PM 50 ESB

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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MAR 23 1989

MEMORANDUM

SUBJECT: 89-WA-07. Section 18 Exemption for the use of Sethoxydim (Poast®) on Green (succulent) Peas to Control Ryegrass. EPA Reg. No. 7969-58. (No MRID #, DEB # 4993).

From: Freshteh Toghrol Ph.D., Chemist F. Toghrol
Special Registration Section II
Dietary Exposure Branch
Health Effect Division (H7509C)

THRU: Francis B. Suhre, Acting Section Head Francis B Suhre
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To: D. Stubbs/Jim Tompkins, PM 41
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and
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The Washington Department of Agriculture requests a Section 18 exemption for the use of sethoxydim (trade name: Poast) on green (succulent) peas.

Poast® preemergence Herbicide (EPA Reg. No. 7969-58) is a registered pesticide of BASF Wyandotte Corporation; the product contains 18% sethoxydim 2-[1- (ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexene-1-one as its active ingredient.

A maximum of 2,500 acres of peas will be treated with 700 lbs of active ingredient.

Tolerances are established (40 CFR 180.412) for combined residues of sethoxydim 2-[1- (ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexene-1-one and its metabolites containing the 2-cyclohexene-1-one moiety, calculated as the herbicide,at 0.05 ppm to 40.0 ppm in or on numerous commodities, including (but not limited to) alfalfa hay, forage at 40 ppm; milk; fat, meat, and meat by-products of goats, hogs, cattle, and cattle at 0.2 ppm (each), and eggs at 0.5 ppm.

Tolerances are also established (21 CFR 561.430) for combined residues of sethoxydim and its metabolites containing the 2-cyclohexene-1-one in or on animal feed items at 0.5 to 15 ppm.

No plant or animal metabolism studies were submitted with this request. However metabolism data were previously submitted in connection with PP# 0G2396, PP#3F2904, and PP#F3284. For the purpose of this section 18 request, we consider the metabolism of sethoxydim in plants and animals to be adequately understood. The residue of concern are sethoxydim and its metabolites containing the 2-cyclohexene-1-one.

89-WA-07 calls for a single application (ground or aerial) of poast (preemergence) Herbicide at 0.28 lb. ai/A/season (1-1/2 pints of product), and a PHI of 30 days.

The GC method described as Method I in PAM II is adequate for enforcement purposes.

No residue data were submitted with this Section 18, however, residue data were previously submitted in connection with PP#8F3640. The available data reflect higher application rates (2 to 3X) and shorter PHI's (ca. 1/2) than those proposed for this Section 18 request. Data most applicable to this request are summarized be low:

Application rate lb ai/A	PHI days	Residues PPM succulent peas	Pea forage	hay
0.3 + 0.3	15	1.0	----	---
0.5 + 0.3	18	7.1	18.8	------
0.5 + 0.5	15	7.2	----	------
0.5 + 0.5	9	---	12.5	------
0.5 + 0.3	57	----	----	33.4

Meat, Milk, Poultry and Eggs:

Peas (dehydrated) may be fed to cattle, and poultry up to 30% and 40% of their diet respectively. Pea vines and hay are also animal feed items and may reflect up to 40% of the diet of

dairy cattle . Based on the available residue data for these animal feed items, we estimate a maximum sethoxydim dietary burden of 0.4 ppm, for poultry and 20.0 ppm for cattle may result from this proposed section 18 use. Since these levels are less than the established tolerances for comparable feed items (soybeans at 10.0 ppm and alfalfa forage and hay at 40 ppm), we conclude that the established tolerances for milk (0.05 ppm); eggs (0.5 ppm); and fat, meat and meat by-products of goats hogs, horses, sheep and poultry (0.2 ppm) will not be exceeded as a result of the proposed use.

Conclusions:

1. The metabolism of sethoxydim in plants and animals is adequately understood. The residues of concern are sethoxydim and its metabolites containing the 2-cyclohexene-1-one moiety.

2. The GC analytical method (Method I) described in PAM II is adequate for enforcement purposes. Analytical reference standards of sethoxydim are available from EPA Repository.

3. Residues of sethoxydim are not likely to exceed 10, 20, and 40 ppm,in or on succulent peas, peas forage, and peas hay respectively, as a result of this proposed use.

4. DEB concludes that the established sethoxydim tolerances in meat, fat, eggs and milk are adequate to cover the residues resulting from this proposed use.

Recommendations:

TOX considerations permitting, DEB has no objections to this section 18. An agreement should be made with the FDA regarding the legal status of the treated tomatoes in commerce.

cc: Sethoxydim S.F., R.F., Section 18 S.F., Circ., F. Toghrol, PMSD/ISB, TAS (S. Stanton).
RDI: F. B. Suhre Acting Section Head (3/22/89): E. Zager: Acting Deputy Chief (3/22/89):
TS-H7509C:DEB:F.Toghrol:F.T.:RM:802:CM#2:3/22/89.