Filing-Ellis Co. has submitted the request for an amended registration for ground and aerial application of chlopyrifos (Stollman 1994) to control outbreaks of corn and sugar beet and its control arts on almonds. EPA’s original comment (May 8, 1989, 332/782 and 8/3/78) requested further information concerning the registration because of the lack of detail in the description of use. An amended label submitted to satisfy this deficiency was included with the original submission. In addition, however, there is a new substance of chlopyrifos (O-ethyl-O-(2,6-dimethyl-4-pyridyl)phosphorothioate) whose active ingredient cleared under 40 CFR 1520.105.

The following tolerances are established for the combined residues of chlopyrifos and its 3,5,6-trichlorothio-4-pyridyl (TCP) metabolite: corn, field, 8 ppm; sweet corn, 1 ppm; cotton, cotton & cotton, 0.1 ppm; peanuts, 1 ppm; corn, 1 ppm; beans, 2 ppm; sugar beets, 1 ppm; sugar beets, top, 2 ppm; corn, 1 ppm; almonds, 0.4 ppm; and, almond hulls, 1 ppm.

Registration and Formulation Uses

Corn

Registered uses of chlopyrifos on corn, corn, and sweet corn (Chlopyrifos Registration Statement, Section Chemistry Classed, 7/27/72) include the 1976 formulation which is self-applied as a granular broadcast application at 1.0 to 1.5 lbs, a liquid application at 1.0 to 1.5 lbs, an aerial application, and as an aerosol application to insecticide effects on insects and as an aerosol application at 0.3 to 0.4 lbs.
on 2.1/2,080 feet of row (not to exceed 2.1/2 a.i./a based on a 12-inch row spacing). Only one treatment, at planting or at-silage harvest, may be made per season. Second applications of broadcast or aerial application at 0.05-1.1 lb a.i./a may be made at 9.90-1 lb a.i./a/season using ground equipment. If needed, a second foliar application may be made after a 10-15 day interval. The 1 lb/a, 25-gallon application is self-applied as a granular, broadcast application at 1-2 lb a.i./a and as a post-emergent, at-silage application (directly to both sides of plant) at 1 lb a.i./a. Multiple post-emergent treatments using ground equipment (ground or aerial application in plant rows) or aerial equipment (broadcast spray) are made at 0.25-1.0 lb a.i./a per application not to exceed 7.5 lb a.i./a/season. Treated corn stalks may not be fed to livestock within 35 days of the last treatment. Treated corn stalks may not be harvested for livestock feed within 14 days of the last treatment. A 21-day P1D for harvest of grain and a 14-day preparing interval is in effect for all applications.

The proposed use on corn for lesson 18 Rate includes ground or aerial application of 0.5-0.6 lb a.i./a broadcast or planting or post-emergence for broadcast application, the rate is reduced proportionately to 0.2-0.4 lb a.i./a/acre. Instructions include limiting applications to no more than 3.6 lb a.i./a per season; a 10-day 15-day period; a post-emergent restriction on grazing or feeding or treated stalks to meat or dairy animals for 16 days; and a 35-day post-emergent restriction on feeding of treated to meat or dairy animals.

Accuses, Beets:

Restricted use on corn for lesson 18 Rate includes the 2.1/2 a.i./a application for at-planting or post-emergent (up to the 3-true leaf stage) application at 1.8-2 lb a.i./a/acre (20-day P1D not required); only one self-incorporated application per year may be made. In addition, broadcast application of 1.8-2.1 lb a.i./a is incorporated at planting or aerial application at 2.1/2 a.i./a (not to exceed 4 lb a.i./a/acre). A 30-day P1D is in effect for foliar applications in livestock. A 10-day period (3.6 lb a.i./a) is in effect for use of the 4 lb a.i./a/acre formulation in 10 acres for current season. For use in broadcast foliar applications of 1.8-2 lb a.i./a/acre using ground or aerial equipment. A 35-day P1D is in effect.限制性使用於玉米的課程18率包括在播種或生長後的終止後的應用（至三張真葉期），應用率為1.8-2.1 lb a.i./a/英畝（不超過4 lb a.i./a/英畝）。在植株中，草本應用於一至三週的後期。播植或採收後在畝面或空氣應用的1.8-2.1 lb a.i./a是被整合的。在播種或空氣應用2.1/2 lb a.i./a/英畝（不超過4 lb a.i./a/英畝）。一個30日的P1D適用於灌溉。一個10日的期間（3.6 lb a.i./a）適用於使用4 lb a.i./a/英畝在播種或空氣應用的10英畝的當季。在植株中，草本應用於一至三週的後期。播植或採收後在畝面或空氣應用的1.8-2 lb a.i./a是被整合的。
then the label should include a 16-day EW and a restriction on
livestock grazing on foliar-treated areas.

1.6% EC

The registered use includes the 1 lb/gal EC formulation on
almond trees that are mixed with oil at 0.25-0.5 lb a.i./100 gal/A
as a dormant or delayed dormant application made to the entire
tree to the point of trunk. Only one application may be made
during the dormant or delayed dormant period and treated orchards
may not be grazed by meat or dairy animals. The 30% EC formulation
has been approved as a foliar treatment at 2 lb a.i./A in 40-100
gal of water/A at no more than three applications per season with
a 14-day EW. For dormant or delayed dormant treatments, the 30%
EW is applied in a manner similar to the 1 lb/gal EC formulation.

The proposed use of 1.6% EC involves a single application
only of 0.25-0.4 lb a.i./A broadcast by ground rig before hull
split. A restriction on grazing of meat or dairy animals in
untreated orchards should be added to the label.

Analytical Methods

Analytical methods suitable for enforcement purposes has
been established by Dow Chemical Co. and are listed as follows
with their associated pesticide number and percent recovery:
corn, Technical No. 18523 75.12 (85%) (1988, 75-120); snap beans,
No. 77, 187 (35%) (1988), 12-160); and almond hulls and kernels,
No. 10731, 183 (23%) (75-120)). 1% EC 711.14% is available
in tank No. 71, 12-160) in one application evaluated in residue75
No. 10731, 71, 12-160). It does not thoroughly penetrate the
almonds/hulls. A treatment with either tank mix concentrate,
the 0.1% EC solution, and the formulation EC (boxed lid) and
1% EC on whole almonds (indicated X).

Residue Data

No new residue data were included with this amended label.
Since the proposed use of chlortopiclon on alfalfa and on sugar beets
is at considerably lower rates than currently registered uses
and similar sorghum are mixed, then 30% does not report
the combined residue of chlortopiclon and its 30% mixture
resulting from the proposed use to exceed an area infection
residues of 0.1 ppm for corn (whol, green % heat), 40 ppm for
concentrate and storage, and 1 ppm for sugar beets (whol and heat).

Specific data on flowers were previously submitted in EP19768.
Three foliar applications were made at up to 3 lb a.i./A each
during the growing season. Samples were taken 14-16 days following
the last application and analyzed for applied amounts of chlortopiclon.
These averaged 0.13 (75-0.13) ppm in discarded nut bases.
and 2 (0.25-2.5) ppm in kernel hulls (Pat. 59. 051472). Since the following applications proposed in the amended registration in general, with the exception of the resulting residues to exceed the established tolerance of 0.2 ppm for almonds, or 0.1 ppm for kernel hulls. Furthermore, 12 applications of both the 80% WP and the London 64 Rate formulation were made during the same season (i.e., 6 to 10 a.i./A on 0.0 30 a.i./A total square), respectively), because of the timing and spatial application rate proposed 80% WP still does not exceed residues of chlordane and its OPP metabolites to exceed the established tolerances for almonds and kernel hulls.


text

Maize, Wheat, Barley, and Rye

Maize, wheat, barley, and kernel hulls are all cereal food items. Corn (maize) is a primary source food from corn kernel husks, maize, and pulp are also major food items. Since residues of chlordanes and its OPP metabolites are not expected to exceed the established tolerances on these commodities, then OPP concludes that the proposed use of chlordane will not result in secondary residues exceeding their established tolerances.

Conclusions

1. Combined residues of chlordane and OPP resulting from the proposed use of chlordane on corn should not exceed the established tolerance of 0.1 ppm on corn (maize, grain and shoot), or 0.1 ppm on corn (maize) or on corn (maize) and feed.

2. Combined residues of chlordane and OPP resulting from the proposed use of chlordane on sugar beets should not exceed the established tolerance of 1.5 ppm on sugar beet roots and 0.1 ppm on sugar beet tops.

3. Combined residues of chlordane and OPP resulting from the proposed use of chlordane on almonds should not exceed the established tolerance of 0.3 ppm on almond meal and 0.1 ppm on almond hulls.

4. Secondary combined residues of chlordane and OPP are not expected to exceed the established tolerances of 1.5 ppm in meat, 6% and 8% and 1% of cattle, of 0.15 in milk fat (reflecting 0.01 in milk milk of the milk) in meat, 6% and 8% and 1% of cattle, of 0.2 ppm in milk, 5% and 8% and 1% of cattle of eggs, hens, hens and chickens, and of 0.01 ppm in eggs, hens, hens, and eggs, and 1% of cattle of potatoes.

5. Since following applications may be made to almonds trees, the SOP procedures are needed to ensure a 15-day rest for a validation or Vantamid process.
Providing the petitioner agrees the proposed label to include the restrictions noted in conclusion 3 above, USDA has no objections to the proposed amended registration.