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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

Subject: Special Review Action Code 870
Maneb Data Call-In. Request for time extension for crop residue data. Letter of 12/27/86 Accession No. NONE [RCB No. 353]

From: Martha J. Bradley, Chemist
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Background

The Maneb Task Force submitted proposals, dated March 1, 1985, to satisfy crop residue requirements for maneb and ETU. The Task Force chose 12 crops which comprise 70-75% of the market and referred to them as representative crops. In our review of the proposals (M. Bradley, April 16, 1985), we accepted the Task Force proposals for the 12 specific crops and inquired whether the remaining crops were to be dropped from the maneb labels. A report from the Task Force dated June 7, 1985 stated that they recognized the need for residue data for all crops having tolerances and that when the Agency had commented on the proposed program for the 12 selected crops, the Task Force would consider expanding the program into a second year.

The present letter, dated December 27,1985 from Joseph D. Panetta on behalf of the Maneb Task Force, requests extension of the deadline for crop residue data. Tha Task Force now proposes the submission of residue data on the 12 specific crops in early 1986 and for the remaining crops by March 1, 1987. The Task Force also proposes extension of the deadline for the first 12 crops from March 1986 to May 1, 1986 because of problems with analytical methods development.

RCB has been requested by the Special Review Personnel to determine whether the 12 crops can serve as representative crops under the crop grouping scheme (CFR 40 180.34(f). General comments on crop residue data and a summary of food

uses from the EPA Index to Pesticide Chemicals follows by crop group, principle growing areas and components for which residue data are needed.

General Comments

1. The * items in the attached crop group listing are the twelve crops on which the Task Force is conducting residue studies. The representative crops in the crop grouping scheme are given in parentheses for each crop group.

2. The registrants should consult 40 CFR 180.34 for related crops and conditions for "translating" data from one crop to another.

3. Our comments on components for which residue data are needed apply only to foods or feeds for which tolerances are normally established and are listed in Residue Chemistry Guidelines.

4. The food items for which TOX wishes to have residue data to conduct a dietary risk assessment are in addition to the components we are listing in this memo. These data are necessary because the level of residues of the parent and metabolites can change greatly during standard food processing steps. The processed and ready to eat commodities for which residue levels on food, ready for consumption are needed, should be those for which food consumption data are available in the TAS data base.

5. The residue studies must be properly supported. The following should be considered by the submitter.

Appropriate storage stability studies must be available.
Treatment must include maximum application/A/season, aerial and ULV application, and spreader-sticker use where recommended.
The methodology used must be adequately validated.

6. All Processing and cooking studies should be conducted on racs having detectable residues. Residue data are needed for the parent compound and ETU in representative processed and cooked foods and feeds.

7. If detectable residues are found on feed items, suitable cattle and poultry feeding studies will be needed as well as appropriate tolerance proposals for meat, milk, poultry and eggs. These data are essential for conducting a dietary risk assessment.

8. The maximum number of treatment times or maximum total dosage per season should be given on the label unless the residue data show no build-up of residues from multiple applications.

9. A detailed review of all the raw data and use patterns will be necessary to consider whether crop residue data can be "translated" to other crops. Our purpose is to point out the obvious data gaps in the support of the established tolerances for maneb. The registration standard for maneb is scheduled to be completed by September 1986. Additional data gaps may be identified at that time.

10. In the attached crop group listing, the section on "components for which residue data are needed" takes into account the fact that data on representative commodities only, may suffice for all crops in a group.

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Seed Treatments and Pineapple Propagation Stock Treatments

Seed and propagation stock treatments are no longer considered to be non-food uses. Section 171-12 of the Residue Chemistry Guidelines lists the requirements for determining whether tolerances are needed for these treatments. For those crops which have tolerances from post emergent applications, no additional data on residue levels from seed treatment use are usually needed. However, data for the seed treatment of barley, corn (other than sweet), cotton, flax, oats, peanuts, rice, rye, sorghum, soybeans, sunflower, wheat and for pineapple propagation stock treatment will be needed.

Tobacco

Although tolerances are not established for pesticide use on tobacco, residue data are required to assess the exposure to residues on tobacco. Section 171-11 of the Residue Chemistry Guidelines lists the data requirements for tobacco. Data for green tobacco, dried tobacco, cigarettes and pyrolosis products are generally needed.

Tree nuts (almond, pecan and English walnut)

Tolerances: *almond 0.1 ppm

Maximum Use: 1.6 lb ai/100 gal or 7.28 lb ai/A as dust; multiple applications
Apply no later than 5 weeks after petal fall
If applied after petal fall, the feeding of hulls restricted for dairy animals or animals being finished for slaughter
Add a suitable spreader-sticker

Principle growing areas:
CA

Components for which residue data are needed:
nutmeats
hulls

Conclusion: Residue data for maneb and ETU are needed for almond nutmeats and hulls. The restriction against feeding hulls is not practical because the almond hulls are not under the control of the grower.

Pome Fruits (apple and pear)

Tolerances: *apple 2 ppm (the original 7 ppm tolerance was not rescinded when the tolerance was lowered to 2 ppm)

Maximum Use: 8 lb ai/A, apply at 7 to 14 day intervals
15 or 30 day PHI depending on the state
restriction against grazing in treated orchards
add suitable spreader-sticker

Principle growing areas:
apples - CA, MI, NC, NY, OR, PA, VA, WA, WV

Components for which residue data are needed:
apples
apple pomace, wet and dry - cattle and poultry feed
apple juice
apple sauce

Conclusion: Residue data for maneb and ETU are needed for the above commodities.

Stone fruit (sour or sweet cherry, peach and plums or fresh prunes)

Tolerances:		
apricot	10	ppm
nectarine	10	ppm
peach	10	ppm

Maximum Use: apricot
1.6 lb ai/100 gal or 8.4 lb ai/A as dust, multiple applications
14 day PHI

nectarine, peach
8 lb ai/A, multiple applications
nectarine 14 day PHI
peach 2 day PHI; if applied within 14 days of harvest remove residues by brushing

Principle growing areas:
apricot - CA, UT, WA
nectarine - CA
peach - CA, GA/SC, MI, NJ/PA, WA

Components for which residue data are needed:
apricots
nectarines
peaches

Conclusion: Residue data for maneb and ETU are needed for the above commodities. The directions for the peach use, to remove residues by brushing is not practical. The residue present at harvest should be considered as the basis for setting the tolerance. The PHI can also be changed by the registrant.

Asparagus (not included in any crop group)

Tolerances: asparagus none

Maximum Use: 2.4 lb ai/A, postharvest, apply at 10 day intervals.
0.8 lb ai/100 gal dip treatment, planting stock

Principle growing areas:
CA, IL, MI, NJ, WA

Components for which residue data are needed:
asparagus, fresh

Conclusion: This use is no longer considered a non-food use. Some residue data for maneb and ETU are needed for the planting stock dip treatment of asparagus.

Bananas (not included in any crop group)

Tolerances: *whole fruit 4 ppm
*pulp 0.5 ppm

Maximum Use: 4 lb ai/A, preharvest application, repeat at 2 to 3 week intervals or as needed, aerial
No PHI

Components for which residue data are needed:
whole fruit
pulp

Conclusion: Residue data for maneb and ETU are needed for bananas.

Legume vegetables (beans, one succulent variety and one dried variety; peas, one succulent variety and one dried variety)

Tolerances: *beans (dried) 7 ppm
*beans (succulent) 10 ppm

Maximum Use: 3.2 lb ai/A, apply during bloom or as needed, repeat at 4 to 7 day intervals
7 day PHI for dried, 4 day PHI for succulent
feeding of treated forage or hay is restricted

Principle growing areas:
dried beans & peas - CA, CO, ID, MI, NB, ND, WA/OR
succulent beans & peas - CA, DE, FL, ID, MI, MN, NJ/NY, OR/WA, TN/NC/VA, WI

Components for which residue data are needed:

dried	succulent
seed	seed and pod
vine	vine
hay	hay
	cannery residue

Conclusion: Residue data are needed for maneb and ETU for the above commodities. The vines and hay may be restricted from feeding livestock.

Brassica (cole) leafy vegetables (broccoli, cabbage and mustard greens)

Tolerances:		
	broccoli	10 ppm
	Brussels sprouts	10 ppm
	cauliflower	10 ppm
	kohlrabi	10 ppm
	*cabbage	10 ppm
	cabbage, Chinese	10 ppm
	collards	10 ppm
	kale	10 ppm
	mustard greens	10 ppm

Maximum Use: broccoli
3.2 lb ai/A as spray or 4 lb ai/A as dust; apply in plant beds at 3 day intervals and at 7 to 14 day intervals in the field
0 day PHI
If applied within 3 days of harvest, remove residues by washing and trimming

Brussels sprouts, cauliflower, kohlrabi
2.4 lb ai/A as spray or 2.78 lb ai/A as dust; apply in plant beds at 3 day intervals and at 7 to 14 day intervals in the field
0 day PHI

cabbage
1.8 lb ai/A as spray or 2.59 lb ai/A as dust; apply 7 to 10 days after planting, 3 to 5 day intervals in plant beds or 3 to 7 day intervals in the field
7 day PHI

collards, kale, mustard greens
2.4 lb ai/A repeat at 7-10 day intervals

[illegible] residues by washing

Principle growing areas:
broccoli - CA, OR, TX/AZ
cabbage - CA, FL, NJ, NY, SC/NC/GA/TN, TX, WI
mustard greens - CA, FL, LA/GA/TN, MI/OH/IN, TX/AZ

Components for which residue data are needed:
cabbage, fresh with wrapper leaves
broccoli, fresh
fresh mustard greens and processed seed

Conclusion: Residue data for maneb and ETU are needed for the above commodities. Due to the range of application rates and PHIs, the representative crops may not be sufficient for the crop group brassica leafy vegetables. The precaution to remove excess residues from broccoli, collards, kale and mustard greens is impractical. Actual residue at harvest must be used as the basis for setting the tolerance. The PHI can also be changed by the registrant.

Root and tuber vegetables (carrot, potato, radish and sugarbeet)

Tolerances:			
	carrots	7	ppm
	*potatoes	0.1	ppm
	*sugar beet	-	
	sugar beet tops	45	ppm
	turnip root	7	ppm
	turnip tops	10	ppm

Maximum Use: carrots
2.4 lb ai/A as spray or 3 lb ai/A as dust; repeat at 7 to 10 day intervals
0 day PHI

potatoes
2 lb ai/A as spray or 3.92 lb ai/A as dust; repeat at 5 to 10 day intervals or as needed
0 day PHI potatoes
also potato seed piece treatment - not considered a non-food use

sugarbeets
2.56 lb ai/A, repeat at 7 to 10 day intervals for 3 to 5 applications
10 day PHI with the feeding of treated tops restricted
or
1.6 lb ai/A, repeat at 7 to 10 day intervals for 3 to 5 applications
14 day PHI with no restriction on feeding of treated tops
also seed treatment

turnips
2.4 lb ai/A, repeat at 7 to 10 day intervals
10 day PHI
remove excess residue by washing

Principle growing areas:
carrots - AZ, CA, MI, MN, NJ, NY, OH, OR, TX, WA, WI
potatoes - CA, CO, ID, [illegible]
sugar beets - CA, ID, MI, MN, NB, ND, WA, WY
turnips - CA, IL/IN, NJ, OH, OR/WA, TX

Components for which residue data are needed:

carrots	sugarbeets	potatoes	turnips
root, unwashed	roots, unwashed	tuber, unwashed	roots, unwashed
	leaves - may be restricted	granules	tops
	pulp, dehydrated	chips	
	molasses	dried	
	refined sugar		

Conclusions: Residue data for maneb and ETU are needed for the above commodities. The precaution to remove excess residues from turnips is impractical. Actual residue at harvest must be used as the basis for setting the tolerance. The PHI can also be changed by the registrant. Turnip tops and roots are under the control of the grower and feeding may be restricted. For sugarbeets, PHIs that depend on the amount of pesticide applied are not practical. The label directions are even more impractical with the feeding restriction also dependent on the dose applied.

Leafy vegetables except brassica (lettuce (head and leaf), celery and spinach)

Tolerances:

celery	5 ppm
endive	10 ppm
*lettuce	10 ppm
rhubarb	10 ppm
spinach	10 ppm

Maximum Use: celery
2.4 lb ai/A as spray or 2.8 lb ai/A as dust; apply in plant bed at emergence and repeat at 3 to 5 day intervals, then at 7 to 10 day intervals in the field
14 day PHI
remove residues by stripping, trimming, and washing

endive and lettuce
2.4 lb ai/A as spray or 3.15 lb ai/A as dust; repeat at 3 to 5 day intervals
10 day PHI
remove residues by stripping, trimming and washing

rhubarb - greenhouse - use limited to MI
1.6 lb ai/100 gal Apply 4 weeks before harvest. Make 4 applications at 7 day intervals
0 day PHI

spinach
2.4 lb ai/A as spray or 2.7 lb ai/A as dust
10 day PHI
remove residues by washing or other effective means

Principle growing areas:
celery - CA, FL, MI, WA
lettuce (head and leaf) - CA, CO, FL, NY/NJ, TX/AR, WA
rhubarb - greenhouse
spinach - CA, CO/AR, MD/VA, NJ, TX/OK

Components for which residue data are needed:
celery, untrimmed, unwashed
head lettuce, fresh with wrapper leaves and leaf lettuce
spinach, fresh
rhubarb, fresh

Conclusion: Residue data for maneb and ETU are needed for the above commodities.

The precaution to remove excess residues from celery, endive, lettuce and spinach is impractical. Actual residue at harvest must be used as the basis for setting the tolerance or the PHI can also be changed by the registrant.

Cereal grains (fresh sweet corn and dried field corn, rice, sorghum and wheat)

Tolerances: *sweet corn 5 ppm kernel plus cob with husk removed

Maximum Use: 2.4 lb ai/A, repeat at 3 to 7 day intervals
0 day PHI
restriction against feeding treated forage to livestock
also seed treatment

Principle growing areas:
sweet corn - all areas across the country

Components for which residue data are needed:
kernel plus cob with husk removed
forage

Conclusion: Residue data are needed for maneb and ETU for the above commodities. A restriction against feeding treated forage is not acceptable. Forage residue data are needed.

Small fruits and berries (blackberry or other Rubus spp., blueberry, cranberry, grape and strawberry)

Tolerances: cranberry 7 ppm
*grape 7 ppm

Maximum Use: cranberry
6 lb ai/A, apply at midbloom, repeat at 10 to 14 day intervals
30 day PHI
or
2.4 lb ai/100 gal, apply at midbloom
apply no later than 4 weeks after midbloom

grape
4 lb ai/A, multiple applications, repeat at 7 to 10 days or as needed
apply no later than 10 days after bloom
or
1.5 lb ai/A, multiple applications, repeat at 7 to 10 days or as needed
7 day PHI

Principle growing areas:
cranberry - MA, NJ, OR, WA, WI
grape - CA, MI, NC, NY, WA

Components for which residue data are needed:

cranberry	grape
cranberry	fruit
	raisin
	pomace, wet and dry
	juice
	raisin waste

Conclusion: Residue data for maneb and ETU are needed for the above commodities. It is not practical to have different PHIs for various application rates.

Cucurbit vegetables (cucumbers, melons (cantaloupe or muskmelon) and summer squash)

Tolerances:		
	*cucumber	4 ppm
	*melon	4 ppm
	*squash, summer	4 ppm
	squash, winter	4 ppm
	pumpkin	7 ppm

Maximum Use: cucumber
3 lb ai/A as spray or 3.5 lb ai/A as dust; repeat at 3 to 5 or 7 to 10 day intervals
5 day PHI

melons
2.4 lb ai/A as spray or 3.5 lb ai/A as dust; repeat at 7 to 10 day intervals
5 day PHI

pumpkins
2.4 lb ai/A; repeat at 7 to 10 day intervals
0 day PHI

squash
2.8 lb ai/A as spray or 3.5 lb ai/A as dust; repeat at 7 to 10 day intervals
5 day PHI

Principle growing areas:
cucumber - CA, FL, MI, NC, NJ, NY, OH, SC, TX
cantaloup - AX, CA, GA, IN, MI, SC, TX
squash - CA, FL, GA, MA, MI, NJ, NY, OR, SC, TX

Components for which residue data are needed:
cucumber
cantaloup or muskmelon
summer squash

Conclusion: Residue data for maneb and ETU are needed for the above commodities. Because of the differences in use rate and PHIs, residue data for the representative crops may not be sufficient for the crop group cucurbits.

Fruiting vegetables except cucurbits (tomatoes and peppers)

Tolerances:		
	eggplant	7 ppm
	peppers	7 ppm
	*tomatoes	4 ppm

Maximum Use: tomatoes
2.5 lb ai/A as spray or 4 lb ai/A as dust repeat at 7 to 10 day intervals
5 day PHI

peppers
3.02 lb ai/A, repeat to 7 to 10 day intervals
0 day PHI

eggplant
2.4 lb ai/A as spray or 3.02 lb ai/A as dust; apply when fruit begins to form, repeat at 7 to 10 day intervals
0 day PHI

Principle growing areas:
tomatoes - CA, FL, IN, MI, NJ, OH, PA, SC, TN
peppers - CA, FL, NC, NJ, TX

Components for which residue data are needed:
tomatoes
juice
pomace, wet and dry
paste
puree
peppers, fresh

Conclusion: Residue data for maneb and ETU are needed for the above commodities. Due to the range of application rates and PHIs, residue data on the representative crops may not be sufficient for the crop group fruiting vegetables.

Figs (not included in a crop group)

Tolerances: figs 7 ppm

Maximum Use: 0.6 lb ai/100 gal, apply once, 10 to 20 days before harvest
10 day PHI

Components for which residue data are needed:
figs, fresh
figs, dried

Conclusion: Residue data are needed for maneb and ETU on the above commodities.

Bulb vegetables (onion (green and bulb) and one other commodity)

Tolerances: onion 7 ppm

Maximum Use: 2.4 lb ai/A as spray or 3 lb ai/A as dust repeat at 7 to 10 day intervals
0 day PHI
also at planting in furrow

Principle growing areas:
bulb onion - CO, ID, MI, NY, OR, WA
green onion - AZ/NM, CA, TX

Components for which residue data are needed:
green onions
dry bulb onions

Conclusion: Residue data are needed for maneb and ETU on the above commodities.

papaya (not included in any crop group)

Tolerances: papaya 10 ppm

Maximum Use: 2.4 lb ai/A, apply when fruit is set, repeat at 7 to 14 day intervals
no PHI

Components for which residue data are needed:
whole fruit

Conclusion: Residue data are needed for maneb and ETU on the above commodity.

Conclusions/Recommendations

The residue data needed for each crop/crop group are listed under each subject heading in this review. A detailed review of all the raw data and use patterns for the selected 12 crops will be necessary to consider whether representative crop residue data can be "translated" to other crops in a crop group. We note that there are only four crop groups for which tolerances have been established on all representative commodities in the group (fruiting vegetables, cucurbits, leafy vegetables and brassica leafy (cole) vegetables. We also note that there is only one crop group, cucurbits, for which the registrants are currently conducting residue trials for the representative crops in that group.

RCB has no objection to the time extension to May 1, 1986 for the submission of residue data for the 12 selected crops (even though a letter dated October 16, 1985 from Joseph [illegible] indicated that the existing methodology for maneb and ETU were satisfactory).

The extension of the deadline to March 1987 for residue data for the crops not supported by data for the 12 selected crops is not based on scientific considerations and we defer to Registration Division on this matter.

References:

1. EPA Index to Pesticide Chemicals dated 10/31/85 for label directions.
2. Memo of R. Perfetti of 12/3/83 to IR-4 listing geographically representative states for crop grouping.
3. Agricultural Statistics, 1979
4. Crop grouping scheme, 40 CFR 180.34 (f)
5. Residue Chemistry Guidelines.

cc: Reviewer, EBDC SF, R F, circu, F.Sanders(RD), Amy Rispin, PMSD/ISB
RDI:Section Head:RSQuick:Date:01/16/86:RDS:01/17/86
TS-769:RCB:Reviewer:MJBradley:MJB:CM#2:RM:810:557-1521:01/14/86