



Uporaba insekticida laser v varstvu rastlin

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Laser je prvi insekticid iz nove skupine pripravkov, *Naturalytes*. Aktivna snov v insekticidu laser je spinosad, ki jo pridobivamo iz metabolitov splošno razširjene vrste bakterije, *Saccharopolyspora spinosa*. Aktivna snov spinosad je zelo učinkovita proti žuželkam, vključno proti vrstam iz redov Lepidoptera, Diptera, Hymenoptera, Thysanoptera in nekaterim vrstam iz reda Coleoptera. Uporablja se za varstvo v kmetijstvu in hortikulturnih nasadih, v rastlinjakih, na igriščih za golf ter v vrtovih. Aktivna snov spinosad zagotavlja učinkovito varstvo proti škodljivcem, z najmanjšim vplivom na koristne in druge neciljne organizme. Ker je učinkovita pri zelo majhnih odmerkih in je varna za okolje, za sesalce ter koristne organizme, je bila a. s. spinosad registrirana v US EPA programu z manjšim tveganjem (reduced risk program). Leta 1999 je bila nagrajena z Presidential Green Chemistry Award, kar potrjuje pomembnost a. s. spinosad in prizadevanja podjetja Dow AgroSciences za proizvodnjo varnejših in učinkovitejših sredstev za varstvo rastlin. Insekticid laser ima torej naslednje pomembne lastnosti: je zelo učinkovit proti številnim vrstam škodljivcev, uporabljamo ga v nizkih odmerkih, zaradi česar je obremenitev okolja manjša, je nenevaren za koristne organizme, ima poseben način delovanja, pri čemer ni znan pojav navzkrižne odpornosti ter ima nizko strupenost za sesalce, ptice in ribe.

ABSTRACT

Application of Laser in Plant Protection

Laser is the first insecticide proposed for a new class of insect control products, the *Naturalytes*. Active ingredient of Laser called Spinosad is derived from the metabolites of the naturally occurring bacteria, *Saccharopolyspora spinosa*. Spinosad has been shown to be highly active on insects including species from the orders Lepidoptera, Diptera, Hymenoptera, Thysanoptera and a few Coleoptera. Spinosad may be used to control pests in both agricultural and horticultural environments, and also in greenhouses, golf courses, gardens, and around homes.

Spinosad has been developed to provide rapid control of the pests with minimum disruption of beneficial insects and other non-target organisms.

Due to its very low effective use rate, safety to the environment, safety to the mammals, and safety to the beneficial insects, Spinosad was registered under the US EPA's reduced risk program. It was also awarded the *Presidential Green Chemistry Award* during 1999, which recognizes the unique contribution of Spinosad and also highlights Dow AgroSciences commitment to producing safer and more effective products for insect control.

Laser provides users with a unique package of very desirable features: highly effective on many pest species, low application rates resulting in low environmental load, safe for use with most beneficial insects, unique mode of action with no known cross-resistance, low mammalian toxicity, and low avian and fish toxicity.