Triadimefon
9-18-92

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

SEP 18 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: PP# 2F2688/FAP# 2H5636. Triadimefon (Bayleton® 50% WP Fungicide; EPA Reg. No. 3125-320) in or on Pineapple Bran as a Feed Additive (Guideline # 171-4(l)). Evaluation of Analytical Method and Residue Data. (Chemical No. 109901). (MRID No. 420132-01; CBRS # 9547; DP BARCODE: D175489).

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THRU: William J. Hazel, Ph.D., Section Head
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TO: Cynthia Giles-Parker/J. Stone, PM Team 22
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Background:

Mobay proposes (PP# 2F2688/FAP# 2H5636) the establishment of a feed additive tolerance (FAT) for the combined residues of the fungicide triadimefon (1-(-4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone) and its metabolites containing chlorophenoxy and triazole moieties (expressed as the fungicide) in or on pineapple bran at 5.0 ppm.

Mobay previously has submitted a petition (PP# 2F2688) for triadimefon (a post-harvest treatment) in or on pineapples, which resulted in the establishment (40 CFR § 180.410(a)) of a tolerance for the combined residues of the fungicide triadimefon/metabolites

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in or on pineapples (fresh fruit only) at 3.0 ppm.

The PM has requested (instructed) that CBRS pay attention to the recent CBTS memo (24 (c) HI920003) by Jose J. Morales (dated 3/9/92).

Note to PM:

Please see conclusion 3 in this memo regarding this (24 (c) HI920003) registration.

Triadimefon is a FIFRA 88 List B Chemical (Case # 2700). A Phase 4 Review of the pesticide triadimefon has been completed by CBRS (S. R. Funk, 1/24/91) indicating many data gaps including plant and animal metabolism, analytical method for plant commodities (including pineapple) and additional residue data for triadimefon/metabolites in or on pineapple and its processed fractions pineapple bran and juice using a post-harvest dip application at the maximum label rate of 13.33 oz of product (6.667 oz ai)/100 gallon of water (Guideline 171-4(k/l)).

Tolerances are established (40 CFR §180.410(a)) for the combined residues of the fungicide triadimefon and its metabolites containing chlorophenoxy and triazole moieties in or on numerous plant and animal raw agricultural commodities ranging from 0.04 to 145.0 ppm (including pineapple at 3.0 ppm). A regional tolerance is established (40 CFR §180.410(b)) for the combined residues of the fungicide triadimefon and its metabolites containing chlorophenoxy and triazole moieties in or on raspberries at 2.0 ppm.

Food additive tolerances are established (CFR 40 §185.800) for the combined residues of the fungicide triadimefon and its metabolite β-(4-chlorophenoxy)-α(1,1-dimethylethyl)-1H-1,2,4-triazol1-ethanol in or on barley and wheat milled fractions (except flour) at 4.0 ppm.

Feed additive tolerances are established (CFR 40 §186.800) for the combined residues of the fungicide triadimefon and its metabolite β-(4-chlorophenoxy)-α(1,1-dimethylethyl)-1H-1,2,4-triazol1-ethanol in or on apple pomace (wet and dry) at 4.0 ppm, grape pomace (wet and dry) at 3.0 ppm, and raisin waste at 7.0 ppm.

Conclusions:

1a. The metabolism of triadimefon in plants and animals is not adequately understood (Triadimefon Phase 4 Review by S. R. Funk, dated 1/24/91).

2a. A GC analytical method for triadimefon per se in animal commodities has been published in PAM II (methods I and II) for

enforcement purposes. The method may be acceptable as a regulatory method for plant matrices too but has not been validated by an independent laboratory or the EPA. The Phase 4 Review of triadimefon requires additional validation data for methods used to determine triadimefon/metabolites in plants (including pineapple) and animals.

2b. The submitted data indicate that the limit of detection (LOD) for triadimefon in pineapple bran is 6.0 ppm (this is the first time such a high limit of detection has been reported for this GC method). This LOD (6.0 ppm) for triadimefon on pineapple bran is higher than the proposed tolerance for triadimefon/metabolites on pineapple bran at 5.0 ppm.

3a. The registrant reasons that since EPA (based on these data) has approved the 24(c) (HI920003) registration there is no need to review the same data for this feed additive tolerance petition (for triadimefon/metabolite **in or on pineapple bran**).

3b. The issued 24(c) registration by the state of Hawaii was for a different use (pre-plant seed piece application) of the pesticide with a lower rate than that on the federally registered label for triadimefon on **pineapple**. EPA had no objection to this 24(c) registration not based on submitted data (a 5X exaggerated rate), but based on the following: a) as required for issuance of any 24(c) registration there already was an established tolerance for triadimefon/metabolites in or on pineapple at 3.0 ppm; b) the rate of application for the 24(c) registration was lower (9.0 oz vs 13.3 oz) than the Sec. 3 label for both applications (seed piece and post-harvest) and c) the 24(c) registration was issued for a different use of the pesticide on pineapple (pre-plant seed piece application) with a very long PHI(it takes almost two years for treated seed pieces to produce a pineapple fruit).

4a. The submitted residue data are based on post-harvest dipping application at an exaggerated rate (5X the label rate) on pineapple. These data indicate that residues of triadimefon/ metabolites in or on pineapple, pineapple juice and pineapple bran are 12.29, <6.0, and 15.80 ppm respectively. Based on the concentration factor (15.80 divided by 12.29 = 1.29) and the established tolerance at 3.0 ppm, the proposed tolerance of 5.0 ppm in bran (1.29 X 3.0 ppm = 3.87 ppm) seems reasonable. However, since the limit of detection for processed pineapple bran and juice is 6.0 ppm, the proposed tolerance is lower than the LOD. Additionally an exagarated application rate on pineapple will not result in detectable residues in pineapple bran. Therefore, misuse at a higher rate could result in pineapple bran residues below the 5.0 ppm proposed tolerance or not detectable. Therefore, the registrant must modify the analytical method or develop new analytical methodology for pineapple bran so that the combined LOD for all regulated metabolites for pineapple bran is $\leq$ 5.0 ppm allowing adequate enforcement to detect illegal uses.

4b. The Phase 4 Review of triadimefon (S. R. Funk, 1/24/91) has specified data requirements for triadimefon/metabolites in or on pineapples as follows: A post-harvest dip application must be made at the maximum label rate (13.33 oz of product (6.667 oz ai)/100 gallon of water). Residues of concern must be determined in or on fresh pineapple and the processed fractions pineapple bran and pineapple juice (Guideline 171-4(k/l)).

These data are still required.

4c. Once the pineapple residue data required in the Phase 4 DCI have been received and deemed adequate all tolerances (including the pineapple bran tolerance) will be reassessed.

5. The storage stability of triadimefon/ metabolites (separately) in or on pineapple and its processed fractions are required.

6. Pineapple bran is an animal feed item and is used at up to 40% in the diet of beef cattle and dairy cattle (in the pineapple growing and processing state of Hawaii), but since pineapple is a minor crop this diet is not relevant at the national (mainland) level. The established tolerances in meat, fat, and meat by-products of 1.0 ppm and in milk and eggs at 0.04 ppm are adequate to cover the secondary residues found in animal tissues from the use of pineapple bran as an animal feed item (if and when a tolerance of about 5.0 ppm are established). We note that the restriction prohibiting feeding of pineapple bran should be removed from the pesticide label since pineapple bran is not under grower control, and is therefore not a restrictable feed item.

7a. An international Residue Limit Status sheet is attached and there are no established Codex, Mexican or Canadian tolerances for triadimefon and its metabolite (**triadimenol**) in or on pineapple bran. Therefore, the establishment of the proposed tolerance in or on pineapple bran will not create compatibility problems.

7b. There is a Codex maximum residue limit for triadimefon and its metabolite (triadimenol) in or on pineapples at 3.0 ppm (same level as U.S. tolerance). However, the Codex regulated residues are different from those of the U.S. Codex regulates residues of triadimefon and its metabolite triadimenol (which according to Codex is the main metabolite). The U.S. currently regulates residues of triadimefon and three metabolites triadimenol (KWG 0519), KWG-1323, and KWG-1342 in or on commodities.

Recommendation

CBRS recommends against the establishment of the 5.0 ppm feed additive tolerance for triadimefon/metabolites in or on pineapple bran because the LOD of the method for triadimefon on pineapple bran (6.0 ppm) is higher than the proposed tolerance.

It is CB's general policy that no tolerance for a pesticide/metabolite in or on a rac or processed commodity can be established below the limit of detection of the method used to analyze the residues. Therefore, the registrant must develop analytical methodology with combined limits of detection for all regulated metabolites ≤ 5.0 ppm. The adequacy of this tolerance will be reassessed when all related outstanding data are submitted, particularly data reflecting post-harvest dip treatment of pineapple.

Detailed Considerations

Manufacturing and Formulation:

The manufacturing process of triadimefon is discussed in CB's memo of PP# 2F2665 (A. Smith, 9/9/82) and the Triadimefon Phase 4 Review (S. Funk, 1/24/91). The impurities in the technical product are not likely to produce a residue problem.

Proposed Use

The proposed label calls for a single post-harvest dipping application of whole pineapple fruit at the rate of 2.66 to 13.33 oz of Bayleton® 50% WP (1.33 to 6.66 oz of ai)/100 gallons of water or wax water. pineapple fruits should be dipped no longer than 3 minutes. **Fruit discarded from fresh fruit packing operation may be used for processing.**

The proposed label also calls for a single pre-plant dipping application of pineapple seed piece at the rate of 2.66 to 9 oz of Bayleton® 50% WP (1.33 to 4.5 oz of ai)/100 gallons of water. The higher label rates are recommended for a heavy disease pressure. Do not use green forage or fodder (cannery waste may be fed) for animal feed.

The current label specifies a single post-harvest dipping application of the whole pineapple fruit at the rate of 13.33 oz of product (6.66 oz of ai)/100 gallons of water. Pineapple fruits should be dipped no longer than 3 minutes. Do not use the pineapple bran for animal feed.

Nature of the Residue:

Plant Metabolism:

No plant metabolism data were submitted with this petition. The qualitative nature of the residues in plants is not adequately understood, because previously submitted studies for triadimefon metabolism in [barley (MRID 00096991), wheat (MRID 000981115), cucumber (MRID 00031440 and 00031441) and apple (MRID 00155549)]

indicated that there are still a large percentage of unidentified or inconclusively identified metabolites in plants. Therefore, CBRS in "Triadimefon Phase 4 Review " by S. R. Funk, dated 1/24/91 required additional plant metabolism studies to fulfill this data gap.

Previously, tolerance limits have been established [(40 CFR §180.410(a) & (b), §185.800, & §186.800)] for residues of triadimefon and its metabolites [triadimenol or KWG-0519 (β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-1H-1,2,4-triazol-1-ethanol), KWG-1342 (1-(4-chlorophenoxy)-3-methyl-3-hydroxymethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol), and KWG-1323 (1-(4-chlorophenoxy)-3-methyl-3-hydroxymethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone)] in or on various raw agricultural commodities, foods and feeds resulting from the use of the fungicide.

Animal Metabolism:

No animal metabolism data were submitted with this petition. The qualitative nature of the residues in animals is not adequately understood, because previously submitted studies for triadimefon metabolism in cow (MRID# 00025543, 92188035, & 92188034), poultry (MRID# 00033070, 92188039, & 92188038), and swine (MRID# 00025545, 92188037, & 9218806) indicated that the dose administered are too low for characterization of a metabolite or it reflects only a single dose and/or not enough supporting data. Therefore, CBRS in "Triadimefon Phase 4 Review" by S. R. Funk, dated 1/24/91 required additional animal metabolism study to fulfill this data gap.

Previously, tolerance limits have been established (40 CFR §180.410(a) for residues of triadimefon and its metabolites triadimenol or KWG-0519, KWG-1342, and KWG-1323 in or on various raw agricultural commodities (including meat, milk, poultry, and eggs).

Analytical Methodology

According to the Triadimefon Phase 4 Review (S. R. Funk, dated 1/24/91) a regulatory method exists in PAM II (Method I and II) for animal commodities. The method may be acceptable as a regulatory method for plants too but it has not been validated by an independent laboratory or the EPA. The registrant must submit regulatory analytical method(s) for determination of triadimefon and its metabolites in plants (including pineapples).

The analyses were performed as described in Mobay Report No. 80488, 1/20/82 used for triadimefon on barley and wheat with some modification. The residues in pineapple and pineapple fractions were determined using GC/NPD in the nitrogen mode. Briefly,

triadimefon and metabolites were extracted from pineapple and pineapple processed product using methanol:water (7:3, v:v). The extract was heated at reflux for 1.5 hours, cooled and filtered. The methanol portion of the extract was removed by rotary evaporator and the water portion was buffered and incubated with cellulase enzyme overnight. The residues were partitioned into methylene chloride and was purified using gel permeation chromatography. A preparative HPLC column or a LOBAR® column separated the residues into 2 fractions, one fraction contained triadimefon and triadimenol and the other fraction contained metabolites KWG 1342 and KWG 1323. The fraction containing triadimefon and triadimenol was brought to an appropriate volume with toluene and was separated and quantified using a GC [packed column (10% SP-2100 + 1.5% SP-2401)] method utilizing an NPD detector in the nitrogen mode. The fraction containing the metabolites KWG 1342 and KWG 1323 was brought to an appropriate volume in acetone and an aliquot was mixed with (1-decanol, 50 μl) and trifluoroacetic acid (50 μl) then trifluoroacetic anhydride (200-250 μl) was added. The mixture were heated at 45 °C for one hour to produce the trifluoroacyl derivatives. The metabolites trifluoroacyl derivatives then were separated and quantified using an NPD-equipped Gas chromatograph (used for the parent fractions). When chromatographic interference was encountered, residues were confirmed on a 5% SP-2401 packed column.

Limit of Detection:

Table 1. Method's limit of detection (LOD) for triadimefon and its metabolites (triadimenol, KWG 1342, and KWG 1323) in different fractions of pineapple.

pineapple Fraction	Triadimefon	triadimenol	KWG 1342	KWG 1323
Pulp or Slices	<0.01	<0.01	<0.01	<0.01
Skins or Peel	<0.01	<0.01	<0.01	<0.01
Bran	<6.0	<0.14	<0.01	<0.01
Waste Pulp	<6.0	<0.14	<0.01	<0.01
Juice	<6.0	<0.14	<0.01	<0.01
Syrup	<6.0	<0.14	<0.01	<0.01
Whole Fruit	<0.10	<0.10	<0.10	<0.10

The limit of detection is defined as the lowest fortification level at which acceptable recovery was obtained. Results of the residue analyses were reported above the defined limits.

CBRS Comments

This is the first time such a high limit of detection for triadimefon on a commodity, including pineapple (using this method), has been reported.

Table 2. Method validation for triadimefon, triadimenol, KWG 1342, an KWG 1323 in different fractions of pineapple.

parent	pineapple /Fraction	ppm added	ppm found	% recovery
Triadime -fon	Slices or pulp	0.10 0.01 0.01 0.02 0.05	0.085 0.009 0.01 0.019 0.045	85 100 90 95 90
Triadime -fon	**Bran**	**6.0** **24.0**	**4.9** **18.058**	**75** **82**
Triadime -fon	Juice	6.0 24.0	5.7 28.0	96 121
Triadime -fon	Syrup	6.0 24.0	6.623 21.0	110 88
Triadime -fon	Whole Fruit	0.1 20.0	0.084 16.804	84 84
Triadime -fon	Peel	0.01 0.01 0.02 0.05	0.008 0.009 0.017 0.044	80 90 85 88

Metabolite	pineapple /Fraction	ppm added	ppm found	% recovery
Triadimenol	Slices or Pulp	0.1 0.01 0.01 0.02 0.05	0.097 0.01 0.01 0.021 0.052	97 100 100 105 104
Triadimenol	**Bran**	**0.14** **0.54**	**0.167** **0.564**	**79** **96**
Triadimenol	Juice	0.14 0.54	0.156 0.616	111 114
Triadimenol	Syrup	0.14 0.54	0.154 0.523	110 97
Triadimenol	Whole fruit	0.10	0.099	99
Triadimenol	Peel	0.01 0.01 0.02 0.05	0.009 0.008 0.019 0.049	90 80 95 98

Metabolite	pineapple /Fraction	ppm added	ppm found	% recovery
KWG 1342	Slice or Pulp	0.10 0.01 0.01 0.02 0.05	0.113 0.008 0.007 0.014 0.032	113 80 70 70 64
KWG 1342	**Bran**	**0.01** **0.02**	**0.008** **0.008**	**80** **40**
KWG 1342	Juice	0.01 0.02	0.006 0.023	60 115
KWG 1342	Syrup	0.01 0.02	0.008 0.016	80 80
KWG 1342	Whole Fruit	0.1	0.080	80
KWG 1342	Peel	0.01 0.01 0.02 0.05	0.010 0.012 0.027 0.063	100 120 135 126

Metaboli te	Pineapple /Fraction	ppm added	ppm found	% recovery
KWG 1323	Slice or Pulp	0.1 0.01 0.01 0.02 0.05	0.131 0.007 0.007 0.015 0.036	131 70 70 75 72
KWG 1323	**Bran**	**0.01** **0.02**	**0.012** **0.016**	**120** **80**
KWG 1323	Juice	0.01 0.02	0.007 0.018	70 90
KWG 1323	Syrup	0.01 0.02	0.007 0.016	70 80
KWG 1323	Whole Fruit	0.10	0.084	84
KWG 1323	Peel	0.01 0.01 0.02 0.05	0.009 0.014 0.022 0.057	90 140 110 114

Magnitude of Residue: (MRID # 420132-01

The sample treatment and pineapple processing was conducted at Maul Pineapple Company located in Halimaile, Hawaii. A single application was made at a 5X exaggerated rate of 33.33 oz ai (66.67 oz of formulation)/100 gallons of waxed water (54 L of FMC 705-5 wax) in three replicates. Pineapple fruits were held at the crown and swirled to the crown base in the pesticide and control solutions for approximately 6 seconds. Samples (the whole fruit) were then removed from the solution to a sloped floor where they were left to drain for approximately 2 minutes. Control fruits were dipped in a solution containing only the FMC 705-5 wax and water. The treated and control samples after the treatment were transferred to frozen storage except for processing samples. Treated and control samples were used for processing as follows: crowns were twisted off from remaining fruits, taken to cannery receiving bin fruit washer, the fruits were washed and processed to wet skins, core and eradicator meat then put through the dicer and juice press. Juice was separated from pulp, bran, waste pulp, skins, juice ion exchange syrup (using simulated typical commercial practices as closely as possible) on the same day and then all were frozen. All samples 7 days after the treatment were shipped frozen to the performing laboratories (Analytical Bio-Chemistry

Laboratories, Inc., located in Columbia, Missouri). The analysis of the residues in pineapple fractions were made using GC/NPD in the nitrogen mode (see analytical method section of this memo).

Table 3. Apparent total triadimefon residues found in control (untreated) pineapple and pineapple processed fractions.

pineapple Fraction	Triadi -mefon	triadi -menol	KWG 1342	KWG 1342	Total ppm found
Pulp or Slices	<0.01	<0.01	<0.01	<0.01	<0.01
Skins or Peel	<0.01	<0.01	<0.01	<0.01	<0.01
Bran	<6.0	<0.14	<0.01	<0.01	<6.0
Waste Pulp	<6.0	<0.14	<0.01	<0.01	<6.0
Juice	<6.0	<0.14	<0.01	<0.01	<6.0
Syrup	<6.0	<0.14	<0.01	<0.01	<6.0
Whole Fruit	<0.10	<0.10	<0.10	<0.10	<0.01

Table 4. Total triadimefon/metabolites residues found in post harvest treated (at 5X rate) pineapple and pineapple processed product.

pineapple Fraction	Triadi -mefon	triadi -menol	KWG 1342	KWG 1342	Total ppm found
Pulp or Slices	0.04	<0.01	<0.01	<0.01	0.04
Skins or Peel	3.66	1.31	<0.01	<0.01	4.97
Bran	13.97	1.83	<0.01	<0.01	15.80
Waste Pulp	<6.0	0.62	<0.01	<0.01	<6.0
Juice	<6.0	<0.14	<0.01	<0.01	<6.0
Syrup	<6.0	<0.14	<0.01	<0.01	<6.0
Whole Fruit	12.01	0.28	<0.10	<0.10	12.29

The submitted residue data are based on post-harvest dipping application at an exaggerated rate (5X the label rate) on pineapple. These data indicate that residues of triadimefon/ metabolites in or on pineapple, pineapple juice and pineapple bran are 12.29, <6.0, and 15.80 ppm respectively. Based on the concentration factor (15.80 divided by 12.29 = 1.29) and the established tolerance at 3.0 ppm, the proposed tolerance of 5.0 ppm (1.29 X 3.0 ppm = 3.87 ppm) seems reasonable. However, since the limit of detection for triadimefon in or on processed pineapple bran is 6.0 ppm, the proposed tolerance is lower than the LOD. Additionally an exagerated application rate of triadimefon on pineapple will not result in detectable residues in pineapple bran. Therefore, illegally high rates could result in residues in pineapple bran that are still less than the tolerance.

Storage Stability:

No storage stability data for triadimefon/metabolites in or on pineapple bran were provided with this petition to support the analyses. Additionally, a previously submitted petition (PP# 2F2688) indicates that storage stability data for triadimefon/ metabolites in or on pineapple have never been provided. However, a summary of storage stability (frozen) data for triadimefon/ metabolites (KWG 0159, KWG 1342, and KWG 1323) in or on grapes,

tomatoes, wheat grain, wheat forage, and potatoes were submitted. These data indicated that the percent decomposition ranged from 0 - 7, 0 - 15, 0 -41, and 0 - 31 for triadimefon, KWG 0159, KWG 1342, and KWG 1323, respectively, over a 113-552 day interval. The reported data show that storage stability varies with crop and residues in/on grapes are least stable. Since storage stability data for triadimefon/metabolites varies in different crops and that because there are no storage stability data for triadimefon/ metabolites in or on pineapple and its processed fractions, the storage stability data for triadimefon and each regulated metabolite in or on pineapple and pineapple bran is required. The Phase 4 Review (dated, 1/24/91) has also required storage stability data for triadimefon/metabolites in or on pineapple. These data must be submitted with the additional residue data required for triadimefon in or on pineapple and its processed products.

Meat, Milk, Poultry, and Eggs:

Pineapple bran is an animal feed item and is used at up to 5% in the diets of laying hens, 20% in swine and 40% in the diets of beef and dairy cattle (in the pineapple growing and pineapple processing state of Hawaii), but since pineapple is a minor crop this diet is not relevant at the national (mainland) level. The petitioner has previously submitted a feeding study at 25, 75, and 250 ppm feeding levels which resulted in the establishment of tolerances in meat, fat, meat by-products (except hogs and poultry) at 1.0 ppm and in milk, eggs and the fat, meat, and meat by-products of hogs and poultry at 0.04 ppm.

If the livestock diet consists of 40% barley green forage, 40% pineapple bran and 20% grape pomace, the maximum expected dietary intake of triadimefon/metabolite will be 6.35 ppm (see table below). Therefore, the established tolerances for meat, and milk are adequate to cover the secondary residues found in animal tissues from the use of pineapple bran as an animal feed item (if and when a tolerance of about 5.0 ppm is established for triadimefon/ metabolites in pineapple bran).

Feed Items	ppm tolerance	% in diet	ppm intake residues
Barley green forage	15.0	40	6.00
Pineapple bran	*5.0	40	2.00
Grape pomace (wet and dry)	3.0	20	0.60
total	23.0	100	8.60

* pineapple bran proposed tolerance; the rest of the tolerances already are established (see 40 CFR §180.410(a) and 40 CFR §186.800).

Other Consideration:

The International Residue Limit Status sheet is attached and there are no established Codex, Mexican or Canadian tolerances for triadimefon and its metabolite (**triadimenol**) in pineapple bran. Therefore, the establishment of the proposed tolerance in or on pineapple bran will not create compatibility problems. However, there are established Codex MRLs for triadimefon/metabolite (triadimenol) in or on pineapples at 3.0 ppm. Although the level of the established U.S. tolerance in or on pineapple is the same, it is important to note that there are differences in the residue definition between Codex and that of the U.S. Codex considers residues of triadimefon and its metabolite triadimenol, while the U.S. tolerance (so far) has regulated residues of triadimefon and its three metabolites [triadimenol or KWG-0519, KWG-1342, and KWG-1323] containing chlorophenoxy and triazole moieties. Based on the results of the required metabolism studies, CBRS will reassess both the quantitative and qualitative nature of all tolerances and how they compare with Codex MRLs.

cc: triadimefon (PP# 2F2688/FAP# 05636), S.F., R.F., List B file, F. Toghrol, F. Chow (HED/CCB), Circ.,

RDI: W. Hazel (9/9/92): M. Metzger (9/15/92): E Zager (9/16/92)
H7509C:CBII:RS:F.Toghrol:F.T.:RM:804B:CM#2:(703)557-7887:8/27/92.

16.

I. Kuwa
7/30/92

Attachment:

INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL Triadimefon

CODEX NO. 133

CODEX STATUS:

[ ] No Codex Proposal
Step 6 or Above (on pineapple bran) *

Residue (if Step 8): triadimefon + triadimenol

Crop(s)	Limit (mg/kg)

PROPOSED U.S. TOLERANCES:

Petition No. PP #2F 2688/FAP# 2H056-36

DEB Reviewer Freshteh Toghrol

Residue: Triadimefon/metabolites chlorophenoxy & triazole

Crop(s)	Limit (mg/kg)
pineapple bran	5.0

CANADIAN LIMITS:

[✓] No Canadian Limit

Residue: _____

Crop(s)	Limit (mg/kg)

MEXICAN LIMITS:

[✓] No Mexican Limit

Residue: _____

Crop(s)	Limit (mg/kg)

NOTES

* There is a 3 ppm Codex limit on pineapple.

Form Revised 1989