

US EPA ARCHIVE DOCUMENT

12-29-87RF



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

DEC 29 1987

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#3F2934 (RCB #2695) Vinclozolin (Ronilan™) on Raspberries, Leaf Lettuce, and Onions - Amendment of July 31, 1987 - MRID Nos. 402974-00 thru 402974-04

FROM: Gary Otakie, Chemist  
Tolerance Petition Section II  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769C)

TO: Lois A. Rossi, PM 21  
Fungicide-Herbicide Branch  
Registration Division (TS-767C)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769C)

THRU: Charles L. Trichilo, Ph.D., Chief  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769C)

Background

BASF Wyandotte Corporation had previously requested the establishment of tolerances for combined residues of the fungicide 3-(3,5-dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolinedione (vinclozolin) and its metabolites containing the 3,5-dichloroaniline moiety in or on the raw agricultural commodities leaf lettuce and raspberries at 10 ppm and onions, green and dry bulb, at 1.0 ppm.

Summary of Deficiencies that Need Resolution

1. Deficiency No. 3b. concerning leaf lettuce is resolved, provided the petitioner amends the proposed label to

limit the maximum use to 6 lbs. (3 lbs. ai) Ronilan/acre/growing season. A revised Section B, with the amended label is required.

2. Deficiency No. 3c. concerning dry bulb onions is resolved. However, the proposed tolerance on green onions remains deficient due to the lack of supporting residue data on green onions. Accordingly, a revised Section F specifying use on dry bulb onions only, is required.

#### Recommendation

Residue Chemistry Branch (RCB) will recommend for the establishment of the proposed vinclozolin tolerances on raspberries, leaf lettuce, and dry bulb onions of 10.0, 10.0, and 1.0 ppm respectively, provided that the proposed label is revised to include the required maximum use statement for lettuce, under RCB Comments/Conclusions re: Deficiency No. 3b of the Detailed Considerations that follows in this review, and a revised Section F specifying use on dry bulb onions only is submitted. RCB recommends against the proposed tolerance for vinclozolin on green onions of 1.0 ppm for the reason discussed in the Detailed Considerations (Deficiency No. 3c.) that follows in this review.

#### Present Submission

#### Additional Data

The present submission includes residue data on raspberries, leaf lettuce, and (presumably dry bulb) onions; and a storage stability study on vinclozolin and its metabolites in grapes, strawberries, lettuce, and soil.

#### Detailed Considerations

The deficiencies cited in RCB's review of February 7, 1984 (PP#3F2934, memorandum of J. Mayes) will be restated below followed by the petitioners responses and RCB's Comments/Conclusions. The numbering of the deficiencies follows that of the February 7, 1984 review.

#### Deficiency No. 3a.

Data on raspberries show high and erratic control values which question the reliability of the empirical data. It must be shown that the apparent inadvertent residues in plots do not adversely affect sample results causing higher residues. More data on raspberries are needed, reflecting the proposed use. Data for one plot indicate that the proposed tolerance could be exceeded. Wider geographical representation is also needed.

Petitioner's Response to Deficiency No. 3c

A. Residue Data (MRID No. 402974-01)

In order to obtain additional residue data from the use of Ronilan™ Fungicide on raspberries, 16 field trials were conducted in 7 States: New York, New Jersey, Michigan, Ohio, Oregon, Washington, and California. These states comprise the major growing regions for this crop. The study was designed to determine the residue levels at a normal preharvest interval (PHI), 5 to 11 days, when the fungicide was applied under typical conditions.

Pertinent field trials received four applications of 1.0 lb ai/A each. The collection of field samples occurred in a random fashion in order to obtain representative samples. Samples were harvested at normal maturity 5 to 11 days following the last application. Samples were shipped frozen to BASF Corporation Chemicals Division and were stored frozen until analysis.

The raspberries were homogenized in a Hobart meat grinder. Any partial thawing of samples during this process was of short duration. All homogenized samples were then stored frozen (< -5 °C) until analysis. When aliquots were removed for contract laboratory analyses, these were packed and shipped in dry ice. The bulk of the material was maintained in the BASF freezer. A maximum of 20 months lapsed between harvest and analysis of the raspberry samples.

All raspberry field trial samples were analyzed utilizing Method 25F (previously discussed under PP#3F2934, February 7, 1984 memorandum of J. Mayes), and modified by substituting chloroform for dichloromethone throughout the entire procedure, with a limit of quantitation of 0.05 ppm of vinclozolin. Recoveries for the method on raspberries averaged  $87 \pm 13\%$  (N = 10) with fortifications ranging from 0.10 to 10.0 ppm.

The analysis of the raspberry samples showed a maximum residue of 4.6 ppm of vinclozolin equivalents after four applications of 1.0 lb ai/A each and a PHI of 9 days. This total residue is composed of all metabolites containing the dichloroaniline moiety, since the method cleaves metabolites to this compound prior to derivatization. The residue varied from 0.15 ppm to 4.6 ppm over the PHI range of 5 to 11 days.

The following table summarizes the raspberry field trial data (uncorrected for recovery):

RASPBERRY FIELD TRIALS

<u>State</u>	<u>Application Rate (lb ai/A)</u>	<u>No. of Samples</u>	<u>No. of Applications</u>	<u>PHI (days)</u>	<u>Range Vinclozolin Equivalents (ppm)</u>
NY	0	5	0	0	0.06 - 0.10
NY	1	5	4	9	2.1 - 3.4
NJ	0	2	0	0	0.05 - 0.36
NJ	1	3	4	9	0.15 - 4.6
MI	0	2	0	0	0.09 - 2.0* (0.13)
MI	1	2	4	5	0.16 - 1.9
OH	0	2	0	0	0.05
OH	1	2	4	5	1.3 - 1.7
OR	0	3	0	0	0.05 - 0.09
OR	1	9	4	10-11	0.27 - 3.0
WA	0	3	0	0	0.06 - 0.09
WA	1	3	4	9	2.1 - 2.4

\*The control and treated samples were apparently mixed up so the original samples were reanalyzed.

B. Storage Stability Data (MRID No. 402974-04)

A storage stability study was conducted for two similar matrices (strawberries and grapes), and was submitted to validate the storage of raspberry samples. Individual 40 to 50 gram subsamples of strawberries were fortified at 0.2 and 5.0 ppm with BAS 352 F (vinclozolin). Metabolite B, (3,5-dichlorophenyl-carbamic acid-(1-carboxy-1-methyl)-allyl ester), metabolite D (3,5-dichloroaniline), or metabolite E (N-(3,5-dichlorophenyl)-2-hydroxy-2-methyl-3-butenic acid amide) while 50 gram subsamples of grapes were fortified at 5.0 ppm with either BAS 352F, metabolite B or metabolite D; and stored frozen at < -5 °C until analysis.

Strawberry and grape samples were analyzed using Method 25 or Method 25E, respectively, since the storage stability study was started prior to the approval of Method 25F. These methods are essentially identical except Method 25E includes the option of liquid chromatographic determination, but in all cases gas chromatography was used. Method 25 has undergone a successful EPA method trial on strawberries (PP#9F2205, memorandum of G.P. Makhijani, August 7, 1989). Method recoveries were determined for grapes fortified with 0.5 ppm BAS 352F, metabolite B or metabolite C and average recoveries were 93 ± 23, 109 ± 39, and 88 ± 18%, respectively.

The storage stability data for the 0.5 ppm fortifications are summarized as follows:

Storage Stability of Vinclozolin and Metabolites in Strawberries and Grapes

Sample Type	Storage Period from Initial Fortifications (months)	Percent Recovery* Metabolites		
		BAS 352 F	B	D (E)
<u>Strawberries</u>				
	3	80		
	6	79		
	12	86		
	32	76		
	3		77	72 (96)
	13		96	71 (98)
	29		86	78 (93)
<u>Grapes</u>				
	3	88	86	83
	6	97	87	91
	40	98	97	66

(cont'd)

\*Percent recovery values represent an average of duplicate analyses except where noted. For the strawberry analyses, recovery values are uncorrected for method efficiency on the day of analyses. For the grape analyses, these values are corrected for method efficiency.

RCB Comments/Conclusions re: Deficiency No. 3a

The storage stability data submitted on grapes and strawberries indicate that when stored frozen at < -5 °C, vinclozolin and metabolite B are stable up to 40 months; metabolites D and E are stable up to 29 months; and metabolite D is also moderately stable up to 40 months, in

similar crops. The storage stability data are acceptable and representative for a crop such as raspberries. Accordingly, the storage stability data on vinclozolin and metabolites B, D, and E stored in grapes or strawberries adequately support the stability of these moieties, in the raspberry field trial samples, stored up to a maximum of 20 months.

The field trial data on raspberries are geographically representative and adequately supports the proposed maximum label application rate for raspberries of 2 lbs of product/acre/application up to a maximum of four applications or 8 lbs of product/acre (i.e., 4 lbs ai/A/season). Analyses were conducted utilizing Method 25F (previously discussed under PP#3F2934, February 7, 1984, memorandum of J. Mayes), and modified by substituting chloroform for dichloromethane throughout the entire procedure. The residue range of vinclozolin equivalents was from 0.15 to 4.6 ppm, for PHI's ranging from 5 to 11 days. The recommended PHI on the label is 9 days. Although, the field trials conducted in Oregon utilized a PHI of 10 to 11 days, the residue ranged from 0.27 to 3.0 ppm, well below the proposed tolerance on raspberries of 10 ppm. A detailed review of all the field trial data on raspberries adequately supports both the proposed tolerance on raspberries of 10 ppm and the proposed PHI of 9 days.

Deficiency No. 3a is resolved.

Deficiency No. 3b

Data reflecting the proposed use on leaf lettuce were collected only in the state of New Jersey. More geographical representation is necessary to make a judgment on the expected residues from this use.

Petitioner's Response to Deficiency No. 3b.

A. Residue Data (MRID No. 402974-02)

In order to obtain additional data from the use of Ronilan™ Fungicide on leaf lettuce, 12 field trials were conducted in 5 States: Florida, Texas, Michigan, Ohio and California. These states comprise the major growing regions for this crop. The field trials received two to four applications of 1.0 lb ai/A each. Samples were harvested at normal maturity 5 to 28 days following the last application. Samples were shipped frozen to BASF Corporation Chemicals Division and were stored frozen until analysis.

The lettuce samples were homogenized in a Hobart meat grinder. Any partial thawing of samples during this process was of short duration. All homogenized samples were then stored frozen (< -5 °C) until analysis. When aliquots were removed for contract laboratory analyses, these were packed and shipped in dry ice. The bulk of the material was maintained in the BASF freezer. A maximum of 17 months lapsed between harvest and analysis of the lettuce samples.

The largest residue found in the typical lettuce samples was 5.4 ppm of vinclozolin equivalents. The field data for this trial indicated a treatment schedule of four applications of 1.0 lb ai/A each and a PHI of 20 days. The more common treatment program of three applications of 1.0 lb ai/A and a PHI of 5 days produced a maximum residue of 4.4 ppm.

The largest total residue found in the lettuce samples after any of the application schedules was 18.5 ppm. This residue was atypical when compared to samples in other trials. The cooperator who conducted this trial reported that the crop was planted later in the fall than normal and that the plants were stunted when harvested. The samples collected for analysis would not have been harvested in this condition for commercial use. Under normal conditions the plants would have been actively growing and the residues would have been lower as with other trials receiving the same number of treatments. The similar residue levels found for both the 14- and 28-day samples indicate that growth was minimal during this time.

The following table summarizes the lettuce field trial data uncorrected for method recoveries:

Leaf Lettuce Field Trials

<u>State</u>	<u>Application Rate (lb ai/A)</u>	<u>No. of Samples</u>	<u>No. of Applications</u>	<u>PHI (days)</u>	<u>Range Vinclozolin Equivalents (ppm)</u>
FL	0	3	0	0	0.18 - 0.30
FL	1	3	2	28	0.27 - 0.36
TX	0	2	0	0	0.18 - 0.23
TX	1	1	4	20	5.4
TX	1	1	3	28	0.34
CA	0	3	0	0	<0.05 - 0.17
CA(1)	1	2	3	5	1.8 - 4.4
CA(2)	1	3	2	28	10.0 - 16.4
CA(3)	1	3	2	14	9.0 - 18.5
MI	0	2	0	0	0.08 - 0.30
MI	1	2	3	21	0.08 - 0.30
OH	0	10	0	0	0.06 - 0.26

OH	1	5	3	10	0.58 - 0.77
OH	1	3	3	5	0.34 - 1.8
OH	1	2	3	15	1.1 - 1.8

- (1) sampling date July 11, 1885.
- (2) sampling date December 25, 1985.
- (3) sampling date December 11, 1985.

According to the petitioner's submission, all lettuce field trial samples were analyzed utilizing Method 25F (previously discussed under PP#3F2934, February 7, 1984, memorandum of J. Mayes) and modified by substituting chloroform for dichloromethane throughout the entire procedure, with a limit of quantitation of 0.05 ppm of vinclozolin (BAS 352 F) equivalents. Recoveries for the method on lettuce averaged  $87 \pm 8\%$  (N = 9) with fortifications ranging from 0.50 to 20.0 ppm.

B. Storage Stability Data (MRID No. 402974-04)

A storage stability study was conducted for lettuce to validate the storage of lettuce samples. Individual 50 gram subsamples of lettuce were fortified at 2.0 ppm with either BAS 252 F, metabolite B, metabolite E, or metabolite S (3-(3,5-dichlorophenyl)-5-methyl-1,3-oxazolidine-2,4-dione) and stored frozen at  $< - 5^{\circ}\text{C}$  until analysis. Lettuce samples were analyzed using Method 25A previously discussed with PP#9G2204, January 18, 1980, memorandum of B. Davis, which is nearly identical to Method 25 which has undergone successful method trial on strawberries (PP#9F2205), memorandum of G.P. Makhijani, August 7, 1989). Method recoveries were determined for lettuce fortified with 2.0 ppm BAS 352 F, metabolite B, metabolite E, and metabolite S and average recoveries were  $110 \pm 17$ ,  $102 \pm 16$ ,  $110 \pm 11$  and  $113 \pm 8\%$ , respectively. The storage stability data for fortification of 2.0 ppm are summarized as follows:

Freezer Storage Stability of Vinclozolin (BAS 352 F) and Three of Its 3,5-Dichloroaniline Containing Metabolites in Lettuce.

Date of Analysis	Storage Period from Initial Fortification, (months)	Percent Recovered* Vinclozolin Metabolites			
		BAS 352 F	B	D	S
09-08-78	2	90	100	89	108
11-15-78	4	89	101	84	90
12-18-79	17	93	94	92	95

\*Recovery results represent an average of duplicate analyses of fortified samples and are corrected for the method efficiency on the days of analyses.

RCB Comments/Conclusions re: Deficiency No. 3b.

The storage stability data submitted on lettuce indicate that when stored frozen at < -5 °C, vinclozolin, metabolite B, metabolite E, and metabolite S are stable when stored up to 17 months in lettuce. Accordingly, the storage stability data on vinclozolin and metabolites B, E, and S adequately supports the stability of these residues, in the lettuce field trial samples which were stored up to a maximum of 17 months.

The field trial data on leaf lettuce are geographically representative and adequately support a maximum label application rate for leaf lettuce of 2 lbs. of product/acre/application up to three applications or a maximum of 6 lbs. of product/acre (i.e., 3 lbs ai/A/season with a PHI of 28 days. Although, residues in leaf lettuce as high as 18.5 ppm vinclozolin equivalents were found, at a total application rate of 2 lbs. ai/A and a PHI of 28 days; these field trials were conducted late in the fall and the cooperators conducting the field trials indicated that the plants were stunted at harvest.

Nevertheless, since the residue levels in these field trials exceeded the proposed tolerance on leaf lettuce of 10 ppm, Dr. Frank W. Zink, Department of Vegetable Crops, University of California, Davis was telephoned (by G. Otakie) to discuss the possibility of stunted growth in leaf lettuce. Information on the specific field trial in question including the field trial location of Fresno, CA; the planting date of

November 3, 1985 and the sampling dates of December 11, 1985 and December 25, 1985 were provided. Dr. Zink indicated that leaf lettuce in the Fresno, CA area is usually planted from late August to early September with the lettuce harvested from about October 1 to November 15. Further, he indicated that the typical growing time for harvesting leaf lettuce is from 65 to 95 days with 65 days usually representing the minimum time required to harvest full grown lettuce. Given the fact that 90 percent of the growth in leaf lettuce occurs in the last 10 days before harvest, and that the field trials in question had a growing time of only from 39 to 53 days, and were planted later than normal, Dr. Zink believed it was likely that the lettuce was stunted or not fully developed.

This allegation is further supported by a review of all the remaining field trial data where the second highest residue was 4.4 ppm from three applications of 1.0 lb ai/A and a PHI of 5 days in a field trial also conducted in California, but in the summer (the highest residue was 5.4 ppm but reflected four applications of 1.0 lb ai/A and a PHI of 20 days). A detailed review of all the field trial data on leaf lettuce adequately supports the proposed tolerance of 10 ppm and the proposed PHI of 28 days.

Since the proposed label fails to specify any maximum total application rate for lettuce, a statement such as the following should be added to the RESTRICTIONS AND LIMITATIONS FOR LETTUCE on the proposed label:

Do not apply more than 6 lbs. of Ronilan/Acre  
in one season on lettuce.

RCB alerts the RD Product Manager that this same maximum total application statement above, was originally on the proposed label for head lettuce dated May 1, 1979, and submitted to RCB for review under PP#9G2204. Now the petitioner apparently proposes to combine the use directions for head and leaf lettuce without this restriction. The above restriction should also be on the currently approved label for head lettuce.

Deficiency No. 3b is resolved, provided the label is revised as stated above.

Deficiency No. 3c.

More data are needed on onions reflecting the proposed use and a wider geographical representation is necessary.

Petitioner's Response to Deficiency No. 3c. (MIRD No. 402975-02)

In order to obtain additional residue data from the use of Ronilan<sup>™</sup> Fungicide on onions, 21 field trials were conducted in 6 States: Texas, Michigan, Oregon, New York, Minnesota, and California. These states comprise the major growing regions for this crop. The study was designed to determine the residue levels at a normal PHI, 5 to 136 days, when the fungicide was applied under typical conditions. The field trials received one to eight applications of 1.0 lb ai/A each. Samples were shipped frozen to BASF Corporation Chemical Division and were stored frozen until analyses.

The onions were homogenized in a Hobart meat grinder. Any partial thawing of samples during this process was of short duration. All homogenized samples were then stored frozen (< -5 °C) until analysis. When aliquots were removed for contract laboratory analyses, these were packed and shipped in dry ice. The bulk of the material was maintained in the BASF freezer. A maximum of 21 months lapsed between harvest and analysis of the onion samples.

All onion field trial samples were analyzed utilizing Method 25 F (previously discussed under PP#3F2934, February 7, 1984, memorandum of J. Mayes) and modified by substituting chloroform for dichloromethane throughout the entire procedure, with a limit of 0.05 ppm of vinclozolin (BAS 352 F) equivalents. Recoveries for the method on onions averaged  $83 \pm 10$  percent (N = 10) with fortifications ranging from 0.10 to 1.0 ppm.

The analysis of the onion samples showed a maximum residue of 0.13 ppm of Vinclozolin equivalents after five applications of 1.0 lb ai/A each and a PHI of 18 days. This total residue is composed of all metabolites containing the dichloroaniline moiety since the method cleaves metabolites to this compound prior to derivatization. Other samples were treated with one to eight applications of 1.0 lb ai/A. These residues varied from < 0.05 ppm to 0.08 ppm over the PHI range of 5 to 136 days.

The following table summarizes the onion field trial data uncorrected method recoveries:

Onion Field Trials

<u>State</u>	<u>Application Rate (lb ai/A)</u>	<u>No. of Samples</u>	<u>No. of Applications</u>	<u>PHI (days)</u>	<u>Range Vinclozolin Equivalents (ppm)</u>
NY	0	4	0	0	<0.05 - 0.07
NY	1	4	3-4	12-21	<0.05 - 0.07
TX	0	4	0	0	<0.05 - 0.06
TX	1	4	4-5	14-18	<0.05 - 0.13
CA	0	3	0	0	<0.05 - 0.08
CA	1	11	1-5	68-136	<0.05 - 0.08
MI	0	4	0	0	<0.05 - 0.12
MI	1	4	8	14-21	<0.05 - 0.5
OR	0	3	0	0	<0.05 - 0.06
OR	1	3	5	5-9	<0.05 - 0.06
MN	0	3	0	0	<0.05 - 0.06
MN	1	3	4	12	0.05 - 0.06

Since the petitioner has requested a tolerance on both green and dry bulb onions the field trial data was reviewed to determine the maturity of the onions of the time of sampling and is summarized as follows:

<u>Field Trial</u>	<u>Planting Date</u>	<u>Sampling Date</u>	<u>Maturity (Days)</u>
5036	4/ 4/85	8/20	136
5038	4/ 5/85	8/9	94
5042	5/12/85	8/13	121
5044	5/22/85	8/29	97
5046	3/ 6/85	5/27	81
5048	9/28/85	2/11/86	103
5051	3/ 1/85	12/8	277
5053	5/ 1/85	9/13	132
5055	5/ 3/85	8/12	99
5057	4/18/85	8/28	130
5059	4/18/85	8/28	130

RCB Comments/Conclusions re: Deficiency No. 3C

Although, no storage stability data were submitted on onions the storage stability data submitted on grapes, strawberries and lettuce discussed in detail under Deficiencies Nos. 3a and 3b of this review, adequately support the stability of vinclozolin and metabolites B, D, E, and S in the onion field trial samples stored for a maximum of 21 months.

The field trial data on bulb onions is geographically representative and adequately supports the proposed maximum label application rate for dry bulb onions of 2 lbs. of product/acre/application up to a maximum of five applications or 10 lbs of product/acre (i.e., 5 lbs. ai/A) at a PHI of 18 days. Analyses were conducted utilizing Method 25F (previously discussed under PP#3F2934, February 7, 1984 memorandum of J. Mayes) and modified by substituting chloroform for dichloromethone throughout the entire procedure. The field trials showed a maximum residue of 0.13 ppm after five applications of 1.0 lb ai/A and a PHI of 18 days. The field trials adequately support the proposed tolerance on dry bulb onions of 1.0 ppm and the proposed PHI of 18 days.

Since the petitioner also proposed a tolerance on green onions a review of the planting and sampling dates was done to determine the maturity of the onions at the time of sampling. Data in RCB files (ref. E.A. Walker, June 27, 1956) indicate that onion seed and onion sets mature from 95 to 120 or 60 to 75 days, respectively. The maturity of the onions in the field trials ranged from 81 to 136 days (with the exception of one field trial which included sampling 277 days after planting). Although not specifically identified, it appears the petitioner planted onion seeds rather than sets. Essentially, since green onions are those that are pulled while the tops are still green and succulent, maturity as such would likely occur prior to 81 days after planting. The petitioner has provided no data indicating any of the field trials represented green onions. Accordingly, the petitioner's request for a tolerance on green onions is not supported and is not acceptable.

Deficiency No. 3C is resolved for dry bulb onions. A deficiency still exist for green onions and additional field trials on green onions are required to support the tolerance proposal for green onions.

#### Other Considerations

(1) An International Residue Limit Status Sheet is attached. Codex has a tolerance for vinclozolin and metabolites containing 3,5-dichloroaniline of 1.0 ppm for bulb onions and 5.0 ppm for red and black raspberries. Thus, a Codex-United States compatibility problem does not exist for bulb onions. However, the proposed United States tolerance of 10.0 ppm on raspberries is not compatible with Codex.

(2) RCB will not recommend that the petitioner be required to carry out the FDA multiresidue method Protocols I, II, III, and IV for the proposed uses on leaf lettuce, raspberries and dry bulb onions at this time. However, for any future

use or a change in the application use rate for vinclozolin on onions, raspberries, lettuce and crops listed under 40 CFR 180.380, the petitioner will need to subject vinclozolin to these protocols (see FEDERAL REGISTER/Vol. 51, No. 187/Friday, September 26, 1986).

cc: PP#3F2934, Reviewer-Otakie, RF., Circu., PM#21, TOX, PMSD/ISB  
TS-769C:G. Otakie:CM#2:Rm.810:557-7484:Typist Kendrick:12/13/87  
Edited by:MT:12/18/87  
RDI:J. Onley;12/7/87:R. Schmitt;12/7/87

INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL VINCLAZOLIN

CODEX NO. 159

*J. Jones*  
9/18/87

CODEX STATUS:

No Codex Proposal  
Step 6 or above

PROPOSED U.S. TOLERANCES:

Petition No. 3 F 2934

RCB Reviewer G. OTAKIE

Residue: PARENT PLUS

Residue (if Step 8): Sum of vinclozolin and metabolites containing 3,5-dichloroaniline, expressed as vinclozolin.

METABOLITS WITH 3,5-DICHO-RO ANILINE MOIETY

Crop(s)	Limit (mg/kg)
onion, bulb	1
Raspberries, red, black	5

Crop(s)	Limit (mg/kg)
ONIONS, GREEN + BULB	1.0 PPM
LETTUCE, LEAF	10.0 PPM
RASPBERRIES	10.0 PPM

CANADIAN LIMITS:

No Canadian limit

Residue: \_\_\_\_\_

MEXICAN LIMITS:

No Mexican limit

Residue: \_\_\_\_\_

Crop(s)	Limit (mg/kg)
---------	---------------

Crop(s)	Limit (mg/kg)
---------	---------------

NOTES: 1) Consideration is being given to parent only  
2) Limits are temporary pending full ADI.  
There is a Codex 5ppm proposal on head lettuce, but none on leaf lettuce.

Page 1 of 1  
Form revised 1986