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PP#822075. Oryzalin in/on Sweet Potatoes. Amendment of 9/5/80.

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In previous submissions of this petition, we found that no root crop metabolism data were available. The analytical methodology detected only oryzalin per se and showed no detectable residues in sweet potatoes. The methodology did not determine any oryzalin metabolites. Consequently, we requested a root crop metabolism study to determine whether oryzalin metabolites occur in root crops.

IR-4 has now submitted the report titled "Foliar Uptake and Translocation of ¹⁴C-Oryzalin in Sweet Potato" in response to our request.

All other chemistry deficiencies have been satisfied (memo of N. Nelson, PP#822075, 10/16/78).

¹⁴C-ring labeled oryzalin was dissolved in 95% EtOH and 10 microliters of this stock solution was applied to the mid-rib of a single leaf of two turgid and two pre-wilted sweet potato plants. After diluting the 10 microliters of the above stock solution to 1 ml with 95% ethanol, two additional turgid plants were treated and "some solution allowed to drip onto the soil surface". The amount of labeled material actually "dripped" onto the soil was not quantitated. Treated and untreated leaves, and peeled and unpeeled roots were sampled and counted 47 and 105 days after treatment. After 47 days the treated leaves contained 8.52 - 19.61% of the original dose (one pre-wilted sample was reported as 0.02%). No radioactivity was reported for untreated sampled leaves or peeled and unpeeled roots.

We agree with the authors that the results of the above report show no metabolites in the roots are expected via translocation from the leaves. Residue data for the actual application of up to 3-4X the proposed rate for oryzalin has revealed no detectable amount of parent (<0.01 ppm) (N. Nelson, PP#822075, 9/7/78) in roots. With the above information plus the fact this is an at-plant application leads us to conclude the residue of concern is the parent compound, oryzalin.

Recommendation

TOL and EER considerations permitting we can now recommend for the requested tolerance of 0.05 ppm in/on sweet potatoes.

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cc: RF, CIRC., SARICO, WAYTE, FDA, TOL, EER, EPA, P2482075
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