for nitrogen and complex control of diseases and pests, organic hop growing is considered very demanding (Turner et al 2011). As an alternative to use of synthetic or organic plant protection products, natural, energized homeodynamics approach which resulting in products Cora agrohomeopathie®, offering alternative which developed during past decades and is on Slovenia already on the market for last 7 years. Here principles of Natural Order by energetic level are summarized

and applied to agricultural ecosystems . Products are developed intended for the plants and ecosystems where these plants grow. Use of Cora agrohomeopathie[®] products leads directly to increasing production of healthy crops without the use of chemical agents or another active substances in their production, and thus reduces the direct and indirect pressure of field production on the environment. The many times confirmed fact is, that those natural, energized homeodynamic & agrohomeopathic products without active substances can be used also in intensive field production, motivated us to test them also in hop production. In the year 2013 was set up and implemented our Aplicative research project to grown hop without pesticides by use of products Cora agrohomeopathie[®] (with codes C1, C3, X66 and X62). First 3 products (C1, C3, X66) were covered needed strenghtening of hop vitality and so implicit also hop own resistance to diseases and pests. Team members were those from the **slide nr.3**. Data about our products C1, C3, X62 and X62 are available on the **slide nr. 15**, where are also available data about our plan of field trial for growing hops without pesticide.

- Presentated project was divided into two parts, which were in the presentation ppt divided as Project part 1 and Project part 2. In first part is presented, how we grown hop without pesticide, which were replaced with products Cora agrohomeopathie (with codes C1, C3, X66 and X62). The second part of the project presented effectiveness of product X62 in the growing conditions in severe drought and more heat waves and without any irrigation or watering of hop trial fields.
- On the **slide nr. 4** there is the structure and content of both parts of the project. During planing, monitoring, implementing and evaluating of project were respected methods and criteria valid for aplicative research projects.

- For comparison of results we used data given us from Slovenian Institute of hop Growing and Breeding:

- 1. About average results for quality and quantity of yield of hop sort Aurora in Slovenia, in growing season 2013;

- 2. About results for development stage per scale BBCH and for quality and quantity of yield of hop sort Aurora, grown on the field surfaces of the Slovenian Institute of hop Growing and Breeding. Those fields are very near of location of our hop field trials, so there were the same condition about weather and climatic condition on their and our fields. There were also the same condition about the soil and about hop supply on fertilization (which were both per recommendations for integrated mode of hop growing). The difference were:

- a) hop from our field trials in 2013 were not irrigated, neither watered. Pesticides for pest and diseases hop protection were on our hop fields replaced with products Cora agrohomoepathie (with codes C1, C3, X66 and X63).

- b) hop from hop fields of Slovenian institute of hop research and breeding were irrigated 5 times during growing season 2013, with 7.700 l of water per one hectar, this is summarized cca 38.500 l water per ha during hop growing season. Pesticides for pest and diseases hop protection were used.

for long term observation we used some data from the study of of the Institute for Hop and Breeding of Slovenia in Žalec. For the study of the influence of temperatures and precipitation during vegetation on the hops harvest, the selected hops were a typical area of the Savinja valley and weather data of the observation station of the Institute for Hop and Breeding of

Slovenia in Žalec. The period from 1956 to 1973 was included in the study. Data are on the **slide nr. 41**. From this study is for us important conclusion, that the fluctuation of crop over the years is largely due to weather conditions during the vegetation period. **Slides 41 to 44**. Due to the fact, that were weather and climate conditions in the growing season 2013 in Savinjska Valey total exception, we have followed to the orientation of hop specialist Irena Friskovec from Celje department of Slovenian Chamber of Agriculture. Thus, comparation with long term results was not right choise and we compared our results as stated earlier.

Despite to the time limitation, from this large presentation I will just represent summry of the results for part 1 of the project and from part 2 of the project.

Location of our hop trial is described on the **slide nr. 13**.

On slide 14 is described hop variety Aurora, which we selected for our Aplicative research project in 2013. Here are also represented data about hop diseases, pests, effects of weather and climate extreems.

What may drought caused to the hop plants: is presented on the **slide nr. 22 and 23**. Thus hop is very demanding plant regarding water suply and thus we assess, that regarding to this projects results, we have very, very promising, advanced, clean and natural, sustainable solution for wide range of different agricultural crops, which grow in condition of drought, heat and without possibilities for irrigation or watering.

The weather and climate condition for growing season 2013 in Savinjska valey are given on the **slides 25 and regarding links.**

And now to the summary of the results:

Part 1 of the project, on slide 32

2013- severe drought in Slovenia and demanding growing circumstances for hop, due to the weather circumstances.

- Due to severe drought in 2013, natural disaster was proclaimed in Slovenia.
- Many longer lasting heat vawes with maximal temperatures around 38° Celsius during growing season 2013 in Slovenia.
- On not irrigated and not watered field trials surface, instead of pesticides were used natural energized, homeodynamic products Cora agrohhomeopathie® (with products codes C1,C2, X66, X62).

With these products, a comprehensive spraying program has been developed, to enhance the vitality and indirectly, through the vitality of the hops, also to enhance the resistance of the hops to:

1. Hop Downy Mildew (*Pseudoperonospora humuli*) -(covered with our products Cora agrohhomeopathie (with production codes C1, C3, X66)
2. Hop Powdewry Mildew (*Sphaerotheca macularis*)- (covered with our products Cora agrohhomeopathie with production codes C1, C3, X66)

3. Hop spider mite (*Tetranychus urticae*) - (covered with our products Cora agrohomeopathie with production codes C1, C3, X66)

4. Hop flea beetle (*Psylliodes punctulatus* Koch) - (covered with our products Cora agrohomeopathie with production codes C1, C3, X66)

5. Hop Aphid (*Phorodon humuli*) - (covered with our products Cora agrohomeopathie with production codes C1, C3, X66)

6. Drought, heat /Adaptability to weather and climate change - (covered with our product Cora agrohomeopathie with production code X62.

Managing of all stated pests, diseases, drought, heat, water stress – everything were very succesful by mode of operating our natural, energized, quantum-homeodinamic products for plants strengthening and plant care.

-on slide 32:

YIELD Per Quantity:

- In the professional agronomically testing of Coraagrohomeopathie® products under real production conditions in hop test trials in 2013, despite to the very demanding production conditions due to drought and on not irrigated experimental hops plots, almost the same yield of hops was produced in terms of quantity, as was the average of the year of the same variety (on testing hop areas was harvested 99,62% of the average yield of variety Aurorain 2013 in Slovenia, where by the crop of hop taken into account for average harvest for 2013 in Slovenia, was grown on irrigated, watered fields.

2. YIELD Per Quality:

- In terms of quality (which is the content of alphaacids in air dry cones), the hops produced on the test surfaces stated previously, were

much better since it had for 26,32% higher content of the alpha acids in air dry hop cones than was the alpha acids content in air dry cones for the average crop of the year 2013 of the same variety (Aurora) in Slovenia.

- Also cones harvested on test hop trials, sprayed with products Coraagrohomeopathie® (with product codes C1, C2, X66, X62) were healthy, without damages due to diseases, pests, drought, heat.

- Test surfaces were not irrigated, not watered. Comparative average values for quality and quantity of Slovenian hops yield variety Aurora from 2013, were from hop fields, which were irrigated and/or watered as stated previously.

- During whole growing season hop plants from our test fields of hop sprayed with products Coraagrohomeopathie® were in good condition during the whole growing season and despite of stressful growth conditions (drought, high temperatures, heat waves), “developed unusually normally.” (1) This was explored in Part 2 of the Project and is presented in continue!

PROJECT PART 2: Summary on the slide 35

-Results from monitorings of hop from fields of the Institute for hop research and breeding **on the slide 43 and links**

Then also **on the slides 45, 46, 47**

Comparison and evaluation of results, **slide 48 with link, slide 53 with links**

Phenological development of plants, **slide 49**

Comparison and evaluation of results, **slide 48 with link,**

Summary Spreadsheet of results of Content of alpha acids in hop cones and weather conditions in the phenophases of hop cones making (1) **Slide nr. 47**

slide 53 with links:

slide 54,55,56

ABSTRACT, SUMMARY, CONSLUISION, PROJECT PART 2

What effect may have drought to the hop

Slide 22 and 23 (already presented)

Slide 58:

(rdeče: podvojena vsebina)

This our applicative research project deals about field trial and confirmation, that with use of appropriate combination of natural, energized bio-quantum homeodinamic products Cora agrohomeopathie®, is possible to grown also hop without use of any pesticide and harvested good yield per quality and quantity. This project's results confirmed that we did it very well (Results- Phenologycal development of plants, Results Yield, spreadsheet 19, Comparision, evaluation of results).

Severe drought and hop

In the growing season 2013 in Slovenia occured severe drought and high temperatures waves. It occured combination of meteorological and hydrological droughts, and occurring in a time of intense growth and development of agricultural plants, i.e. in critical phenological - developmental periods, in July and Avgust. The effects of drought on hops have been the subject of a scientific study (link on extract of main findings). They exposed, that such in such circustamces normally is the crop is reduced or even completely destroyed. The range of applicability of the results obtained Hop is demanding plant regarding water supply. So our results may be very useful also for

wide range of other sorts of plants yield growing. Specifics In 2013, the average temperatures and precipitation in the critical months of vegetative and generative development of hops in Slovenia were unfavorable - this is especially valid for August 2013 in terms of absolute values and per distribution over the period in these two months (July, August).

2 This discrepancy was significant given the long-term monitoring of temperature and precipitation statistics. That's the reason, that expert consultant –specialist of hops growing from Chamber of Agriculture and Forestry of Slovenia, Agricultural department Celje (**10), has advised us to use only appropriate data from 2013 for comparison. We compared:

- Data from our experimental hop fields of hop production without irrigation using the Cora agrohomoepathie X62 product . Variatey of hop: Aurora. Location: near to the Slovenian Institute for hops research and brewing and
- data from irrigated hops fields of Slovenian Institute for hops research and brewing. Variatey of hop: Aurora. Location: near to the our hop field trial surface.

Conclusions and highlights Combination of appropriate used natural, energized products Cora agrohomoepathie® with products codes: C1, C3, X62, X66, covered strengthening of plants vitality as well also their own resistance to hops diseases, hop pests, own hop resistance to biotic and abiotic stress and hop strengthening of own plants adaptability to demanding weather and climate changes.

We excluded any irrigation or watering of hop trial surface throught the whole growing season. This applicative research project results confirm, that products Cora agrohomoepathie® combined use was very effectiveness in terms of strengthening the vitality of agro-

cultural plants (hop in this case) and indirectly specifically strengthening their own resistant to pests and diseases, as well as their adaptability to the conditions of severe drought and heat, where irrigation was excluded.

The hops field trial was conducted in extreme conditions of severe drought and several heat waves during the growing season, which were occurred also in sensitive developmental phenophases of hops.

3 Monitoring and testing were carried out by highly specialized experts of the field of hop growing in Slovenia.

At this stage, was included the Slovenian Institute for hop researching and brewing, which later for comparisons of results made available data and the results of the monitoring of the production of hop from year 2013 of the Aurora variety, on their hops fields, which were irrigated (*). Basic monitoring results was obtained from company Hmezad exim d.d. With results excellent results was also confirmed the effectiveness of the product Cora agrohhomeopathie X62 by its use on hop plants on severe drought and heat, while it has been proven:

- that the yield in terms of quantity was very comparable with the yield from irrigated surfaces, • that the yield in terms of quality, compared to the value of alpha acids, had the equal result as the highest value of alpha acids, which was measured on yield from the comparative and irrigated hops field (*).

Quality was tested for hop produced on non-irrigated hopfields using the Cora agrohhomeopathie X62 product.

- From the average yield of the same variety in relation to the content of alpha acids in air dry cones, our hop results were per quality better for 22,98% and in terms of quantity, it deviated

down only for 0,3%. In this context is needed take into account the fact, that hop cones were included in the calculation of the average annual results of the year, were mostly produced on irrigated or watered hop fields. None of these growers used any Cora agrohhomeopathie® products in 2013.

- In terms of the quantity of crop on our non-irrigated and non-watered hops fields, which was sprayed with the Cora agrohhomeopathie X62 product in 2013 (hereinafter signed as (1)), per quantity of harvested hop cones was only 0.3% smaller / worse than the hop that was produced on irrigated hops fields of the Slovenian Institute for hop research in brewing. The exact same conclusion is to compare (1) with the Slovenian average of the Aurora hop variety for year 2013.

- Comparision and evaluation of results: under this link.

Those are very good results, which confirmes both:

4 • succesfully growing hop without pesticide with implimenting this fielf trial spraying program with products Cora agrohhomeopathie® (C1, C3, X62, X66);

- great effects of Product Cora agrohhomeopathie X62 in growing seasons with drought and heat on non irrigated and non watering field trial surface.

- Costs compare Hop sort Aurora during its growing season need about 38.500 l of water per ha (cca 11 liters per one hops plant). Costs for irrigation of 1 ha of agricultural surface are in Slovenia/ hops production cca 125€ per one irrigation (**10). In year 2013 was on irrigated hops fields needed aproximatly 5 irrigations, which costed 725 € per ha. Costs of used product Cora agrohhomeopathie X62 were 510,57€ per ha.

- The final findings and conclusion Especially in areas where agricultural land can not be irrigated or watered during the drought for a variety of reasons the use of product Cora agrohomoepathie X62 can be very meaningful and can significantly reduce economic loss due to loss of crops in arid and hot conditions, as well as increasing food security in such areas.
- For those, who want to offer excellent pesticide-free hops to breweries and beer consumers, our natural products without active substances are a great choice, opportunity and a competitive advantage, which may be for the world market interesting for big breweries as well for small breweries.

And invitation for business cooperation with my entrepreneur company.. SLIDE 60 (vsaj 5 minut časa namenim temu!)

Thank you for your attention, I believe that you heard for me some exiting information, which ma indeed help to many many people, to their life becomes easier and better.

I invite you to keep contacts with me, your emails are welcome.
Thank you.