

Amended Use Pattern for picloram; Submitted 9-24-74;
(464-326)

11-14-74
11/14/74

Coordination Branch

Background

Tolerances are established for residues of the herbicide 4-amino-3,5,6-trichloropicolinic acid from its application in the acid form, or in the form of its potassium, triethylamine, or trisopropylamine salts expressed as 4-amino-3,5,6-trichloropicolinic acid in or on raw agricultural commodities as follows:

- 80 parts per million in or on forage grasses.
- 5 parts per million in the kidney of cattle, goats, and sheep.
- 0.5 part per million in the liver of cattle, goats, and sheep.
- 0.2 part per million in the meat, fat, and meat by-products (other than kidney and liver) of cattle, goats, and sheep.
- 0.05 part per million (negligible residue) in milk.

*Interim tolerances are established for residues of the herbicide picloram (4-amino-3,5,6-trichloropicolinic acid) in or on the following raw agricultural commodities when present as a result of application of 2,4-D-picloram mixtures to growing barley and wheat during the 1974 growing season in the States of Montana, Nebraska, and North Dakota:

- 5 parts per million in kidney of hogs and horses.
- 1 part per million in green forage and straw of barley and wheat.
- 0.5 part per million in or on grain of barley and wheat.
- 0.5 part per million in liver of hogs and horses.
- 0.2 part per million in meat, fat, and meat byproducts (except kidney and liver) of hogs and horses.
- 0.05 part per million in eggs and the meat, fat, and meat byproducts of poultry.*

The presently accepted use pattern for picloram on pasture and rangeland is

Use Restricted to Texas

0.5 lb. act/A picloram acid (from triethylamine salt) as package mix with 0.5 lb. act/A 2,4,5-T (triethylamine salt)...Do not contaminate water. Do not move soil. Do not use around homes, recreation areas, or similar sites.

The grazing caution (on present labels) which is required by the 2,4,5-T is: Do not graze dairy animals on treated areas within 6 weeks after application. Do not graze meat animals on treated areas within 2 weeks of slaughter.

Picloram (alone) has never been registered on food/feed crops. However a pending amendment (464-320 submitted 10-7-74) calls for:

10K Pellets (11.6% potassium salt of picloram alone)

6.0 lb. act/A of K salt
5.2 lb. act/A picloram

Pasture and Rangeland in W. Va., Va., N.C., S.C., Ga., Ky., Fl., Tenn., Ala., Miss., Mo., Ark., La., Kansas, OK., Texas, Colo., and N.M.,

CB's reviewer (John A. Shaughnessy) has recommended for acceptance of this 10K Pellet use. (Note this is for pellets, not a spray application.)

Proposed Amendment

TORDON 22K = 24.9% potassium salt of picloram
(LIQUID) 2 lb./gal act picloram

Air or Ground Application (SPRAY)

Permanent Rangeland and Grass Pastures in Western Areas:

0.5 lb. act picloram/A or
up to 2.0 lb. act picloram/A

Broadcast
Spot Treatment but do not exceed
0.5 lb. act/A overall

In any one growing season, when using the rate of 2 quarts 1.0 lb. act/A per acre for spot treating, spray no more than 10 acres of any contiguous 20 acre block, or no more than one half the total area involved; at 3 quarts 1.5 lb. act. per acre, spray no more than 7 acres of a 20 acres block or one third of the total area; at 4 quarts 2.0 lb. act. per acre, spray no more than 5 acres of a 20 acre block, or one fourth of the total area. On any size area, follow these percentages of the total area treated in accordance with the rate used. These rates will provide a maximum of 1/2 pound of picloram act. per acre of pasture or range land.

Tank Mixtures

0.5 lb. act/A picloram plus up to 2 quarts/A of ESTERON 99 Conc; Formula 40; DMA 4; ESTERON 245 or KURON herbicides. Follow precautions and directions on the labels of these products.

Do not apply to cropland used for production of desirable crops other than forage grasses. Do not rotate rangeland or pasture to other crop use.

Do not move treated soil.

Do not transfer livestock from a treated area to a broadleaf crop area without allowing 7 days grazing on untreated grass. Otherwise, urine may contain enough picloram to cause injury to sensitive broadleaf plants.

Do not graze dairy animals in or on areas treated with >0.5 lb. act/A spot treatment within 4 weeks. Other animals grazing treated areas within 4 weeks after spot treatment should be withdrawn from treated areas 3 days preslaughter.

Comments

1. This is a new formulation (K salt SC) for use on rangeland and grass.
2. The area of use is broadened from Texas to Western U.S.A.
3. The overall rate per acre remains the same as presently registered (0.5 lb. act/A).
4. There are directions for new tank mixes with ESTERON 99 CONC (Propylene glycolbutyl ether ester of 2,4-D).

Formula 40 (Alkanolamine salts of 2,4-D)
 DMA 4 (Dimethylamine salt of 2,4-D)
 ESTERON 245 (Propylene glycol butyl ether ester of 2,4,5-T)
 KURON herbicides (propylene glycol butyl ether ester of Silves)

5. There is no permanent tolerance for 2,4-D in grass (except for U.S. Gov't use of DMA 2,4-D on ditch banks). There is an interim tolerance of 300 ppm 2,4-D in grasses (pasture and rangeland) and grass hay.

There are no permanent or interim 2,4,5-T tolerances in/on any crop.

There is no permanent or interim tolerance for silvex on grass.

6/ It has been CB policy that interim tolerances apply only to presently registered uses. All these mixtures are new uses, never registered.

7. Spot treatments of up to 1/4 of the total area, at 2.0 lb. act/A will require supporting residue data.

Residue Data (this submission)

The analytical method used for grass was Dow's ACR 66.7. This is the method of Getzendaner et al, using GLC-EC. This method was accepted as part of Petition OF0893.

Ten large-scale studies are reported, in which range (grass) was treated with TORDON 22K. The data can be summarized:

<u>lb. act</u> <u>picloram/A</u>	<u>Average residues in ppm</u>		
	<u>0 weeks after</u> <u>treatment</u>	<u>2 weeks</u>	<u>16 weeks</u>
0.5	60	7.4	4.5
1.0	187	68	8.4
0.5	105	18	0.5
1.0	154	32	1.9
3.0	343	37	-
3.0	720	95	70
1.5	166	37	1
3.0	519	165	74
3.0	291	110	15
2.0	304	68	47

(No data are submitted for tank mixes of any kind)

Conclusions

1. The residue data indicate that high initial residues are reduced to tolerance levels after 2 weeks. Therefore, the label should have an additional caution: "Do not graze livestock or cut for feed within 2 weeks after treatment. This was not necessary in Petition 863 because the label had no direction for up to 2.0 lb. act/A spot treatments.
2. The tank mix uses are not acceptable because there are no tolerances (permanent) for 2,4-D, 2,4,5-T, or silvex on grass. Even if tolerances were established for these compounds, we would still need residue data proving that the mixtures do not cause illegal residues of either component in/on grass.

Recommendations

It is recommended that registration should be denied for the 2 reasons stated in the Conclusion.

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