June 29, 1971

MEMORANDUM OF CONFERENCE

June 2, 1971

Subject: Aldicarb (Temik) and Carbaryl

Present: Dr. C. Weil - Melon Institute

R. R. Romine - Union Carbide Corp.
R. L. Meeker " " "
D. Heywood " " "
R. C. Back " " "

AND

Dr. O. G. Fitzhugh - Office of Pesticides Programs/EPA
Mr. J. G. Cummings - Chemistry Branch/PTD/EPA
Mr. J. Wolff - " " "
Dr. G. E. Whitmore - Toxicology Branch/PTD/EPA
Dr. C. H. Williams - " " "
Dr. J. Svirbely - " " "
Mr. J. Lamb - Petitions Control Branch/PTD/EPA

The meeting discussion followed the outline as presented in the May 24, 1971 Union Carbide Corp. letter addressed to Mr. Lamb.

The Union Carbide representatives were particularly interested about our attitude of some rat and mouse feeding studies[1] that they were doing with aldicarb sulfone and sulfoxide. They said these studies would demonstrate a no-effect level that would be higher than the no-effect that was the basis for the establishment of sugarbeet residues and cotton residue tolerances. They were of the opinion since the crop residues consisted primarily of the sulfone and sulfoxide that the new study being done should be used for an assessment of the no-effect level rather than the original studies wherein aldicarb was fed. Aldicarb was systemic in all plants and residues were all the sulfoxide and sulfone. Animal and plant metabolism of aldicarb were similar. A direct question was asked by the industry if the Division felt that these progress reports of the studies of the sulfone and sulfoxide would allow a reconsideration of a no-effect level in support of a needed 0.5 ppm in potatoes. (They have a temporary tolerance of 0.2 ppm on potatoes). In reply, we said that we established tolerances on the basis of long term studies and since these new studies have not been completed it would be difficult for us to arrive at a safety judgment related to a yet to be demonstrated no-effect level. Dr. Fitzhugh said that with the original feeding

[1] See attached sheet.

of aldicarb, the sulfoxide and sulfone were really being fed. One has to consider raw potatoes and how much residue will be present. Aldicarb is an effective nematocide and the U. S. wants it for golden nematode control. Application is 4 lbs ai/acre in soil.

It was pointed out that enough raw potatoes are consumed that the question of the safety of 0.5 ppm of aldicarb on this commodity would be most important and that we would have to be assured that consumption of the .5 ppm on raw potatoes would not be an acute hazard.

Mr. Cummings commented that the hazard from misuse of aldicarb is high. Dr. Fitzhugh commented that aldicarb represents an environmental hazard. He cited toxicity to pheasants.

It was suggested that the company submit the available data they have for review before any firm decision could be made in respect to their request of the establishment of the higher no-effect level based upon the sulfone and sulfoxide feeding studies.

Carbaryl was discussed following a description by Dr. Weil of the studies as listed in the May 24, 1971 letter. After prolonged discussion related to no-effect levels etc., it was stated that since the Colston monkey reproduction study has raised some doubts about the effect of carbaryl upon primate gestation that it would be recommended that this question be further investigated by an additional monkey reproduction study.

There was no commitment about further consideration of carbaryl petitions until the monkey reproduction in question has been resolved.

George E. Whitmore, DVM
Section Chief
Toxicology Branch
Pesticides Tolerances Division

Copies of the reports that Dr. Weil left with us are filed with the TB copy of this memo.

cc:
OGFitzhugh
JGCummings
PRD/EPA
Perrine Br.
Atlanta Br. (CLewis)
Division Reading Files
Reading Files (Branch)

GEWhitmore/ccw
6/29/71

1

2 yr-feeding study with sulfoxide in rats 0.6 & 0.3 mg/kg
sulfone in rats 2.4 & 0.6 mg/kg
(1:1 mixture) 1.2 mg & 0.6 mg/kg
aldicarb 0.3 mg/kg

At 6 mox. no histopathology. In ♂ rats fed the mixture at 1.2 mg/kg slight weight gain decrease. No organ weight effect at 6 mos.

18 mos. chronic feeding of aldicarb to mice 0.7, 0.4, 0.2, 0.1 mg/kg. No effects on B.W. Increased mortality in 1st few weeks, since then 1 or 2 each 90 day period and this comp. to controls. 44 mice of each sex to start, hope to end up with 15 or 20 of each sex.

Level of detection of sulfoxide 0.001 ppm

LD_{50} Temik 1 mg/kg

LD_{50} sulfoxide 1 mg/kg