

**ONTOGENETSKI MODELI KOT ORODJE ZA ODLOČANJE V VARSTVU
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Ontogenetski modeli služijo za simulacijo razvoja kmetijskih rastlin. V triletnem projektu je bila preučevana ustreznost razpoložljivih modelov (CERES, ONTO in AGROSIM, ki temeljijo na temperaturnih vsotah) za simulacijo poteka razvoja ozimne pšenice. Največja skladnost med dejanskimi in napovedanimi BBCH vrednostmi je bila ugotovljena pri modelu ONTO. Z namenom izboljšanja natančnosti simulacije, je bil z združitvijo modelov CERES in ONTO izdelan nov ontogenetski model SIMONTO. Model odraža vpliv temperature, fotoperiode in vernalizacije na razvoj posevka z množitvijo teh parametrov. Najboljši rezultati so bili ugotovljeni, če so bile rastline izpostavljene vernalizaciji med razvojnima stadijema BBCH 10 in BBCH 30. Uporaba modela SIMONTO je bila razširjena tudi na druge posevke, parametri modela pa so bili ocenjeni za ozimno rž, ozimni ječmen, ozimno tritikalo in ogrščico. Modeli SIMONTO so uporabni kot orodje pri načrtovanju ukrepov varstva in gnojenja in so del sistemov za podporo pri odločanju za varstvo žit in oljne ogrščice pred boleznimi in škodljivci.

Ključne besede: Ontogenetski modeli, SIMONTO, podpora pri odločanju, varstvo žit

ABSTRACT**ONTOGENETIC MODELS AS A TOOL IN DECISION MAKING IN ARABLE CROP
PROTECTION**

Ontogenetic models are employed to simulate the development of crops. In a three-years project available model approaches (CERES, ONTO, AGROSIM, temperature sum – based models) were tested for their ability to simulate the ontogenetic development of winter wheat crops characterised by the BBCH-code. Highest congruence of observed and predicted BBCH-values were obtained by ONTO. In order to improve the precision of the simulations new ontogenesis models (SIMONTO) were elaborated combining CERES and ONTO approaches. A SIMONTO-model reflecting the influence of temperature, photoperiod and vernalisation on the developmental rate of the crop by multiplying the three effectiveness rates and which vernalisation is effective during a period ranging from BBCH 10 to BBCH 30 gave best results. SIMONTO-approach was expanded to further crops and model parameters were estimated for winter rye, winter barley, winter triticale and winter oilseed rape. SIMONTO-models can be used as a steering tool for crop protection and fertilisation measures and are coupled to decision support systems for several pests and diseases of cereal crops and oilseed rape.

Key words: Ontogenetic models, SIMONTO, decision support systems, protection of cereal

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