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Flubendiamide, a Novel Insecticide Highly Active against Lepidopterous Insect Pests

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Abstract:

Flubendiamide, N^2-[1,1-dimethyl-2-(methylsulfonyl)ethyl]-3-iodo-N^1-[2-methyl-4-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]phenyl]-1,2-benzenedicarboxamide, is a novel class of insecticide having a unique chemical structure. The uniqueness of the structure results from three parts with novel substituents; a heptafluoroisopropyl group in the anilide moiety, a sulfonylalkyl group in the aliphatic amide moiety, and an iodine atom at the 3-position of the phthalic acid moiety. The compound shows extremely strong insecticidal activity especially against lepidopterous pests including resistant strains. Flubendiamide would have a novel mode of action, because the insecticidal symptoms accompanied by a discriminative contraction of the larval body are distinguished from those of commercial insecticides. It is also very safe for non-target organisms. Flubendiamide is expected to be a suitable agent for controlling lepidopterous insects as part of the insect resistance management and the integrated pest management programs. © Pesticide Science Society of Japan

Keywords:
benzenedicarboxamide, flubendiamide, heptafluoroisopropylanilide, insecticide,

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