New Technology of production Biostimulants with chelated form of micronutrient for plant nutrition.

Radosław Wilk, Katarzyna Chojnacka, Henryk Górecki, Helena Górecka

Department of Advanced Material Technologies, Faculty of Chemistry, Wroclaw University of Technology, Poland.

This work is presenting impact of new product basaed on amino acid hydrolisate enreached in micronutrients on root develompment, yield quality, and quantity of oilseed rape.
Discovery of peptides, aminoacid and reserches their importance to living organisms were made already in nineteenth century but relatively recently amino acid were recognized as active substance with propertis to chelating micronutrient and nessesery for proper plant growth. When metal is in chelat structure plants can effective and rapidly take it up what is extremly usefull in case of deficiency these compounds in soil or occurence metal ions in not available forms. Amino Acid widely recognized as stimulants in speciality formulation with micronutrient gave significant results for several paths in plant development, such as rooth development, green weight of biomass, yield quality and quantity. Experiments on oilseed rape with AminoPrim (new biostimulant produced in innovative 3 steps catalizyed hydrolisis process) were carried out in The Institute of Soil Science and Plant Cultivation (IUNG) Puławy. Field experiments had positiv results in rooth development : almost double increas of dry mass of rooth 21 days after autumnt application of biostimulant AminoPrim in dose 1,50 l/ha and 3.00 l/ha and more than 20% increase dry green biomass 12 days after spring foliar application of AminoPrim in all three examinated doses.

Fig. 1: Rooth development 21 days after autumnt application of biostimulant AminoPrim.
Fig. 2: Rooth development 12 days after spring application of biostimulant AminoPrim.

ACKNOWLEDGMENTS

This work was financially supported by Polish National Centre for Research and Development – project no POIG.01.03.01-02-016/12 and grant entitled: „The new technology of production of preparations stimulating plants growth from protein hydrolysates”.