INFLUENCE OF ORGANIC BIOSTIMULATORS ON SEED MATURATION OF MEDICINAL AND SPICE PLANT SPECIES *CORIANDRUM SATIVUM* L.

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INTRODUCTION

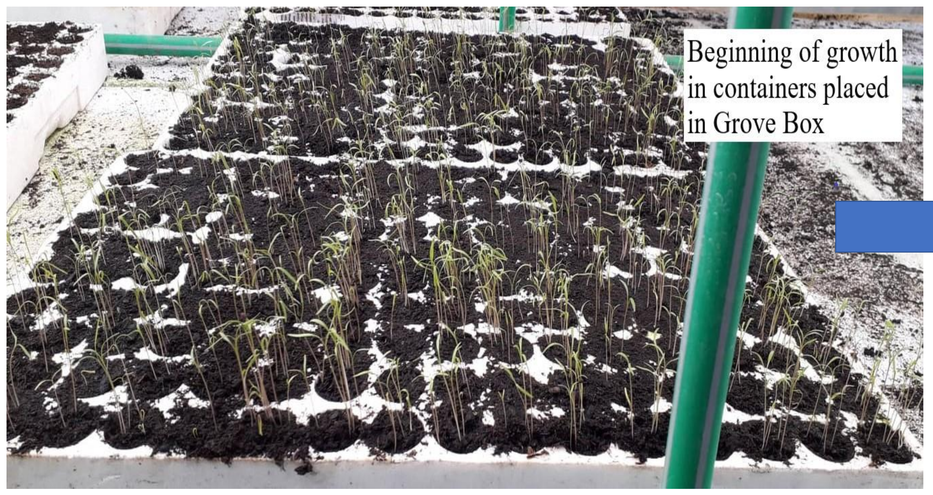
Coriandrum sativum is an annual herbaceous plant belonging to the *Apiaceae* family. *C. sativum* seeds are widely used in folk medicine and veterinary medicine. It is mostly used in the food industries while in households it is used as a spice. The largest quantities of coriander seeds are used for the production of essential oils, which are widely used in the cosmetics industry.

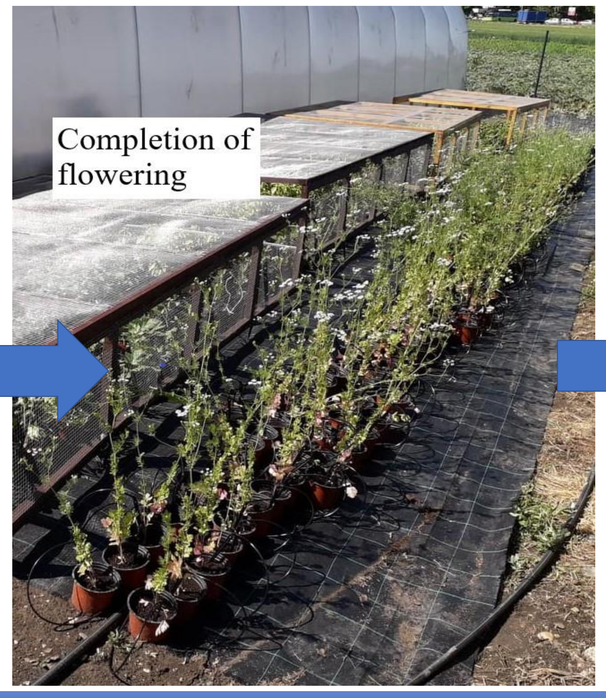
AIM

In an attempt to obtain faster and more uniform maturation of *C. sativum* seeds, an investigation was set up in March 2021, at the experimental field of the Institute for Medicinal Plant Research in Pančevo, Serbia. The aim was to determine the effect of biostimulators on *C. sativum* seeds ripening time and release.

MATERIAL AND METHODS

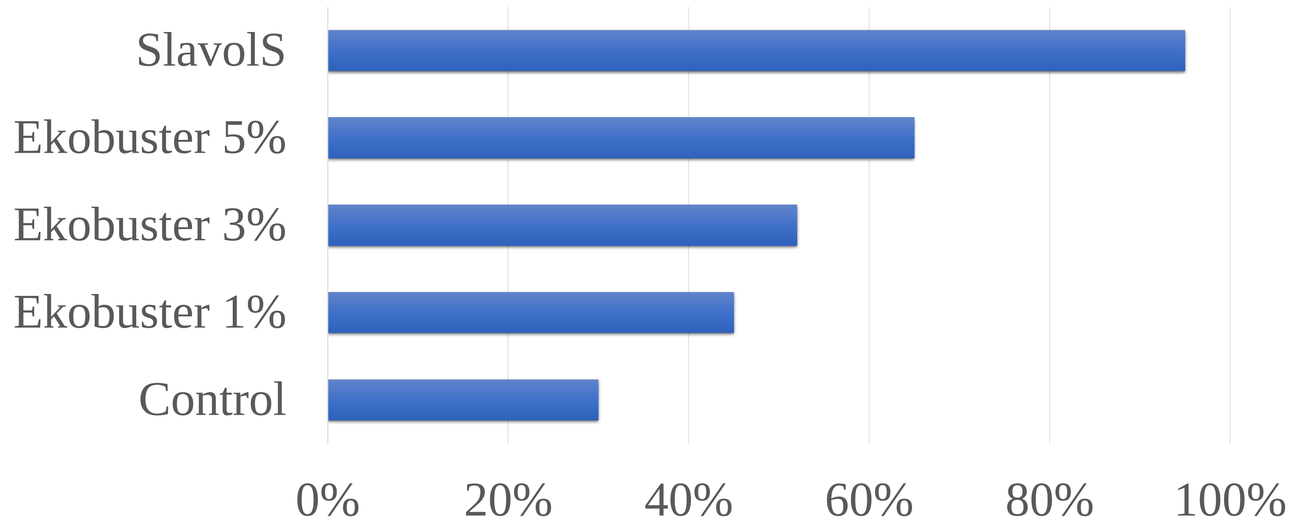
Prior to sowing, the seeds were immersed for 10 minutes in various liquid organic biostimulators: 1%, 3% and 5% Ecobuster1, and SlavolS, while those in control were treated with distilled water. The seeds were then sown in styrofoam containers filled with a mixture of peat moss. There were 30 plants per each treatment and they all grew in a Grow box, under the influence of artificial lighting and at a mean T of 23°C. With the appearance of the first true leaf pair, the plants were transplanted into 0.8L pots filled with the same substrate and transferred to a plastic house to grew under a drip irrigation, at a mean T of 25 °C and daily ventilation. When more than 2/3 of plants formed seeds, the measurements on each individual plant took place.





RESULTS AND DISCUSSION

Treatment	Seed release (%)
Control	30%
Ekobuster 1%	45%
Ekobuster 3%	52%
Ekobuster 5%	65%
SlavolS	95%



There was no significant difference between the treatments in the plants heights and weights, while there was in their seed maturation time. The highest percentage of mature seeds (95%) in the shortest ripening period was obtained in SlavolS treatment, which significantly differed from all other treatments, particularly the control one (30% of released seeds during the same period). Similar to SlavolS but still significantly lower results were obtained with 5% Ecobuster1 (65% of released seeds during the same period).

CONCLUSION

- The obtained results suggest that the biostimulators SlavolS and 5% Ecobuster1 could be successfully applied when faster and more uniform maturation of *C. sativum* seeds want to be achieved.
- The results of the research confirm that biostimulators are a adequate option to accelerate and even maturation of seeds *C. sativum*.

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