2,4-D/TOX

(23)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Releasable

DATE: April 18, 1979

SUBJECT: Weedar 64 Broadleaf Herbicide - EPA Reg. No. 264-2 Caswell No. 315

FROM: Carlos A. Rodriguez Carlos A. Rodriguez 4/18/79 4-20-79
TOX/HED TS-769

TO: Willa Garner, PM 23
RD TS-767

Registrant: Amchem Products, Inc.
Ambler, Pa. 19002

Action Requested: Review the toxicity of the herbicide 2,4-D in horses and update files.

Review of submitted toxicity data:

Acute Toxicity Studies of the Herbicide 2,4-D, Weedar 64 (49.5%) in Horses, (Dr. T.W. Swerczek, 664 Providence Rd, Lexington, Ky, May 1978, submitted by Amchem Products, Inc.).

3 thoroughbred male horses and one male light horse weighing between 270 to 450 kg were used as experimental animals.

Horse No. 1: (78E-229) weighing 450 kg was given by stomach tube on the following days:

1. 2-20-78 - 100 cc of Weedar 64
2. 2-23-78 - 500 cc of Weedar 64
3. 3-5-78 - 1000 cc of Weedar 64

Horse No. 2: (78E-228) aged male, light horse weighing 275 kg was given by stomach tube on the following day:

1. 2-23-78 - 500 cc of Weedar 64

Horse No. 3: One year old was dosed with 300 cc of Weedar 64 by stomach tube on 2-24-78. No clinical toxicity was observed.

Horse No. 4: Same horse as No. 3 was given Weedar 64 on 3-1-78, at a rate of 50 cc to 5 gallons of drinking water. This experiment was performed to check the palability of Weedar 64.

Horse No. 5: 9 month old colt weighing 270 kg was given Weedar 64 on 3-1-78 at a rate of 50 cc per 5 gallons of drinking water. This dose was continued for 3 consecutive days.

Results:

Horse No. 1 (78E-229):

Clinical signs: anorexia, little eating, mucous membranes congested, dyspnea and death.

Central nervous system: normal

Respiratory system: lungs congested, hemorrhagic, edematous and the bronchi and trachea fluid and froth. Bronchi and trachea were hyperemic and hemorrhagic. Nasal turbinates hyperemic and congested.

Gastrointestinal tract: Stomach hyperemic and congestion, liver swollen and congested.

Horse No. 2 (78E-228):

Clinical signs: No signs observed. He was dead the following day.

Central nervous system: normal

Respiratory system: lungs congested, hemorrhagic and edematous. Bronchi and trachea edematous froth and the mucosa was hyperemic and hemorrhagic. Nasal turbinates hyperemic and congested.

Gastrointestinal tract: stomach hyperemic and congested. Liver slightly swollen, mild centrolobular congestion.

Horse No. 3:

Normal weight and health and without signs of toxicity.

Horse Nos. 4 and 5:

No adverse effects seen and appetite remained normal.

Summary and Conclusions:

The purpose of this study was to determine the toxic effects of 2,4-D in horses using different dose levels of the chemical. The toxic dose level was determined to be 1 cc/lb of body weight. Horses given one half the toxic dose showed no toxic effects.

The study is not required for registration and is considered to be Core-Supplementary - Study.

1. Toxic effects to horses could be determined under use conditions if horses were accidentally exposed to the diluted spray or treated areas.

TOX/HED:RDInit:RLandolt:2/26/79:ssr

RL
Whitmire
5/8/79