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EFFICACY REVIEW

IN 6-25-82 OUT 7-2-82

FILE OR REG. NO. 5481-92

PETITION OR EXP. PERMIT NO. Section 18 -- 82-sc-07

DATE DIVISION RECEIVED 6-21-82

DATE OF SUBMISSION 6-18-82

DATE SUBMISSION ACCEPTED \_\_\_\_\_

TYPE PRODUCT(S): I, D, H, F, [N,] R, S \_\_\_\_\_

DATE ACCESSION NO(S). none assigned

PRODUCT MGR. NO. 41 -- Stubbs

PRODUCT NAME (S) Nematocide EM 12.1

COMPANY NAME(S) Amvac Chemical Corporation

SUBMISSION PURPOSE Peaches -- ring and root-knot nematodes

CHEMICAL & FORMULATION 1,2-Dibromo-3-chloropropane.....82.4%

Other halogenated C<sub>3</sub> compounds..... 2.6%

[EC, 12.1 pounds active/gallon]

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EFFICACY REVIEW -- NEMATOCIDES

- 200.0 Introduction: The purpose of this submission is to obtain a Section 18 Emergency Exemption for the use of Nematocide EM 12.1 on peaches in South Carolina. They propose to use 75,000 gallons on 20,000 acres between September 1 and September 15, 1982. The dosage rate will be five gallons per acre of soil surface treated; however, it is estimated that on half the infested acreage only 50% of the surface will be treated.
- 200.1 Use. PEACHES --- ring and root-knot nematodes: Use at rate of 5 gallons per acre treated as a postplant broadcast or strip (band) treatment, with the strip treatment rate being proportionally less than the overall treatment on a per acre of cropland basis. Apply with chisel soil injection equipment with chisels spaced 8-10" apart and 4" deep, seal chisel channels immediately with a tree hoe, press wheels, cultipacker, or heavy iron bar dragged directly behind the chisels. For small trees, treat a band 4-5' wide on each side of tree. For large trees, treat the entire area between tree rows. Apply after harvest and before November 15 after all major cultural practices have been completed for the year. Do not make more than one application per year. Do not prune treated trees until after January 1 of the following year. Do not reenter treated areas within seven days of application without protective clothing and equipment.
- 201.0 Data Summary: Two test reports (research articles) were submitted, one which demonstrates the superior nematicide effectiveness of DBCP over other unregistered nematicides and one which demonstrates that the ring nematode can induce peach tree short life (PTSL) disease. Their petition describes a situation in South Carolina whereby the number of trees dying from PTSL disease has been rapidly increasing each year since DBCP registrations were suspended/cancelled in 1979. Based on the large number of visibly weakened trees in 1982, much more severe losses of trees will occur within the next two years unless steps are taken to correct this problem. It does not appear feasible to use any other nematicide for this problem.
- 202.0 Conclusions and Recommendations: The proposal to use DBCP to control the PTSL disease problem in South Carolina appears to be justifiable. However, the following changes should be made:
1. Correct the discrepancy between the Crop Guide and the Application for Emergency Exemption with regard to when applications should begin. One document states "September 1st" and the other states "after harvest." Our records indicate that the harvest period in South Carolina begins at the end of May and continues through September 1st, depending upon the varieties being grown.
  2. Use should be limited to "mineral soils" and applied when the soil temperature at a depth of 6" to 8" is between 40° and 80°F.

3. Delete claim to use product for root-knot and nematodes other than "ring," as the ring nematode appears to be the only one which warrants control under the emergency exemption.
4. Change the recommendation from "one application per year" to "one application every two years," as DBCP should provide adequate control for at least a two-year period.
5. Use should be limited to fields which have damaging levels of ring nematode that have been confirmed by sampling, or other reliable indicators.

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RD, FHB, TSS

*E 7/12/82*

*See Remacur / Ni review regarding 5 yr limitation  
per R.M. should also apply here 8/3  
RA says SL agrees to accept ring only*