



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 23 1989

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

EXPEDITE

SUBJECT: Review of Data Submitted by the Oregon Department of Agriculture on Residues of Tilt^R (Propiconazole) in or on Grass Seed Screenings and Screening Pellets (12/22/88).

DEB No: 4804

FROM: H. Fonouni, Ph.D., Chemist *H. E. Fonouni*
Dietary Exposure Branch
Health Effects Division (TS-769)

THRU: Charles L. Trichilo, Ph.D., Chief
Dietary Exposure Branch
Health Effects Division (TS-769)

TO: E. Rossi/L. Schnaubelt, PM 21
Fungicide-Herbicide Branch
Registration Division (TS-767)

and

Fungicide-Herbicide Support
Toxicology Branch
Health Effects Division (TS-769)

This review has been expedited as requested by Anne Lindsay, Registration Division. Recently, the Agency (telegram of 12/20/88 by D. Campt) denied a request by the Oregon Department of Agriculture for a specific exemption to allow the feed use of grass seed crop waste obtained from grasses (grown for seeds) treated with Tilt^R. In the communication, it was noted that the appropriate approach is via a petition to establish tolerances under the FFDCA for residues of propiconazole and its metabolites in/on grass hay and screenings.

The Oregon Department of Agriculture has provided monitoring-type data on residues of propiconazole and its metabolites in/on grass seed screenings and grass seed screening pellets both of

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(2)

which are livestock feed items in the Pacific Northwest. The data were generated using samples collected from various seed processing plants in Oregon.

CONCLUSIONS

DEB requires field residue data on grass seed screenings in lieu of monitoring-type data. Information such as a pesticide application rate, and sample history and composition (i.e. the proportion of treated versus untreated agricultural commodity) are necessary in evaluation of residue data for the purpose of establishing tolerances. DEB is currently reviewing the data submitted by the petitioner, Ciba-Geigy, on grass hay and forage in conjunction with pp# 9F3706, and will recommend the petitioner amend the aforementioned petition by proposing a tolerance for grass seed screenings based on the field residue data.

NOTE TO PM

Attached memorandums from BEAD (1/9/89; A. Jennings) and the Oregon Department of Agriculture (11/30/1988; W. Koesan) indicate that grass seed screenings and hay are used as feed items in the Pacific Northwest. DEB, therefore, recommends that appropriate tolerances be established for residues of pesticides currently registered for use on grasses grown for seed in order to prevent a potential adulteration of livestock feed items, grass hay and screenings. Turf grass uses should include a restriction prohibiting use on grasses grown for seed and grasses grown for seed (only) uses should be prohibited unless appropriate tolerances have been established. Region X should be informed about the content of this note.

cc: Reading File, Circulation, Reviewer (H. Fonouni),
pp# 9F3706,, ISB/PMSD (E. Eldredge).

TS-769:DEB:Reviewer(HF):CM#2,Rm803:557-7561:typist(hf):
1/17/89.

RDI:MFKovacs:1/18/89:Deputy Branch Chief:RDSchmitt:1/18/89.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, DC 20460

Attachment I

JAN 9 1989

OFFICE OF
PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Subject: The use of grass seed screenings in animal feed.

To: Chuck Trichilo, Chief
Residue Chemistry Branch

From: Joseph A. Ferrante, Economist
Biological and Economic Analysis Division

Thru: Allen L. Jennings, Director
Biological and Economic Analysis Division

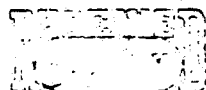
Introduction

We have completed a market analysis of grass seed production in the Pacific Northwest (Washington, Idaho, Oregon). This analysis also includes a discussion of the market for straw and screenings/chaff which are byproducts of grass seed farming and processing.

Grass seeds are harvested by shaving off the top part of mature grass (ie. grass that has been allowed to flower and produce seeds). The bottom part of the plant is mowed and collected for straw. After the straw is harvested, the remaining stubble is burned in the field or plowed under (note: grass field fires have been banned in Oregon).

Grass seeds are cleaned and processed by removing the screening/chaff from the top portion of the plant. The screenings (which are comprised of parts such as the husk hull, and awns) are pelletized to produce animal feed.

The remainder of this memo briefly presents our findings from an analysis of the market for grass seed and grass seed byproducts. We will also present the extent to which grass seed screenings are used in the animal feed market. This information should be useful in deciding whether or not tolerances need to be established for pesticides used on grass seed crops.



Findings

- o There are 350 000 - 400.000 acres producing grass seed in the Pacific Northwest.
- o This acreage yields 330 - 350 million pounds of grass seed.
- o The Pacific Northwest accounts for 60 - 70 percent of the national grass seed production.
- o The price of grass seed ranges from \$.40 per pound for low quality grass (eg. rye grass) to \$1.60 per pound for high quality grass (eg. Kentucky bluegrass).
- o Gross revenue for grass seed in the Pacific Northwest, excluding the sale of byproducts, is between \$150 - \$200 million.
- o Profits vary according to the variety of grass seed produced. The per acre profits for Kentucky bluegrass (a high quality grass) are about \$500 - \$600.
- o Approximately 70 - 100 million pounds of screenings are produced during grass seed processing.
- o Almost all of the screenings (99 percent) are pelletized for cattle feed. The remaining 1 percent is used as mulch.
- o The price of screenings is based on the market price for barley and fluctuates accordingly. Typically screenings sell for \$35 - \$75 per ton.
- o Therefore gross revenues for grass seed screenings are \$1.2 - \$3.8 million in the Pacific Northwest.
- o Cattle eat approximately 13.5 billion pounds of feed annually in the Pacific Northwest. The feed is mainly comprised of corn, sorghum, and oats.
- o Most grass seed screenings are consumed by cattle in Oregon, Washington, and Idaho. These screenings account for less than 1 percent of the total (annual) cattle feed market in this area.

If you need any more information regarding the production of grass seeds, grass seed screenings, and the relative importance of its use in the animal feed market please do not hesitate to contact me at 557-1753.

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89-012-01

To: RSERB (EPA7356)
To: PTSCB/REG.X (EPA9045)
To: ID/EOP (EPX2175)
To: WA/DOA (EPX5675)

From: OR/DOA/PD (EPX4675) Delivered: Wed 30-Nov-88 19:48
EST Sys 163 (205)
Subject: SPEC. Exempt. for Feeding Grass Seed Crop Wastes
Containing
Mail Id: IPM-163-881130-178230783

November 30, 1988

Mr. Donald P. Stubbs, Section Head
Emergency Response Group (TS-767C)
Environmental Protection Agency
Crystal Ball Building 2
1921 Jefferson Davis Highway
ARLINGTON VA 22202

**SPECIFIC EXEMPTION FOR FEEDING OF GRASS SEED CROP WASTES
CONTAINING PROPICONAZOLE (TILT) FUNGICIDE AND ITS METABOLITES**

The Oregon Department of Agriculture requests approval of this application for a specific exemption under Section 18, FIFRA, as amended, in Part 166, Title 40, CFR 166, to temporarily amend the label for TILT Fungicide, EPA Reg. No. 100-617, manufactured by Ciba-Geigy Corporation, Greensboro, North Carolina.

This request specifically asks EPA to waive the feeding restriction: "Do not use any part of crop or crop wastes for livestock feed or bedding", in Oregon from this date until July 31, 1989.

1. TILT Fungicide, registered by Ciba-Geigy Corporation, contains 41.8% 1-[[12-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl] methyl]-1H-1,2,4-triazole (Propiconazole). Among the registered uses of this product are grasses grown for seed in Oregon, specifically the grass species perennial ryegrass, fescue, bluegrass, orchardgrass and wheatgrass. The product is registered for the control of such diseases as rust (*Puccinia* spp.), powdery mildew and *Selenophoma* stem eyespot in the grass species specified.

Present labeling of TILT prohibits the feeding of treated crop and crop wastes to livestock. The department is knowledgeable of a tolerance request submitted to EPA by Ciba-Geigy Corporation on October 21, 1988 (Petition No. 9F3706). This request pertains to hay from treated fields. Data in support of that request indicate that hay cut from treated fields following seed harvest contains no more than 5.0 ppm propiconazole and metabolites. This hay, fed at three

pounds per day per animal, does not result in meat and milk residues in excess of existing tolerances.

Tolerances currently exist for propiconazole and its metabolites in eggs, meat and milk. These tolerances are:

Livestock-cattle, goats, hogs and sheep
(kidney and liver) 0.2 ppm

Livestock-cattle, goats, hogs and sheep
(meat, fat, MBPY, except kidney and liver) 0.1 ppm

Eggs 0.1 ppm

Milk 0.05 ppm

Poultry (kidney and liver) 0.2 ppm

Poultry (meat, fat, MBPY, except kidney and liver)
0.1ppm

2. Grass grown for seed is a significant agricultural crop in Oregon.

Approximately 325,000 acres of grass were grown for seed in 1988. We estimate that about 27% of the acreage received one application of TILT at a rate of 4 ounces of product per acre. Approximately 8% of the acreage received two applications of TILT at the 4-ounce-per-acre rate. A small percentage (less than 5%) of acres may have received three applications of TILT. Applications of TILT may be made as late as 15 days before harvest, but most applications were made more than 30 days prior to harvest.

Acres by Varieties

Variety	Acres Crown in Oregon	Average Yield/Acre (lbs.)
Annual Ryegrass 136,000,000	80,000	1,700
Perennial Ryegrass 100,000,000	100,000	1,000
Orchardgrass 20,656,000	25,820	800
Bentgrass 3,612,000	10,320	350

Bluegrass	21,470	800
17,176,000		
Tall Fescue	60,000	1,000
44,760,000		
Fine Fescue	27,060	700
18,942,000		
	324,670	
341,146,000		

3. Fungicides registered for disease control on grass grown for seed: TILT (propiconazole), Bravo (chlorothalonil) and Bayleton (triadimefon). Until recent years, Dithane S-31 and Dithane M-22 were used, but these formulations are no longer manufactured. TILT and Bayleton provide better than 90% efficacy; Bravo provides about 60% disease control.

4. With over 300,000 acres (5,500 fields) of grass seed in Oregon yielding over 340,000,000 pounds of seed, there is a considerable amount of straw and screenings produced. There is an average of 2.75 tons of straw per acre remaining after harvest. This amounts to a minimum of 825,000 tons of straw. At least 140,00 tons of straw are exported with a farmgate value of \$9,800,000. The final sales value is reported to be at least 140,000 tons x \$250/ton (\$35,000,000).

In the process of cleaning the seed, approximately 20% of the crop is screenings. This results in a minimum of 30,000 tons of grass seed screenings. Some of the screenings are plowed under, dumped or burned. Burning creates a smoke problem and dumping is expensive. Dump fees are \$30-\$40/ton (depending on the geographical area). Dump fees for 50% of the screenings at \$35/ton would amount to \$525,000. Realistically, there are not enough dump sites to accept all the straw and screenings.

5. Screenings and some straw have historically been fed to livestock. The screenings are usually pelleted, although some loose screenings are mixed with other feed components. Some screenings are also utilized as a component of other pelletized feeds. The inability to utilize these screenings as a livestock feed would severely impact the livestock and grass seed industries in Oregon. In addition, failure to use such wastes as livestock feed would result in major disposal difficulties and greatly reduce the timely processing of the grass seed crop in Oregon. Untimely processing would adversely impact growers, processors, shippers and associated domestic and foreign markets.

Grass seed screenings (pellets and loose) are a valuable and

economical source of livestock feed. If approximately 30,000 tons are marketed at \$55/ton, then the value is \$1,650,000. (The price of grass seed screening pellets has ranged from \$35-\$75 during the past few years.) A typical analysis is 11% protein, 2% fat and 24% fiber. About 90% of the feed pellets are shipped in interstate commerce. The majority of the interstate market for grass seed screenings is beef feedlots in Washington and Idaho. Commodity brokers usually offer screenings on the basis of one-half to one pound per head per day, but FDA has (verbally) reported that some feedlots use as much as 9% screening pellets in the ration. Use in dairy rations shows typical feeding levels of two to five pounds per head per day for a lactating cow of 1,200 to 1,400 lbs. body weight.

The amount of screenings utilized in feeding livestock is not expected to exceed 25% of the total ration (dry weight basis) for lactating cows and 30% for finishing cattle. The feeding of screenings to market lambs is generally halted at least 30 days before slaughter. Negligible amounts of screenings are fed to goats or hogs. The amount of propiconazole found in grass seed screenings has not exceeded 6 ppm. Data available from Ciba-Geigy Corporation show that feeding of rations containing as much as 10 ppm propiconazole does not result in milk or meat residues in excess of existing tolerances. Ciba-Geigy therefore supports this application for a specific exemption (Attachment 1, Orr-Kirby, 10/28/88).

6. This request is for exemption from the crop waste feeding restriction on the TILT label for grass seed screenings and straw in the State of Oregon until July 31, 1989.

7. Knowledgeable persons to contact regarding this request for specific exemption:

- Dr. Paul Koepsell, Extension Plant Pathologist
Oregon State University, 503/754-2472
- David S. Nelson, Oregon Grass Seed Growers' Association
Salem, Oregon, 503/585-1157

Sincerely,

W. H. Koesan
Assistant Director
(503) 378-4665

SEC18/20-23#4
Enclosure (via mail)

cc: Paul Koepsell
David Nelson
Jeff McGilvray
Gary Orr
Bill Wright

R

End of Scanned Mail.

Read or Scan:

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M
89-012-01

To: RSERB (EPA7356)
To: PTSCB/REG.X (EPA9045)
To: ID/BOP (EPX2175)
To: WA/DOA (EPX5675)
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End of Scanned Mail.

Read or Scan: