

Environmental Chemistry Review for Monosodium
Methanearsonate

1-17-75

PP# 5G-1570
Reg. # 6308-Exp
The Ansul Co.
Submitted Oct. 1974

I. Introduction

1. Methanearsonic acid-monsodium salt
2. Ansar 529 H.C. Herbicide
3. Requested temporary tolerance of 0.6 ppm for residues of monosodium methane arsonate on wheat.
4. See Environmental Chemistry review of 3F-1357 dated 10-21-74
5. Proposed shipment of 642 lbs ai, for experimental testing in 8 states (107 gallons)

II. Directions for Use

Should be applied at 2.0-3.0 lb ai/A, prior to the formation of the 4th leaf stage in wheat.

Do not make more than one application per season.

Do not apply to wheat under stress. Do not apply when air temperature is above 80F.

III. Proposed Experimental program for Monosodium Methanearsonic Acid on Wheat.

1. Field study:

One test in each of following states: North Dakota, Oregon, Montana and Nebraska. Soil Samples from 0-6" and 6-12" will be taken at 0 days, 2 weeks and 1, 4 and 12 months. More samples will be taken between 0 and 1 month if possible. Devices for collection of runoff water and soil sediment will be placed as soon as possible after application.

2. Soil physical and chemical properties:

"Soil textural class, soil type, EC, pH, OM and fertility level are generally available for all state experiment stations and their sub-stations. When available the above information will be obtained for one station studies. For remaining tests soil type and texture will be included by researchers."

3. Pesticide runoff study.

To be run in Ansul Weslaco Technical Center Rainfall-artificial and 0-1" soil sample will be collected at intervals.

4. Greenhouse leaching study.

Soils from major growing areas. Sampled at 6, 12 and 18 inch depths. Soils to be sprayed with low, medium and maximum rates of MSMA. After spraying, soils will be subjected to alternate wettings and drying periods. Samples will be taken 2-3 times.

IV. Recommendations

A. RL Experimental Permit

B. Concerning the proposed experimental program for MSMA on wheat.

1. For all soils the following parameters must be determined.

1. Organic content
2. Cation Exchange Capacity
3. pH
4. Field Moisture Capacity
5. Percent sand, silt and clay
6. Nitrate-Nitrite level

If these values have been determined by a commercial lab, their report should be submitted. Otherwise a complete description of actual methods used should be submitted.

2. For the field residue studies a soil sample should be taken at 8 months, in addition to other sampling times.

3. For the runoff study, include information concerning the slope of the field, as based on the soil slope classes delineated in the "Soil Survey Manual-Agriculture Handbook No. 18; U.S.D.A. A class D slope gradient would be preferred.

no longer needed

C. The following Studies are required for permanent registration.

1. Aerobic soil studies are needed. See enclosure. (Note Ms. Critchlow please enclose p V16-V22)

2. Anaerobic soil studies. See enclosure (Note: Mrs. Critchlow please enclose p V22)

3. Bound residue study, See enclosure (Ms. Critchlow please enclose pp V22-V24.

4. Fish residue studies. Submit result of catfish and crayfish studies reported underway in 1973, (Report in Reg: 6308-91, p. 28) or new studies according to enclosure (pp V-37-V38)

5. A Rotational and/or subsequent crop residue studies is needed.

a. For crops rotated immediately after harvest of a crop in the treated area, the pesticide is to be aged in a sandy loam soil under aerobic conditions for about 120 days, then the soil planted to a root crop, small grain, and a vegetable. The root crop is required; however, crops in two other crop groupings may be substituted for the small grain and vegetable.

b. For crops rotated the following year after treatment, the pesticide is to be aged in the soil for one year prior to planting. Crops should be as above.

c. If significant residues are found, then actual field studies using non-labeled pesticide will be required. Such data must be obtained under actual agricultural practice.

d. If residues are found in rotational and/or subsequent crops in the field, then a labeling restriction will be needed.

*14C not needed
Total As*

This restriction will take the form of a time interval from application to planting of rotational crops such that illegal residues will not occur in the rotational crop. A restriction longer than 18 months is not acceptable.

- e. Cover crops can be rotated if label restrictions are such that the cover crop is plowed under and not grazed.
- f. If the agricultural practice is such that a treated crop area is rotated with another crop that will result in another treatment of the pesticide to the same area, residue data will be required on the second crop. The rotational crop is to be grown under actual use conditions.

Even if all the required studies are submitted, this would not guarantee registration. This can be determined only after the data have been reviewed. If other uses of MSMA are proposed, additional environmental chemistry data may be required.

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