106101

B. Hemmand CEB-1 7-15-97

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

JUL 15 1997

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

MEMORANDUM

DATE: 07/11/97

SUBJECT: ID# 97WI0008. SECTION 18 EXEMPTION FOR THE USE OF **PIRIMICARB** ON **POTATOES** IN **WISCONSIN.**

DP Barcode: D236172 Caswell#: 359C
PRAT Case#: 288835 Chemical#: 106101
Trade Name: PIRIMOR 50-DF Class: Insecticide
EPA Reg#: 10182-370

TO: R. Forrest/M. Johnson, PM Team 41
MUIERB/RD (7505C)

FROM: Brenda Tarplee, William Dykstra and Andrew Rathman
RAB 1/HED (7509C)

THRU: Melba Morrow, Branch Senior Scientist
RAB 1/HED (7509C)

7/14/97

INTRODUCTION

The Wisconsin Department of Agriculture, Trade and Consumer Protection is proposing a specific emergency exemption for the use of pirimicarb on potatoes for control of aphids. This is the first §18 request for this use. The proposed program will entail application of 2.64 lb. a.i./A on 500,000 acres during the period **June 1, 1997 through September 30, 1997.**

SUMMARY

Occupational exposure and aggregate risk estimates **do not** exceed HED's level of concern. This Section 18 exemption should not pose an unacceptable aggregate risk to infants, children, or adults. Therefore, HED **has no objection** to the issuance of this Section 18 exemption for the use of pirimicarb on potatoes in the State of Wisconsin. A time-limited tolerance for residues of **pirimicarb and its metabolites** in/on **potatoes** at **0.1** ppm should be established to support this Section 18 exemption.

TOXICOLOGICAL ENDPOINTS

DIETARY

1) *Acute Toxicity.* **None** mg/kg/day. For acute dietary risk assessment, the Toxicology Endpoint Selection Committee (TESC) **(6/27/96) did not recommend an acute dietary endpoint for pirimicarb.**

2) *Chronic Toxicity.* RfD = **0.006** mg/kg/day. The Ad Hoc Reference Dose (RfD) was established based on a **6-month dog study (MRID# 43641002)** with a NOEL of **1.8** mg/kg/day and an uncertainty factor of **300** due to data gaps based on **positive Coomb's Test** at the LEL of **4.0** mg/kg/day (Ad Hoc RfD Committee, **6/30/97; RAB1, RAB2, SARC [Hazard ID)**.

NON-DIETARY

1) *Short-Term Toxicity.* For short-term Margin of Exposure (MOE) calculations, the TESC recommended **[6/27/96]** use of the NOEL of **40** mg/kg/day from the **21 day dermal toxicity study** in **rabbits (MRID# 42896201)**. At the LEL of **200** mg/kg/day, there were **inhibition of brain and plasma ChE inhibition.**

2) *Intermediate-Term Toxicity.* For intermediate-term MOE calculations, the TESC recommended **[6/27/96]** use of the NOEL of **1.8** mg/kg/day from the **90 day dog feeding study (MRID# 4361001)**. At the LEL of **4.0** mg/kg/day, there were **hematopoietic effects.**

3) *Chronic Toxicity.* For chronic MOE calculations, the TESC recommended **[6/27/96]** use of the NOEL of **1.8** mg/kg/day from the **90 day dog feeding study (MRID# 4361001)**. At the LEL of **4.0** mg/kg/day, there were **hematopoietic effects.**

4) *Dermal Penetration.* Dermal penetration of 25% has been determined by a weight-of-the-**evidence method** in **rats.**

CANCER

Pirimicarb has not been classified by the **Cancer Peer Review Committee (CPRC) or RfD Committee.**

EXPOSURES AND RISKS

In examining aggregate exposure, FQPA directs EPA to consider available information concerning exposures from the pesticide residue in food and all other non-occupational exposures. The primary non-food sources of exposure the Agency looks at include drinking water (whether from groundwater or surface water), and

drinking water (whether from groundwater or surface water), and exposure through pesticide use in gardens, lawns, or buildings (residential and other indoor and/or outdoor uses). In evaluating food exposures, EPA takes into account varying consumption patterns of major identifiable subgroups of consumers, including infants and children.

1. From Food and Feed Uses:

Tolerances have not been established for the residues of **pirimicarb and its metabolites** in or on raw agricultural commodities.

Acute Risk. An acute dietary risk has not been identified for pirimicarb, since the TES Committee did not identify an acute dietary toxicological endpoint.

Chronic Risk. In conducting this chronic dietary risk assessment, HED has made very conservative assumptions -- 100% of **potatoes** will contain **pirimicarb** residues and those residues would be at the level of the tolerance -- which result in an overestimate of human dietary exposure. Thus, in making a safety determination for this tolerance, HED is taking into account this conservative exposure assessment.

There are no existing tolerances (published or pending), except for the Section 18 tolerance(s). The Section 18 will result in a Theoretical Maximum Residue Contribution (TMRC) that is equivalent to the following percentages of the RfD:

U.S. Population	1.9 %
Nursing Infants	**0.6 %**
Non-Nursing Infants (<1 year old)	**2.3 %**
Children (1-6 years old)	**3.8 %**
Children (7-12 years old)	**2.8 %**

The subgroups listed above are: (1) the U.S. population (48 states); (2) those for infants and children; and, (3) the other subgroups for which the percentage of the RfD occupied is greater than that occupied by the subgroup U.S. population (48 states).

2. From Drinking Water:

Based on information in the EFED One-liner Database (date 7/11/97), **pirimicarb** is persistent and not mobile. There are no established Maximum Contaminant Level for residues of pirimicarb in drinking water. No health advisory levels for pirimicarb in drinking water have been established. There are no residues of pirimicarb in water based on monitoring studies which have been conducted.

pesticides, EPA has commenced and nearly completed a process to identify a reasonable yet conservative bounding figure for the potential contribution of water related exposure to the aggregate risk posed by a pesticide. In developing the bounding figure, EPA estimated residue levels in water for a number of specific pesticides using various data sources. The Agency then applied the estimated residue levels, in conjunction with appropriate toxicological endpoints (RfDs or acute dietary NOELs) and assumptions about body weight and consumption, to calculate, for each pesticide, the increment of aggregate risk contributed by consumption of contaminated water. While EPA has not yet pinpointed the appropriate bounding figure for consumption of contaminated water, the ranges the Agency is continuing to examine are all well below the level that would cause **pirimicarb** to exceed the RfD if the tolerance being considered in this document were granted. The Agency has therefore concluded that the potential exposures associated with **pirimicarb** in water, even at the higher levels the Agency is considering as a conservative upper bound, would not prevent the Agency from determining that there is a reasonable certainty of no harm if the tolerance is granted.

3. *From Non-Dietary Uses:*

Pirimicarb is not currently registered for use on residential non-food sites. However, pirimicarb is registered for terrestrial non-food use to control aphids on alfalfa grown for seed.

4. *From Cumulative Exposure To Substances with a Common Mechanism of Toxicity:*

Pirimicarb is a member of the **carbamate** class of pesticides. There are several members of this class which exert their effect by inhibiting the enzymes of acetyl cholinesterase.

Section 408(b)(2)(D)(v) of the Food Quality Protection Act requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider "available information" concerning the cumulative effects of a particular pesticide's residues and "other substances that have a common mechanism of toxicity". The Agency believes that "available information" in this context might include not only toxicity, chemistry, and exposure data, but also scientific policies and methodologies for understanding common mechanisms of toxicity and conducting cumulative risk assessments. For most pesticides, although the Agency has some information in its files that may turn out to be helpful in eventually determining whether a pesticide shares a common mechanism of toxicity with any other substances, EPA does not at this time have the methodologies to resolve the complex scientific issues concerning common mechanism of toxicity in a meaningful way. EPA has begun a pilot process to study this issue further through the examination of

process to study this issue further through the examination of particular classes of pesticides. The Agency hopes that the results of this pilot process will increase the Agency's scientific understanding of this question such that EPA will be able to develop and apply scientific principles for better determining which chemicals have a common mechanism of toxicity and evaluating the cumulative effects of such chemicals. The Agency anticipates, however, that even as its understanding of the science of common mechanisms increases, decisions on specific classes of chemicals will be heavily dependent on chemical-specific data, much of which may not be presently available.

Although at present the Agency does not know how to apply the information in its files concerning common mechanism issues to most risk assessments, there are pesticides as to which the common mechanism issues can be resolved. These pesticides include pesticides that are toxicologically dissimilar to existing chemical substances (in which case the Agency can conclude that it is unlikely that a pesticide shares a common mechanism of activity with other substances) and pesticides that produce a common toxic metabolite (in which case common mechanism of activity will be assumed).

HED does not have, at this time, available data to determine whether **pirimicarb** has a common mechanism of toxicity with other substances or how to include this pesticide in a cumulative risk assessment. For the purposes of this tolerance action, therefore, HED has not assumed that **pirimicarb** has a common mechanism of toxicity with other substances.

DETERMINATION OF SAFETY FOR U.S. POPULATION

1. Acute Aggregate Risk. There are no acute aggregate risks for food residues for pirimicarb, since an acute dietary TES endpoint has not been identified.

2. Chronic Aggregate Risk. Using the conservative **TMRC** exposure assumptions described above, and taking into account the completeness and reliability of the toxicity data, HED has concluded that aggregate exposure to **pirimicarb** from food will utilize **1.9%** of the RfD for the U.S. population. HED generally has no concern for exposures below 100 percent of the RfD because the RfD represents the level at or below which daily aggregate dietary exposure over a lifetime will not pose appreciable risks to human health. Despite the potential for exposure to **pirimicarb** in drinking water, HED does not expect the aggregate exposure to exceed 100% of the RfD. HED concludes that there is a reasonable certainty that no harm will result from chronic aggregate exposure to **pirimicarb** residues.

3. Short- and Intermediate-Term Aggregate Risk. Short- and intermediate-term aggregate exposure takes into account chronic dietary food and water (considered to be a background exposure level) plus indoor and outdoor residential uses.

Since there are no residential uses, only chronic dietary food and water will result from short- and intermediate-term aggregate risks.

DETERMINATION OF CANCER RISK

Pirimicarb has not been classified by the **Cancer Peer Review Committee (CPRC) or RfD Committee.**

ENDOCRINE DISRUPTOR EFFECTS

EPA is required to develop a screening program to determine whether certain substances (including all pesticides and inerts) "may have an effect in humans that is similar to an effect produced by a naturally occurring estrogen, or such other endocrine effect..." The Agency is currently working with interested stakeholders, including other government agencies, public interest groups, industry and research scientists in developing a screening and testing program and a priority setting scheme to implement this program. Congress has allowed 3 years from the passage of FQPA (August 3, 1999) to implement this program. At that time, EPA may require further testing of this active ingredient and end use products for endocrine disruptor effects.

DETERMINATION OF SAFETY FOR INFANTS AND CHILDREN

In assessing the potential for additional sensitivity of infants and children to residues of **pirimicarb**, HED considered data from developmental toxicity studies in the rat and rabbit and a 2-generation reproductive toxicity study in the rat. Developmental toxicity studies are designed to evaluate adverse effects on the developing organism resulting from maternal pesticide exposure during gestation. Reproductive toxicity studies provide information relating to pre- and post-natal effects from exposure to the pesticide, information on the reproductive capability of mating animals, and data on systemic toxicity.

FFDCA section 408 provides that EPA shall apply an additional 10-fold margin of exposure [MOE] (safety) for infants and children in the case of threshold effects to account for pre-and post-natal toxicity and the completeness of the data base unless EPA determines that a different margin of exposure [safety] will be safe for infants and children. Margins of safety are incorporated into EPA risk assessments either directly through use of a margin of exposure analysis or through using uncertainty (safety) factors

in calculating a dose level that poses no appreciable risk to humans. In either case, EPA generally defines the level of appreciable risk as exposure that is greater than 1/100 of the no observed effect level in the animal study appropriate to the particular risk assessment. This 100-fold uncertainty (safety) factor/margin of exposure (safety) is designed to account for inter-species extrapolation and intra-species variability. HED believes that reliable data support using the standard 100-fold margin/factor, not the additional 10-fold margin/factor, when EPA has a complete data base under existing guidelines, and when the severity of the effect in infants or children or the potency or unusual toxic properties of a compound do not raise concerns regarding the adequacy of the standard margin/factor.

1. Developmental Toxicity Studies.

a. Rats. In the developmental study **(MRID# 42796503)** in rats, the maternal (systemic) NOEL was **25** mg/kg/day, based on **decreased body weight** at the LOEL of **75** mg/kg/day. The developmental (fetal) NOEL was **25** mg/kg/day, based on **reduced fetal body weight, increased minor skeletal anomalies, and increased manus scores** at the LOEL of **75** mg/kg/day.

b. Rabbits. In the developmental toxicity study **(MRID#)** in rabbits, the maternal (systemic) NOEL was **10** mg/kg/day, based on **clinical signs, and decreased body weight** at the LOEL of **60** mg/kg/day. The developmental (fetal) NOEL was **60** mg/kg/day [highest dose tested].

2. Reproductive Toxicity Studies.

Rats. In the 2-generation reproductive toxicity study **(MRID# 42796503)** in rats, the maternal (systemic) NOEL was **22.93** mg/kg/day, based on **decreased body weight** at the LOEL of **88** mg/kg/day. The reproductive/developmental (pup) NOEL was **22.93** mg/kg/day, based on **decreased pup weights** at the LOEL of **88** mg/kg/day.

3. Pre- and Post-Natal Sensitivity

The toxicological data base for evaluating pre- and post-natal toxicity for **pirimicarb** is complete with respect to current data requirements. There are no pre- or post-natal toxicity concerns for infants and children, based on the results of the rat and rabbit developmental toxicity studies and the 2-generation rat reproductive toxicity study.

Based on the above, HED concludes that reliable data support use of the standard 100-fold margin of exposure/uncertainty factor and

that an additional margin/factor is not needed to protect infants and children.

4. *Acute Aggregate Risk.* There are no acute aggregate risks for infants and children, since there are no toxicological endpoints for acute risk assessments.

5. *Chronic Aggregate Risk.* Using the conservative exposure assumptions described above, HED has concluded that the percentage of the RfD that will be utilized by aggregate exposure to residues of **pirimicarb** ranges from **2.3** percent for non-nursing infants less than one year old, up to **3.8** percent for children 1-6 years old. Despite the potential for exposure to **pirimicarb** in drinking water, HED does not expect the aggregate exposure to exceed 100% of the RfD.

Taking into account the completeness and reliability of the toxicity data and this conservative exposure assessment, HED concludes that there is a reasonable certainty that no harm will result to infants and children from chronic aggregate exposure to **pirimicarb** residues.

DETERMINATION OF SAFETY TO OCCUPATIONALLY EXPOSED WORKERS

1. Acute data for this formulation were not provided to RAB-I. The label provided with this submission does not contain a statement listing proposed work clothes and personal protective equipment (PPE). Therefore, no determination can be made as to whether the proposed work clothing and PPE are in compliance with the Worker Protection Standard (WPS).

2. Acute data for the technical are not available. Therefore, no determination can be made as to the appropriate restricted entry interval (REI). The label provided with this submission does not contain an REI statement.

3. Occupational exposure assumptions and estimates are summarized in Tables 1 and 2, respectively. Worker exposure estimates are based on surrogate data from the Pesticide Handlers Exposure Database (PHED), PHED Surrogate Exposure Guide (May 1997) with the worker wearing a single layer of clothing plus gloves (pilots are not expected to wear gloves).

4. Using these exposure assumptions, HED has concluded that the MOEs that will result from the handling and application of pirimicarb by workers range from 99 for aerial mixer loader to 1300 for the aerial applicator. These MOEs **DO NOT** exceed HED's level of concern for occupationally exposed workers. **It is noted, however, that the maximum application rate of 0.33 pounds of active ingredient per acre and the 1.32 pounds active ingredient per acre maximum per season proposed exceed**

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the amounts (almost double) specified in prior Section 18 exemption issuances FOR NON-FOOD USES. (96OR0013, PIRAT, 03/26/96; 93WA0020, OREB, 06/10/93).

OTHER CONSIDERATIONS

Metabolism in Plants and Animals

1. The nature of the residue in plants is adequately understood for purposes of this Section 18 only. The residue of concern is pirimicarb and its two metabolites 5,6-dimethyl-2-(formylmethylamino)-4-pyrimidinyl dimethylcarbamate and 5,6-dimethyl-2-(methylamino)-4-pyrimidinyl dimethylcarbamate (both calculated as parent). The metabolism in ruminants is not adequately understood; however, no residues are expected in feed items in connection with this Section 18.

Analytical Enforcement Methodology

2. Adequate enforcement methodology (gas chromatographic) is available to enforce the tolerance expression. The Method is entitled Determination of Pirimicarb and Metabolites in Potato Tubers and is contained in PP# 5F1608.

Magnitude of the Residues

3. Residues of pirimicarb and its metabolites are not expected to exceed 0.1 ppm in/on potatoes as a result of this Section 18 use. A time-limited tolerance should be established at this level.

4. Select one: Secondary residues are not expected in animal commodities as no residues are expected in the feed item processed potato waste.

Rotational Crop Restrictions

5. No rotational crop restrictions are present on the Section 18 label. The Agency has no data to base rotational crop restrictions on.

International Residue Limits

6. There is a CODEX MRL of 0.05 ppm on potatoes for the parent compound only, so there may be a problem with compatibility.

SUPPLEMENTAL INFORMATION

OCCUPATIONAL EXPOSURE

Table 1. Occupational Exposure Assumptions	
PARAMETER	**ASSUMPTION**
Pesticide Handlers Exposure Database (PHED), Version 1.1, Unit of Exposure From PHED Surrogate Exposure Guide (May 1997)	Mixer/Loader [dry flowable, open pour, single layer of clothing plus gloves]: Dermal = 63.4 µg/lb ai handled, Inhalation = 0.77 µg/lb ai handled
	Applicator - Ground [groundboom, open cab, single layer of clothing plus gloves]: Dermal = 14.0 µg/lb ai applied, Inhalation = 0.74 µg/lb ai applied
	Applicator - Air [liquid formulations, enclosed cockpit, single layer clothing, no gloves]: Dermal = 5.0 µg/lb ai applied, Inhalation = 0.07 µg/lb ai applied
Work Clothing and PPE	Long-sleeved shirt and long pants, shoes plus socks, waterproof gloves
Percent Absorption	Dermal: 25 % [TES document] Inhalation: 100 % [HED default]
Application Type	Ground or aerial (also includes chemigation)
Minimum Finish Spray	Ground: 10 gal/A Air: 8 gal/A
Maximum Application Rate	0.33 lb ai/A
Maximum Applications Per Year	2
Acres Treated/Day (Y: NG,BEAD)	Ground: 104 acres Air: 245 acres
Worker Weight	70 kg (default value or based on Tox endpoint)
Number of Farms Treated by PCO (Professional Chemical Operator)	Ground: 2 (HED default) Air: 10 (HED default)

Table 2. Occupational Exposure and Risk Assessment[a]				
Worker	**Average Daily Dose[b] (ug/kg/day)**	**Short-Term MOE[c]**	**Intermediate-Term MOE[d]**	**Cancer Risk**
Ground Mixer/Loader	31.08	1300	58 (230)*	Not Applicable
Ground Applicator	6.86	5800	260 (1100)*	
Aerial Mixer/Loader	73.23	550	25 (98)*	

Table 2. Occupational Exposure and Risk Assessment[a]				
Worker	Average Daily Dose[b] (ug/kg/day)	Short-Term MOE[c]	Intermediate-Term MOE[d]	Cancer Risk
Aerial Applicator	5.78	6900	310 (1200)*	

[a] MOEs are expressed to two significant figures.
[b] Average Daily Dose (ADD) = PHED unit exposure x % absorption x application rate x acres treated/day ÷ kg body weight.
[c] Short-Term Occupational Exposure MOE = NOEL/ADD (where NOEL = 40 mg/kg/day).
[d] Intermediate-Term Occupational Exposure MOE = NOEL/ADD (where NOEL = 1.8 mg/kg/day) (corrected for 25% dermal absorption)*.

DIETARY EXPOSURE

Table 3. Residue Consideration Summary Table		
PARAMETER	PROPOSED USE	RESIDUE DATA
CHEMICAL	Pirimicarb	Pirimicarb
FORMULATION	Pirimor 50 DF	Pirimor 50 DF
CROP	Potatoes	Potatoes
TYPE APPLICATION	Ground/Aerial/Chemigation	Ground
# APPLICATIONS	4	4-6
TIMING	Apply when aphids appear and a 7-10 intervals	Throughout season - specifics not available
RATE/APPLICATION	0.125-0.33 lbs ai/A	0.33-1.0 lbs ai/A
RATE/YEAR or SEASON	1.32 lbs ai/A/season	1.32-6 lbs ai/A/season
MAXIMUM RESIDUE	[usually N/A]	0.1 ppm in potatoes
RESTRICTION	14 day PHI	0-36 day PHIs
RESIDUE DATA SOURCE	[usually N/A]	PP#5F1608 and summary data contained in the Section 18 request.
PERFORMING LAB	[usually N/A]	Not Reported.

ADDITIONAL INFORMATION

Animal Feedstuffs Considerations. Data in PP#5F1608 on the nature of the residue indicate that the use is essentially a no

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residue situation. Maximum total activity in from a 1.5X rate ranged up to 0.04 ppm and most was determined not to be parent or residues of concern. As a result, we would expect no residues in the animal feed item processed potato waste.

Processed ByProducts. Studies conducted in 1995 and reported as a summary in this Section 18 request indicate that no residues were found in the byproducts chips and flakes from a 5X application rate.

Progress Toward Registration. While there has been no action toward Sec. 3 registration since the late 70's according to our files, it appears that the company is planning to submit additional data in support of registration in the near future since additional data were generated in 1995.

Reregistration Status. Pirimicarb is not a reregistration lists chemical.

Attachments: DRES Runs: Chronic (A. Rathman, 7/11/97):

cc with Attachments: B. Tarplee, DRES (B. Steinwand), RCAB (Chem Manager)

cc without Attachments: RAB1 (106101), Caswell File, TOX (L. Taylor), CEBI (Sect 18)

CHEMICAL INFORMATION FOR CASWELL NUMBER 359C DATE: 07/11/97 PAGE: 1

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Pirimicarb Caswell #359C CAS No. 23103-98-2 A.I. CODE: 106101 CFR No. 180.365	6mo dog study NOEL= 1.8000 mg/kg 0.00 ppm LEL= 4.0000 mg/kg 0.00 ppm ONCO: not classified		UF -->300 OPP RfD= 0.000000 EPA RfD= 0.006000		RFD/PR reviewed 06/30/97

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM) NEW	PENDING	PUBLISHED
14013AA	POTATOES(WHITE)-WHOLE	97WI008	0.100000		
14013AB	POTATOES(WHITE)-UNSPECIFIED	97WI008	0.100000		
14013AC	POTATOES(WHITE)-PEELED	97WI008	0.100000		
14013DA	POTATOES(WHITE)-DRY	97WI008	0.100000		
14013HA	POTATOES(WHITE)-PEEL ONLY	97WI008	0.100000		

(2)

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Pirimicarb Caswell #359C CAS No. 23103-98-2 A.I. CODE: 106101 CFR No. 180.365	6mo dog study NOEL= 1.8000 mg/kg 0.00 ppm LEL= 4.0000 mg/kg 0.00 ppm ONCO: not classified		ADI UF -->300 OPP RfD= 0.006000 EPA RfD= 0.006000		RFD/PR reviewed 06/30/97

POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY) CURRENT TMRC*	NEW TMRC**	NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES ARC	%RFD
U.S. POPULATION - 48 STATES	0.000000	0.000113	1.888117	1.888117		
U.S. POPULATION - SPRING SEASON	0.000000	0.000110	1.827367	1.827367		
U.S. POPULATION - SUMMER SEASON	0.000000	0.000108	1.805983	1.805983		
U.S. POPULATION - FALL SEASON	0.000000	0.000118	1.962300	1.962300		
U.S. POPULATION - WINTER SEASON	0.000000	0.000117	1.956800	1.956800		
NORTHEAST REGION	0.000000	0.000107	1.775183	1.775183		
NORTH CENTRAL REGION	0.000000	0.000126	2.102083	2.102083		
SOUTHERN REGION	0.000000	0.000115	1.912083	1.912083		
WESTERN REGION	0.000000	0.000101	1.685217	1.685217		
HISPANICS	0.000000	0.000113	1.890167	1.890167		
NON-HISPANIC WHITES	0.000000	0.000115	1.919017	1.919017		
NON-HISPANIC BLACKS	0.000000	0.000105	1.757683	1.757683		
NON-HISPANIC OTHERS	0.000000	0.000076	1.269400	1.269400		
NURSING INFANTS (< 1 YEAR OLD)	0.000000	0.000034	0.562500	0.562500		
NON-NURSING INFANTS (< 1 YEAR OLD)	0.000000	0.000139	2.324917	2.324917		
FEMALES (13+ YEARS, PREGNANT)	0.000000	0.000075	1.247967	1.247967		
FEMALES 13+ YEARS, NURSING	0.000000	0.000082	1.366517	1.366517		
CHILDREN (1-6 YEARS OLD)	0.000000	0.000225	3.751383	3.751383		
CHILDREN (7-12 YEARS OLD)	0.000000	0.000168	2.807433	2.807433		
MALES (13-19 YEARS OLD)	0.000000	0.000126	2.104517	2.104517		
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.000000	0.000105	1.742033	1.742033		
MALES (20 YEARS AND OLDER)	0.000000	0.000097	1.619933	1.619933		
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.000000	0.000081	1.344167	1.344167		

*Current TMRC does not include new or pending tolerances.
**New TMRC includes new, pending, and published tolerances.

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Attachment:

INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL Pirimicarb *

CODEX NO. 101

CODEX STATUS:

[] No Codex Proposal Step 6 or Above

Residue (if Step 8): pirimicarb + demethyl-pirimicarb + N-formyl(methylamino)analogue

Crop(s)	Limit (mg/KG)
Potato	0.05 (lod)

PROPOSED U.S. TOLERANCES:

Petition No. 97-WI-08

CBTS Reviewer A.R. Rathman

Residue: Pirimicarb and Metabolites

Crop(s)	Limit (mg/KG)
Potatoes	0.1

CANADIAN LIMITS:

[X] No Canadian Limits

Residue: negligible residue basis

Crop(s)	Limit (mg/KG)

MEXICAN LIMITS:

[X] No Mexican Limits

Residue:

Crop(s)	Limit (mg/KG)

NOTES*