1/17/75

Meeting 7/28/75

Environmental Chemistry Review for Monosodium Methanearsonate (MSMA)

PP#3G-1357, Reg-No. 6308-Exp
The Ansul Company
Submitted: Jan. 1973

I. Introduction

1. Registrant requested in letter dated 10-23-74, a change from permanent (3F-1357), ~~6308-Exp.~~ to temporary tolerance (3G-1357, 6308 Exp)
2. Anson 529 H. C. Herbicide
3. Proposed temporary tolerances of 0.39ppm in or on sugarcane and 1.0ppm in molasses, bagasse, sugar and syrup.
4. See environmental chemistry review of 3F-1357 dated 10-21-74
5. Proposed: to ship 36gal (216lb ai) to Texas and Louisiana for experimental purposes.

II. Directions for Use

Sugarcane-Louisiana and Texas only 1/3 to 2/3 gal (2-4lb MSMA) per acre per application

First application in mid April (when weeds 14" tall) and second application when re-growth is about 14" tall (about 3-4 weeks later)

Temporary damage to sugarcane foliage may occur after the second application.

Do not exceed two application per year nor make any application after June 1.

III. Discussion of Data

A. Rotational Crops:
A letter from R.W. Millhollon, Research Agronomist, U.S.D.A. Sugarcane Laboratory, stated sugarcane is handled as a monoculture in Louisiana. He estimated that rotational crops occupy only 1.5-2.0% of the sugarcane acreage. At present soybeans are the main rotational crop.

Agriculture Handbood No. 417; "Culture of Sugarcane for Sugar Production in the Mississippi Delta" was submitted.

Conclusions:

1. No information was provided as to sugarcane rotational crops in Texas.

2. Rotational crop residue data, or a suitable label restriction on planting of subsequent crops in treated areas may be needed for

areas outside of Louisiana for permanent registration.

B. Experimental Program for Monosasium Methanearsonic Acid on Sugarcane

1. Field persistence
Two tests in Louisiana and one in Texas will be established for soil persistence. Soil samples from 0-6" will be taken at 0 days, 2 weeks, and 1,4 and 12 months. More samples will be taken between 0-1 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 testural class, soil type, CEC, pH, OM and fertility levels "are generally available for all state experiment stations and their sub-stations." When available the above information will be obtained for an station studies. For remaining tests soil type and texture will be included by researchers.

NOT required. anyone

3. Pesticide runoff study
To be run in Ansuls Weslaco Techmical Center Rainfall-artificial and natural. A light medium and heavy MSMA applications Runoff water and 0-1" soil samples 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 maxumum rates of MSMA. After spraying, soils will be subjected to alternate wetting and drying periods. Samples will be taken 2-3 times.

Sugarcane can go to rice crop

IV. Recommendations

A. RL Experimental Permit

B. Concerning the proposed experimental program for MSMA on sugarcane:
1. For all soil the following parameters must be derermined.
1, organic content
2. Cation exchange capacity
3. pH
4. Field Moisture capacity
5. Nitrate-Nitrite Level
If these values have been determined by a commercial lab; their report should be submitted. Otherwise a complete discription 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.

Omit 10/6/75 — OK

Not required

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

C. The following studies are required for permanent registration.

1. Aerobic soil studies are need. See enclosure. (Note Ms. Critchlow please enclose pp V16-V22)
2. Anaerobic soil studies. See enclosure (Note: Mrs. Critchlow please enclose p V22)
3. Bound residue study. See enclosure (Ms. Crithclow please enclose ppV22-V24.
4. Fish residue studies. Submit result of catfish and crayfish studies reported underway in 1973, (Report in Reg: 6308-91, p.29) or new studies according to enclosure pp V-37-V38)

14C not needed 5. Total As.

To support the use of MSMA on sugar cane in areas where subsequent crops other than sugar cane may be grown, plant uptake studies will be needed. The enclosed guideline should be followed. You have shown that little rotation takes place in Louisiana what about Texas.

Even if all the required studies are submitted this would not quarantee 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.

Ronald E. Ney, Jr. 1/14/75

1/17/75

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