



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MEMORANDUM

DATE: 23-MAY-2007

SUBJECT: PP#s: 5E6911, 5E6926, 5E6991, 3F6576, and 2E6482. Indoxacarb: Acute and Chronic Dietary Exposure and Risk Assessments for the Proposed Section 3 Registrations and Petitions for Tolerances on Grapes; Vegetable, *Brassica*, Leafy, Group 5; Turnip Greens; Vegetable, Leafy, Except *Brassica* (Group 4); Pome Fruits (Group 11, except pear); Tuberous and Corm Vegetables (Subgroup 1C); Cucurbit Vegetables (Group 9); Stone Fruits (Group 12); Cranberry; Mint; Okra; and Southern Pea.

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FROM: Mohsen Sahafeyan, Chemist
Sarah J. Levy, Chemist
Registration Action Branch 1/Health Effects Division (RAB1/HED; 7509P)

THROUGH: Doug Dotson, Ph.D., Chemist
Sarah Winfield, Biologist
Dietary Exposure Science Advisory Council (DE SAC)
and
George F. Kramer, Ph.D., Senior Chemist (RAB1/HED; 7509P)

TO: Sarah J. Levy, Risk Assessor
RAB1/HED (7509P)

Executive Summary

Acute and chronic dietary risk assessments were conducted for indoxacarb using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID™, Version 2.03), which uses food consumption data from the U.S. Department of Agriculture's (USDA) Continuing Surveys of Food Intakes by Individuals (CSFII) from 1994-1996 and 1998.

The last dietary risk assessment for indoxacarb was conducted on 26-AUG-2004 (Memo, M. Sahafeyan; DP#: 305966). This previous analysis was conducted following the removal of an acute toxicity endpoint for females 13-49 years old, adjustment of the no-observed adverse-effect level (NOAEL) for 100% active ingredient from the 75% isomer formulation, and addition of a 10X uncertainty factor to the acute toxicity endpoint for the U.S. general population and other population subgroups by the Hazard Identification Assessment Review Committee (HIARC) on March 2, 2004 (Memo, P. Terse, 12-APR-2004; TXR No. 0052478). The assessment included only the currently registered uses at that time, and was meant to determine the dietary risk after the safety factor change. The assessment did not include the new proposed uses (*i.e.*, grapes, *Brassica* leafy vegetables, and turnip greens). Even without these uses, the acute dietary exposure estimate for the highest exposed population subgroup (children 1-2 years old) was over 300% of the acute population-adjusted dose (aPAD) at the 99.9th%.

Since this assessment, the RAB1 toxicologists met in March, 2007 to re-evaluate the indoxacarb toxicological endpoints and uncertainty factors in light of new studies. The RAB1 toxicologists concluded that the database uncertainty factor for the lack of DNT study should be removed since the DNT results are available. This dietary risk assessment takes into account the new uses associated with the previous petition (*i.e.*, grapes, *Brassica* leafy vegetables, and turnip greens; Memo, S. Levy, 18-FEB-2005; DP#: 290126), the addition of poultry tolerances (as a result of a requested poultry feeding study - Memo, S. Levy, 22-SEP-2004; DP#: 297936), and the current new uses (vegetable, leafy, except *Brassica* (group 4), pome fruits (group 11, except pear), tuberous and corm vegetables (subgroup 1C), cucurbit vegetables (group 9), stone fruits (group 12), cranberry, mint, okra, and southern pea (Memo, S. Levy, 09-MAR-2007; DP#: 325479).

Refined acute probabilistic and chronic dietary exposure assessments were conducted for all existing and proposed new food uses of indoxacarb. A cancer dietary exposure assessment was not conducted for indoxacarb, because indoxacarb has been classified as "not likely to be carcinogenic." Estimated drinking water concentrations (EDWCs), provided by the Environmental Fate and Effects Division (EFED), were included in the current assessments as well. Anticipated residues (ARs) for all registered and proposed food commodities were based on field trial data (FTD). ARs for all current uses were further refined using percent crop treated (%CT) data (Memo, A. Halvorson, 05-APR-2007; DP#: 338731, and electronic communication, A. Halvorson to M. Sahafeyan, 12-APR-2007, and A. Halvorson to S. Levy, 10-MAY-2007), following the guidance provided in HED Standard Operating Procedure (SOP) 99.6 (*Classification of Food Forms with Respect to level of Blending*; 20-AUG-1999). 100% CT was assumed for the remaining new uses. Available processing data for indoxacarb were used to refine ARs for apples/pears (juice), potato (dry, chips), cotton (oil), tomato (paste and puree), peanut (oil), soybean (oil), grapes (raisin and juice), prunes (dried), and mint (oil), and other

commodities where translation was applicable. For all other processed commodities, DEEM-FCID™ (ver. 7.81) default processing factors (PFs) were assumed.

EDWCs were provided by EFED (Memo, J. Hetrick, 01-FEB-2007; DP#: 293793) and incorporated directly into the DEEM-FCID™ analyses. Both the acute and chronic analyses were conducted using estimated surface water residues generated using the Pesticide Root Zone/Exposure Analysis Modeling System (PRZM/EXAMS). EFED provided modeling results for several crop scenarios. The scenarios resulting in the highest EDWCs (cotton in Mississippi) were used in this assessment. For the acute and chronic assessment, the estimated 1-in-10 year annual peak and 1-in-10 year annual mean residue in surface water respectively were used as point estimates in the DEEM-FCID™ analysis.

Acute Dietary Exposure Results

Estimated acute dietary exposure to indoxacarb from food and drinking water is below HED's level of concern for all population subgroups. Combined dietary exposure from food and drinking water at the 99.9th percentile of exposure is estimated to be 0.034881 mg/kg/day for the overall U.S. population, equivalent to 39% of the aPAD. The population subgroup with the highest estimated acute dietary exposure to indoxacarb is children, 3 to 5 years old, with an estimated exposure at the 99.9th percentile of 0.075914 mg/kg/day, equivalent to 84% of the aPAD.

Chronic Dietary Exposure Results

Estimated chronic dietary exposure to indoxacarb from food and drinking water is below HED's level of concern. Combined dietary exposure from food and drinking water is estimated at 0.002411 mg/kg/day for the general U.S. population (16% of the chronic population-adjusted dose (cPAD) and 0.007940 mg/kg/day (53% of the cPAD) for children, 1 to 2 years old, the population subgroup with the highest estimated chronic dietary exposure to indoxacarb.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (*i.e.*, the dose which HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the PAD. The PAD is equivalent to the point of departure (POD; *e.g.*, NOAEL, LOAEL) divided by the appropriate uncertainty or safety factors.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. References which discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: <http://www.epa.gov/fedrgstr/EPA-PEST/2000/July/Day-12/6061.pdf>; or see SOP 99.6 (20-AUG-1999).

II. Food Residue Information

Tolerances for the combined residues of indoxacarb + its R-enantiomer are published in 40 CFR §180.564. There are currently two end-use products of indoxacarb with food/feed uses registered to DuPont: a 30% water-dispersible granular (WDG) formulation (DuPont Avaunt™ Insecticide, EPA Reg. No. 352-597) and a 1.25 lb/gal (15%) suspension concentrate (SC) formulation (DuPont Steward® Insecticide, EPA Reg. No. 352-598). These formulations contain an isometric mixture of 75% indoxacarb (insecticidally active S-enantiomer; DPX-KN128) and 25% of the R-enantiomer (insecticidally inactive; IN-KN127). The percentage of active ingredient (a.i.) listed on each label and the labeled use rates for each crop are based only on the amount of indoxacarb. The initial petitions were on *Brassica*, sweet corn, cotton, fruiting vegetables, lettuce (head and leaf) and pome fruits, in which the crop field trial data were conducted with a formulation containing an isometric 50:50 racemic mixture. Once the formulations were changed by DuPont to a 75:25 mixture, the residue values from the associated crops were multiplied by 0.67 to account for the reduced application rate of total indoxacarb + its R-enantiomer.

Residues of Concern: The nature of the residue in plants and livestock is adequately understood. Data from the plant and ruminant metabolism studies, as well as toxicological and environmental fate data were presented to the HED Metabolism Assessment Review Committee (MARC) for determination of the residues of concern (Memo, S. Levy, 10-JUL-2000; DP#: 263986). See DP#: 324855 for the chemical structures of indoxacarb and its metabolites.

For poultry commodities, the HED MARC recommended that the following compounds be determined in the poultry feeding study: parent, IN-JT333, IN-KG433, IN-KT319, IN-JU873, 5-OH-IN-JT333, Metabolite F, and IN-KB687 (Memo, S. Levy, 10-JUL-2000; DP#: 263986). However, the petitioner stated that two of the metabolites (5-OH-IN-JT333 and Metabolite F) cannot be synthesized in sufficient quantities to permit development of analytical methods. The HED MARC determined that, based on the toxicology profile for the parent compound, and similarity in structure to the parent compound as well as other structure-activity relationship (SAR) considerations, that metabolites 5-OH-IN-JT333 and Metabolite F could be of comparable toxicity to the parent and should be considered residues of concern for risk assessment purposes. Furthermore, other metabolites which will be determined in the poultry feeding study can serve as marker compounds for 5-OH-IN-JT333 and Metabolite F. The ratio of the marker compounds to 5-OH-IN-JT333 and Metabolite F derived from the metabolism study, can be applied to the results of the magnitude of the residue study to estimate the amounts of 5-OH-IN-JT333 and Metabolite F (Memo, S. Levy, 04-OCT-2001; DP#: 277922). A poultry feeding study was submitted and reviewed. Tolerances on poultry were recommended (Memo, S. Levy, 22-SEP-2004; DP#: 297936). No dietary risk assessment was done prior to this document to assess the risk of secondary residues in poultry. See Table 1 for a summary of the residues of concern determined by the MARC.

Table 1. Indoxacarb Residues of Concern.		
Matrix	Tolerance Expression	Residues for Risk Assessment
Plants	Indoxacarb + R-enantiomer	Indoxacarb + R-enantiomer
Ruminants	Indoxacarb + R-enantiomer	Indoxacarb + R-enantiomer. In milk, also include IN-MP819.
Poultry	Indoxacarb + its R-enantiomer, IN-JT333, IN-KT319, IN-JU873, IN-KG433, and IN-KB687	Indoxacarb + its R-enantiomer, IN-JT333, IN-KG433, IN-KT319, IN-JU873, 5-HO-IN-JT333, Metabolite F, and IN-KB687
Rotational Crops	Indoxacarb + R-enantiomer	Indoxacarb + R-enantiomer
Drinking Water	NA	Parent, IN-JT333, IN-KG433, IN-KT413, IN-JU 873, IN-ML437-OH.

Tolerances: Permanent tolerances have been established under 40 CFR §180.564(a) for the combined residues of indoxacarb + its R-enantiomer as follows: apple (1.0 ppm); apple, wet pomace (3.0 ppm); *Brassica*, head and stem, subgroup 5A (5.0 ppm); alfalfa, forage (10 ppm); alfalfa, hay (50 ppm); corn, sweet, forage (10 ppm); corn, sweet, kernel plus cob with husk removed (0.02 ppm); corn, sweet, stover (15 ppm); cotton gin byproducts (15 ppm); cotton, undelinted seed (2.0 ppm); lettuce, head (5.0 ppm); lettuce, leaf (10 ppm); pear (0.20 ppm); peanut (0.01 ppm); peanut, hay (40 ppm); potato (0.01 ppm); soybean, aspirated grain fractions (45 ppm); soybean, hulls (4.0 ppm); soybean, seed (0.80 ppm); vegetables, fruiting, group 8 (0.50 ppm); milk (0.15 ppm); milk fat (4.0 ppm); and in fat (1.5 ppm); meat (0.05 ppm); and meat-byproducts (0.03 ppm) of cattle, goat, hog, horse, and sheep. Time-limited tolerances are established in connection with an Experimental-Use Permit (EUP; peach at 10 ppm; set to expire 15-MAY-2006) and in connection with Section 18 Emergency Exemptions (cranberry at 0.50 ppm; set to expire 31-DEC-2004 and collards at 3.0 ppm; set to expire 30-JUN-2006).

Dupont and Interregional Research Project No. 4 (IR-4) have proposed tolerances for indoxacarb on a variety of commodities. The proposed tolerances are summarized below together with HED's recommendations based on review of the residue data submitted to support these petitions (Memos, S. Levy, 18-FEB-2005; DP#: 290126, 22-SEP-2004; DP#: 297936, and 09-MAR-2007; DP#: 325479).

Crop Commodity	Proposed or Established Tolerance (ppm)	Recommended Tolerance (ppm)	Comments
Grape	2.0	2.0	Adequate residue data are available.
Raisin	6.0	5.0	Adequate processing data are available. <i>Grape, raisin</i>
Vegetables, Leafy, Brassica (Group 5)	12	12	Adequate residue data on mustard green, broccoli, and cabbage are available. Once the tolerance is established on group 5, the established 5.0 tolerance for <i>Brassica</i> , head and stem, subgroup 5A should be revoked.
Turnip Greens	12	12	Turnip green tolerance can be established based on mustard green data.
Egg	0.2	0.20	
Poultry, fat	0.2	0.20	
Poultry, meat	0.06	0.06	
Poultry, meat byproducts	0.06	0.06	
Leafy vegetables except <i>Brassica</i>	14	14	The existing residue data on leaf and head lettuce are adequate, as the currently-submitted spinach and celery data will support a crop group tolerance for <i>Vegetable, Leafy, Except Brassica, Group 4</i> . Once the tolerance is established on <i>Vegetable, Leafy, except Brassica, Group 4</i> , the separate tolerances on leaf and head lettuce should be deleted.
Fruit, pome, except pear, group 11	1.0	1.0	Once the tolerance is established on group 11, the separate tolerance on apple should be deleted. The existing residue data on apples are adequate and will support an expanded use and a tolerance on <i>Fruit, pome, group 11, except pear</i> .
Vegetable, tuberous and corm, subgroup 1C	0.01	0.01	The existing residue data on potatoes are adequate and will support an expanded use and a tolerance on <i>Vegetable, tuberous and corm, subgroup 1C</i> . Once the tolerance is established on subgroup 1C, the separate tolerance on potato should be deleted.
Vegetable, cucurbit, group 9	0.5	0.60	Adequate residue data are available on cucumbers, squash, and cantaloupes. The tolerance is based on residue data from cantaloupes.
Fruit, stone group 12	1	0.90	Adequate residue data are available on cherries, plums and peaches. The group tolerance is based on residue data from cherries. <i>Fruit, stone, group 12</i>
Cranberry	1	0.90	Adequate residue data are available.
Mint	10	11	Adequate residue data are available. Separate tolerances should be established for <i>Peppermint, tops</i> and <i>Spearmint, tops</i> .

Table 2. Tolerance Summary for Indoxacarb.

Crop Commodity	Proposed or Established Tolerance (ppm)	Recommended Tolerance (ppm)	Comments
Okra	0.5	0.50	The existing residue data on tomatoes and peppers will be translated to support the same use pattern and tolerance on okra, as okra is now considered part of the “vegetable, fruiting, group 8” crop group.
Pea (southern)	0.1	0.10	Adequate residue data are available for dried pea only. <i>Pea, southern, seed</i>

Residue Data used for the Acute and Chronic Assessments:

Food Commodities (except livestock commodities): Refined acute probabilistic and chronic dietary exposure assessments were conducted for all existing and proposed new food uses of indoxacarb and drinking water. ARs for all registered and proposed food commodities were based on FTD. When a commodity had a number of <LOQ residue values, either the highest FTD or tolerance was used for ease of calculation (*i.e.*, for apples, the corrected highest field trial value was used for the “treated” commodity, instead of constructing a RDF with the full distribution of corrected values). ARs for all current uses were further refined using %CT data, following the guidance provided in HED SOP 99.6 (*Classification of Food Forms with Respect to level of Blending; 20-AUG-1999*). 100% CT was assumed for the remaining new uses. Available processing data were used to refine ARs for apples/pears (juice), potato (dry, chips), cotton (oil), tomato (paste and puree), peanut (oil), soybean (oil), grapes (raisin and juice), prunes (dried), and mint (oil), and commodities were translated as appropriate. For all other processed commodities, DEEM-FCID™ (ver. 7.81) default PFs were assumed.

Acute Assessment:

- For non-blended and partially blended commodities: A residue-distribution file (RDF) was constructed using the entire distribution of field trial residue values, with zeros incorporated to account for the untreated portion of the crop (untreated portion = 100% minus the estimated maximum %CT). The resulting residue distributions were used probabilistically in the acute assessment. All PFs were inserted in DEEM-FCID™ under “adjustment factor 1.”
- For blended commodities: A point estimate was calculated by taking the average field trial residue and adjusting it by the maximum %CT estimate (point estimate = average residue x maximum %CT). All PFs were inserted in DEEM-FCID™ under “adjustment factor 1.”

Chronic Assessment:

- For non-blended, partially blended and blended commodities: A point estimate was calculated by taking the average field trial value and adjusting it by the average %CT estimate (Point estimate = average residue x average %CT). All PFs were inserted in DEEM-FCID™ under “adjustment factor 1.”

Livestock commodities: For poultry, egg and milk, since the residues of concern were different than the tolerance expression, the metabolism study, in conjunction with feeding studies were used to calculate the secondary residues in those tissues (see detail discussion later in this section). For ruminant and hog tissues, since the tolerance expression was the same as the residues of concern, the tolerance values were used as conservative estimates of the indoxacarb residues.

The food residue data used in the acute and chronic dietary assessments are summarized in Table 3. RDFs used in the acute assessment are included in the attachments to this document.

Table 3. Data and Residue Estimates Used in the Acute and Chronic Dietary Analyses.											
Commodity	Classification	ave. % CT	Max % CT	Source of Data	# of FTD	# of zeroes in RDF	sum (FTD)	mean of RDF	PF	Acute Value	Chronic Value
apple juice	PB	1	5	highest FTD (DP#: 244253)	5	95	3.7	0.037	0.01	rdf x PF	0.0074 x PF
apples	NB	1	5	highest FTD (DP#: 244253)	5	95	3.7	0.037		rdf	0.0074
apples, dried	B	1	5	highest FTD (DP#: 244253)	5	95	3.7	0.037	8	0.037 x PF	0.0074 x PF
Apricot	PB	100	100	peach FTD (DP#: 325479)	30	0	4.66	0.1553		rdf	0.155333
Apricot, dried	B	100	100	FTD (DP#: 325479)	30	0	4.66	0.1553	6	0.1553 x PF	0.1553 x PF
Broccoli	NB	40	50	FTD (DP#: 244253)	20	20	12.95	0.3238		rdf	0.2590
Cabbage (no wrapper)	NB	15	25	FTD (DP#: 244253)	22	66	1.27	0.0144		rdf	0.0087
Cantaloupe	NB	100	100	FTD (DP#: 325479)	22	0	2.236	0.1016		rdf	0.1016
Cauliflower	NB	35	55	broccoli FTD	20	16	12.95	0.3561		rdf	0.2266
Celery-untrimmed	PB	100	100	FTD (DP#: 325479)	12	0	23.2	1.9333		rdf	1.9333
Cherry	PB	100	100	FTD (DP#: 325479)	32	0	8	0.25		rdf	0.25
Cherry juice	PB	100	100	FTD (DP#: 325479)	32	0	8	0.25	1.5	rdf x PF	0.25 x PF
Corn, sweet	NB	1	2.5	highest FTD (DP#: 244253)	1	39	0.008	0.0002		rdf	0.00008
Cottonseed oil	B	100	100	highest FTD (DP#:	1	0	0.67	0.67	0.04	0.67 x PF	0.67 x PF

Commodity	Classification	ave. % CT	Max % CT	Source of Data	# of FTD	# of zeroes in RDF	sum (FTD)	mean of RDF	PF	Acute Value	Chronic Value
				244253)							
Cranberry	PB	100	100	FTD (DP#: 325479)	12	0	2.591	0.2159		rdf	0.2159
Cucumber	NB	100	100	FTD (DP#: 325479)	20	0	0.459	0.0230		rdf	0.0230
Eggs	NB	100	100	see text	1	0	0.119	0.119		0.119	0.119
Group 8, the rest (okra, eggplant, tomatillo)	PB	100	100	highest tomato FTD (DP#: 244253)	1	0	0.27	0.27		0.27	0.27
Grape	PB	100	100	FTD (DP#: 290126)	20	0	10.06	0.5030		rdf	0.5030
Grape juice/wine	PB	100	100	FTD (DP#: 290126)	20	0	10.06	0.5030	0.007	rdf x PF	0.5030 x PF
Grape leaves	PB	100	100	FTD (DP#: 290126)	20	0	10.06	0.5030		rdf	0.5030
Grape raisins	PB	100	100	FTD (DP#: 290126)	20	0	10.06	0.5030	2.7	rdf x PF	0.5030 x PF
Group 11, except apples and pears	NB	100	100	highest FTD for apples (DP#: 244253)	1	0	0.74	0.7400		0.74	0.7400
Lettuce head, no wrapper	NB	18	25		18	54	3.97	0.0551		rdf	0.0397
Lettuce, leaf	NB	9	11	DP#: 244253	18	146	108.2	0.6612		rdf	0.5410
Milk fat	PB	100	100	see text	1	0	3.28	3.28		2.43	2.43
Milk water	PB	100	100	see text	1	0	0.11	0.11		0	0
Milk, non-fat solids	PB	100	100	see text	1	0	0.29	0.29		0.495	0.495
Mint	B	100	100	FTD (DP#: 325479)	12	0	46.44	3.8700		3.8700	3.8700
Mint oil	B	100	100		12	0	46.44	3.8700	0.028	3.87 x PF	3.87 x PF
Mustard Green	PB	100	100	FTD (DP#: 325479)	8	0	47.8	5.9750		rdf	5.9750
Nectarine	PB	100	100	Peach FTD (DP#: 325479)	30	0	4.66	0.1553		rdf	0.1553
Peach	NB	100	100	FTD (DP#: 325479)	30	0	4.66	0.155		rdf	0.155
Peach Dried	B	100	100	FTD (DP#: 325479)	30	0	4.66	0.155	4	0.155 x PF	0.155 X PF
Peanut	B	1	2.5	highest FTD (DP#: 244253)	1	39	0.003	0.000075		0.000075	0.00003

Commodity	Classification	ave. % CT	Max % CT	Source of Data	# of FTD	# of zeroes in RDF	sum (FTD)	mean of RDF	PF	Acute Value	Chronic Value
Peanut butter	B	1	2.5	highest FTD (DP#: 244253)	1	39	0.003	0.000075	1.89	0.000075 x 1.89	0.00003 x 1.89
Peanut oil	B	1	2.5	highest FTD (DP#: 244253)	1	39	0.003	0.000075	1.4	0.000075 x 1.4	0.00003 x 1.4
Pear	NB	1	2.5	highest FTD (DP#: 244253)	1	39	0.08	0.002		rdf	0.0008
Pear juice	PB	1	2.5	highest FTD (DP#: 244253)	1	39	0.08	0.002	0.01	rdf x PF	0.0008 x PF
Pears, dried	B	1	2.5	highest FTD (DP#: 244253)	1	39	0.08	0.002	6.25	0.002 x PF	0.0008 x PF
Pepper (bell or non-bell)	PB	10	15	highest FTD (DP#: 244253)	15	85	1.005	0.0101		rdf	0.0067
Pepper, dried	B	10	15	highest FTD (DP#: 244253)	15	85	1.005	0.0101		0.0101	0.0067
Pepper, dry (bell or non-bell)	B	10	15	highest FTD (DP#: 244253)	15	85	1.005	0.0101		0.0101	0.0067
Plums-prunes	NB	100	100	FTD (DP#: 325479)	22	0	0.99	0.0450		rdf	0.0450
Plums-prunes (dried)	PB	100	100	FTD (DP#: 325479)	22	0	0.99	0.0450	4	0.045 x PF	0.045 x PF
Pork	NB	100	100	tolerance						tolerance	tolerance
Potato	NB	1	2.5	tolerance	1	39	0.01	0.00025		rdf	0.0001
Potato (dry, chips)	B	1	2.5	average FTD	1	39	0.004	0.0001	0.85	0.0001 x PF	0.00004 x PF
Potato, flour	B	1	2.5	average FTD	1	39	0.004	0.0001		0.0001	0.00004
Poultry, fat	NB	100	100	see text						0.457	0.457
Poultry, liver	NB	100	100	see text						0.052	0.052
Poultry, meat	NB	100	100	see text						0.045	0.045
Poultry, meat byproduct	NB	100	100	see text						0.052	0.052
Poultry, skin	NB	100	100	see text						0.079	0.079
Ruminants	NB	100	100	tolerance						tolerance	tolerance
Southern Pea	PB	100	100	FTD (DP#: 325479)	14	0	0.319	0.0228		rdf	0.0228

Commodity	Classification	ave. % CT	Max % CT	Source of Data	# of FTD	# of zeroes in RDF	sum (FTD)	mean of RDF	PF	Acute Value	Chronic Value
Soybean	B	1	1	average FTD	1	99	0.088	0.00088	0.64 (for oil)	.00088 x PF	.00088 x PF
Spinach	NB	5	5	FTD (DP#: 325479)	16	304	84.3	0.2634		rdf	0.2634
Squash	NB	100	100	FTD (DP#: 325479)	22	0	0.729	0.0331		rdf	0.0331
Subgroup 1C, the rest	NB	100	100	tolerance	1	0	0.01	0.01		0.01	0.01
Subgroup 4A, the rest (not spinach & lettuce)	NB	100	100	FTD (DP#: 325479)	16	0	84.3	5.2688		rdf	5.2688
Subgroup 4B	NB	100	100	Celery FTD (DP#: 325479)	12	0	23.2	1.9333		rdf	1.9333
Subgroup 5A (the rest)	PB	35	55	broccoli FTD	20	16	12.95	0.3561		rdf	0.2266
Subgroup 5B	PB	100	100	Mustard green FTD (DP#: 325479)	8	0	47.8	5.9750		rdf	5.9750
Subgroup 9A, melons	NB	100	100	Cantaloupe FTD (DP#: 325479)	22	0	2.236	0.1016		rdf	0.1016
Subgroup 9B except cucumber	NB	100	100	summer squash FTD (DP#: 325479)	22	0	0.729	0.0331		rdf	0.0331
Tomatoes	PB	15	25	highest FTD (DP#: 244253)	25	75	6.75	0.0675		rdf	0.0405
Tomatoes, dried	B	15	25	highest FTD (DP#: 244253)	25	75	6.75	0.0675	14.3	0.0675 x PF	0.0405 x PF
Tomatoes, paste	B	15	25	highest FTD (DP#: 244253)	25	75	6.75	0.0675	1.4	0.0675 x PF	0.0405 x PF
Tomatoes, puree	B	15	25	highest FTD (DP#: 244253)	25	75	6.75	0.0675	0.52	0.0675 x PF	0.0405 x PF
Water (all sources)				see text						0.025	0.00537

Food Residues – Details

Vegetables, leafy, except Brassica, group 4: The submitted field trials for celery and spinach were conducted at different pre-harvest intervals (PHIs) (celery at 7-, 14-, and 21-day PHIs while spinach at 3-, 7-, and 14-day PHIs). The proposed label for leaf petiole vegetables (celery is in subgroup 4B) lists 3-day PHI, 3-day retreatment interval (RTI), maximum seasonal application of 0.26 lb ai/A. Note that data are not available for untrimmed celery at the proposed PHI of 3 days. However, HED used the trimmed celery residue data to estimate untrimmed celery residues as follows: Indoxacarb residue concentrations in trimmed and untrimmed celery were compared for 0-day, 7-day, and 14-day PHI samples. Based on this comparison, trimmed to untrimmed ratios were determined to be 2.32 for the 0-day PHI samples, 3.0 for the 7-day PHI samples and 2.3 for the 14-day PHI samples. The average residue ratio for these three sampling intervals was calculated to be 2.5. The 3-day trimmed celery residue data were entered into the U.S. EPA tolerance calculator, resulting in a trimmed celery tolerance of 3.5 ppm. To determine an untrimmed tolerance value, the 3.5 ppm value was multiplied by the average trimmed to untrimmed residue ratio of 2.5, resulting in a value of ~9.0 ppm.

Therefore, for celery, the trimmed, 3-day PHI celery FTD were multiplied by 2.5 and were used in an RDF (Indoxacarb-040907-3-dayPHI-UntrimdCelery.rdf). This RDF, with assumption of 100% CT due to unavailability of usage data for new uses, was used for all subgroup 4B crops (leaf petiole vegetables).

On the other hand, for crop subgroup 4A (leafy greens subgroup) except for lettuce and spinach, spinach FTD with 100% CT assumptions were used. For lettuce and spinach, their corresponding FTD and %CT were used in three separate RDFs (leaf lettuce, head lettuce and spinach). The crops had the same use rates (4 applications, maximum use rate – 0.26 lb ai/A, 3-day PHI).

Brassica, leafy, group 5: Broccoli, cabbage, and mustard green FTD are available (Memos, S. Levy, 19-JAN-2000; DP#: 244253 and 18-FEB-2005; DP#: 290126) and were within 5x of each other, with mustard green FTD being the highest. The suggested use rate is the same for all crops in this group (maximum application rate = 0.26 lb ai/A, PHI=3 days). Broccoli field trials were not conducted at a 1x application rate; therefore, broccoli data were used for broccoli only after being adjusted for rate of exaggeration (multiplied by 0.67; see DP#: 244253, page 119) and cabbage data were used for cabbage only. For the rest of the crop subgroup 5A, broccoli data (higher residues than cabbage) adjusted for zeroes with %CT for cauliflower (highest %CT in that subgroup and in all crops), were used. For crop subgroup 5B, mustard green data with 100% CT were used (no %CT on any of the crops in subgroup 5B are available).

Grape, grape juice, raisins: Grape FTD with 100% CT assumptions were used for grape, grape juice and raisins. PFs (as adjustment factors in DEEM-FCID™) were also incorporated (PF for grape juice/wine and sherry=0.007, PF for raisins=2.7).

Cucurbit Vegetables (group 9): Cantaloupe, summer squash, and cucumber FTD with 100% CT assumptions were used for group 9 crops. Cantaloupe data were used for all melons (subgroup

9A) and summer squash data (higher than cucumber data) were utilized for all crops in subgroup 9B except for cucumber.

Pome Fruit group (11):

Apple, apple juice, dried apple: The highest FTD for apple which were adjusted for rate of exaggeration (0.74 ppm) were used in an RDF. The RDF also incorporated zeroes according to %CT (maximum 5% and average 1%). A PF of 0.01 was used in DEEM-FCID™ as the second adjustment factor for apple juice, and a DEEM-FCID™ default PF of 8 was used for dried apple.

Pear, pear juice, dried pear: The highest FTD for pear which were adjusted for rate of exaggeration (0.08 ppm) were used in an RDF. The RDF also incorporated zeroes according to %CT (maximum 2.5% and average 1%). A PF for apple juice (0.01) was translated to pear juice as the second adjustment factor in DEEM-FCID™ as for pear juice, and a DEEM-FCID™ as default PF of 6.25 was used for dried pear.

For the rest of the crops in group 11, apple FTD with the same %CT were used.

Fruit Stone, group 12: FTD for cherries, peaches, and plums with the same use rate were submitted; FTD residues were highest for cherries. The registrant requested four applications with a maximum use of 0.44 lb ai/A and 14-day PHI. The submitted FTD were used for the respective crops in DEEM-FCID™ as (in form of RDFs). For other crops in group 12, FTD for the similar fruit were used. %CT data for cherries and peaches provided by BEAD were based on their uses as emergency use permits (EUPs), not as Section 3 registrations and hence were not used. Therefore, for all crops in group 12, 100% CT were assumed. An empirical PF of 4x was used for dried plums. For the other crops in group 12, DEEM-FCID™ default PFs were used for juice and the dried food form.

Mint: The average of the submitted mint FTD were used as a point estimate (assuming 100% CT) for peppermint, spearmint, and their corresponding oil in DEEM-FCID™. Mint and mint oil are considered blended commodities. An empirical PF (0.028x) was used for mint oil.

Fruiting Vegetables (group 8): FTD were submitted for non-bell pepper, bell pepper, and tomatoes (Memo, S. Levy, 19-JAN-1000; DP#: 244253), with residues being highest for tomatoes. The highest FTD residue for both non-bell pepper and bell pepper which was adjusted for the rate exaggeration was 0.067 ppm and that for tomato FTD was 0.27 ppm. Two RDFs were generated for pepper and tomatoes, using their highest FTD and incorporating the available %CT values; the RDFs were used for corresponding crops. For the rest of this group (eggplant, tomatillo, and okra), the highest FTD for tomatoes (0.27 ppm) were used, as well as 100% CT. Empirical PFs for tomato paste (1.4x) and puree (0.52x) were used. The PF for tomato puree (0.52x) was also used for tomato juice. The DEEM-FCID™ default PF for dried tomato (14.3x) was used.

Pea, southern, seed: The submitted FTD with 100% CT assumption were used for cowpea beans seed (per electronic communication with B. Schneider, 10-APR-2007). HED accepted the

submitted data for dry seeds not succulent. As such, the FTD were used for only dry cowpea beans.

Cranberry: The submitted FTD with assumption of 100% CT were used in an RDF. The DEEM-FCID™ default PF for cranberry juice (1.1) was used.

Peanut, peanut butter, peanut oil: All are considered blended commodities. The highest FTD for peanut (0.003 ppm) with 2.5% CT were used to derive a point estimate for acute ($0.003 \times 0.025 = 0.000075$ ppm) and with 1% CT for chronic ($0.003 \times 0.01 = 0.00003$ ppm). An empirical PF of 1.4x was used for peanut oil and DEEM-FCID™ default PF of 1.89x was used for peanut butter.

Tuberous and corm vegetables, subgroup 1C:

Potato: For non-blended food forms, a tolerance-level residue (0.01 ppm) was used in the RDF with inserting zeroes according to %CT value. For blended food forms (dry potato, chips, flour), the average FTD were used with PFs (0.85x for chips and dry potato) (Memo, S. Levy, 30-MAY-2002; DP#: 276516) inserted as adjustment factor 1 and %CT value as adjustment factor 2 in DEEM-FCID™.

Other crops: The tolerance level residue (0.01 ppm), with assumption of 100% CT were used for the rest of the crops in subgroup 1C.

Soybean: Since all the soybean food forms are blended, the average FTD (0.088 ppm) (Memo, S. Levy, 30-MAY-2002; DP#: 276516) were used as a point estimate in conjunction with PF (0.64x for soybean oil only) as adjustment factor 1 and %CT value as adjustment factor 2 in DEEM-FCID™.

Cottonseed oil: The average FTD and the empirical PF (0.04x) as adjustment factor were used.

Corn: The highest FTD were used in an RDF incorporating zeroes corresponding to %CT.

Livestock Commodities

Poultry- From the poultry metabolism study, the ratios of all the metabolites of concern to those that were measured in the feeding study were calculated to be: 1.81 for egg yolk, 2.8 for fat, 1.5 for muscle, 2.5 for liver, and 1.8 for skin (DP#: 244253). These ratios were multiplied by estimated measured residues in each tissue in the feeding study to arrive at the total metabolites of concern. The following dietary burden in conjunction with the feed-tissue chart was used to estimate the measured residues in each tissue. As per HED policy, residues in poultry tissues were not adjusted for % dry matter (DM). These secondary residues in livestock tissues are given in Attachment 8. The calculated dietary burden is 2.72 ppm (electronic communication, J. Stokes, 17-APR-2007).

Feedstuff	%DM	Classification	Tolerance	% In Diet	Dietary Burden
Corn, grain	NA	CC ⁴	0	70	0
Wheat, grain		CC	0	5	0
Soybean, meal ¹		PC ⁵	0.8	15	0.12
Cottonseed, meal ²		PC	2.0	5	0.10
Alfalfa, meal ³		PC	50	5	2.50
Total				100	2.72

1 Based on soybean seed tolerance

2 Based on undelinted cottonseed tolerance

3 Based on alfalfa hay tolerance

4 CC = carbohydrate concentrate

5 PC = protein concentrate

The estimated residues of concern were used as a point estimate in DEEM-FCID™ for the corresponding poultry tissues in both acute and chronic assessments, assuming 100% CT. The estimated residue value in poultry liver tissue was used for meat by-product tissues.

Milk – From a “reasonably-balanced diet” guidelines (J. Stokes, Revisions of Livestock Diets Percents), the following diet for dairy cattle was made.

Feedstuff	%DM	Classification	Tolerance	% In Diet	Dietary Burden
Corn, grain	88	CC	0	30	0
Wheat, grain	89	CC	0	10	0
Apple wet pomace	40	CC	3.0	5	0.38
Cottonseed, undelinted	88	PC	2.0	10	0.23
Alfalfa, forage	35	R ¹	10	15	4.29
Alfalfa, hay	89	R	50	30	16.85
Total				100	21.75

1 R = roughage

The calculated 21.75 ppm is anticipated to result in 0.054 ppm indoxacarb residue in whole milk based on the feeding study (DP#: 276518, p.14) and a constructed dose-residue chart (see attachment 7). However, the residues of concern are indoxacarb and MP-819. From metabolism study (DP#: 244253, p.141), the highest ratio of metabolites of concern to indoxacarb is 1.82; therefore, the estimated highest residues of concern in whole milk is 0.0972 ppm. Due to high lipophilicity of indoxacarb ($K_{OW} = 4.65$ at pH 5) those residues are expected to be concentrated in the milk fat. Therefore, the residues in milk fat are estimated to be at 2.43 ppm (*i.e.*, 0.0972/4%, assuming milk fat is 4% of whole milk). From the same feeding study residues in cream and skim milk were also measured; however, the fat content of the cream is undetermined and thus, those data for cream can not be used. The expected indoxacarb residue in skim milk from the dose-residue chart (see attachment 7) is 0.022 ppm; therefore, the calculated residues of concern is 0.0396 ppm (*i.e.*, 0.022*1.8). With the assumption that the residues are concentrated in non-fat solids of the skim milk (~ 8% of the milk w/w), the estimated residues of concern in non-fat solids is 0.495 ppm (*i.e.*, 0.0396/8%). No residues are expected in milk water and lactose.

Ruminants (beef, goat, sheep, horse) and Pork – Corresponding tolerance values as point estimates (assuming 100% CT) were used for both acute and chronic assessments.

III. Drinking Water Data

Reference: Memo, J. Hetrick, 01-FEB-2007; DP#: 293793.

The drinking water assessment was revised (original drinking water assessment dated on 08-JUN-2004) to clarify and correct application rates and model output for current and proposed uses of indoxacarb. The highest indoxacarb concentrations in surface and ground source water are associated with cotton. This use pattern has a maximum label rate of 0.11 lbs ai¹/A (0.15 lbs KN128+KN127/A). Similar use rates are recommended for apples, potatoes, and grapes (Draft Label for DuPont™ Avaunt®). Tier II surface water modeling for cotton using the index reservoir with the default percent cropped area (PCA=0.87) predicts the 1- in -10 year peak (acute) concentration of DPX-JW062 residues of 25.1 µg/L. The 1- in -10 year annual average concentration (non-cancer chronic) and 30-year annual average concentration (cancer) of DPX-JW062 residues are not likely to exceed 5.37 and 2.78 µg/L, respectively. SCI-GROW modeling indicates concentrations of DPX-JW062 are not expected to exceed 0.21 µg/L. The highest indoxacarb residue concentrations are associated with the Mississippi cotton scenario (Table 6).

For acute and chronic dietary risk assessments, the 1-in -10 year peak (25.1 ppb) and the 1-in -10 year annual average, (5.37 ppb) indoxacarb residues of concern in water from cotton scenario were used.

Table 6. Default PCA Corrected PRZM/EXAMS Indoxacarb Residue Concentrations (µg/L).			
Scenario	1- in -10 year peak	1- in -10 year annual average	30-year annual average
Cotton (MS)	25.068	5.373	2.782
Turf (FL) ¹	0.05	0.014	0.008
Apples (NC)	18.093	4.738	2.560
Cabbage (FL)	8.275	1.940	1.185
Potato (ME)	11.083	5.346	3.961
Swiss Chard (CA) Aerial Application	9.220	3.788	2.643
Swiss Chard (CA) Ground Application	9.173	3.564	2.379

1- The default PCA correction (0.87) was not used for turf because this use pattern was not considered in development of PCAs.

¹ ai = active ingredient is defined as the S isomer of indoxacarb (KN128). The R isomer (KN127) is an inactive isomer.

IV. DEEM-FCID™ Program and Consumption Information

Indoxacarb acute and chronic dietary exposure assessments were conducted using the DEEM-FCID™, Version 2.03, which incorporates consumption data from USDA's CSFII, 1994-1996 and 1998. The 1994-96, 98 data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g. apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups, but for acute exposure assessment are retained as individual consumption events. Based on analysis of the 1994-96, 98 CSFII consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50+ years old.

For chronic dietary exposure assessments, an estimate of the residue level in each food or food-form (e.g., orange or orange juice) on the food commodity residue list is multiplied by the average daily consumption estimate for that food/food form to produce a residue intake estimate. The resulting residue intake estimate for each food/food form is summed with the residue intake estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

For acute exposure assessments, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or "matched" in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (*i.e.*, only those who reported eating relevant commodities/food forms) and a per-capita (*i.e.*, those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for all tiers of analysis. However, for Tiers 1 and 2, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

V. Toxicological Information

RAB1 toxicologists met in March 2007 to re-evaluate the indoxacarb toxicological endpoints and uncertainty factors in light of new studies. The RAB1 toxicologists concluded that the database uncertainty factor for the lack of a developmental neurotoxicity study should be removed since the DNT results are available. Table 7 below summarizes the HED decisions on endpoints as related to the dietary risk assessment.

Exposure Scenario	Dose Used in Risk Assessment, UF	FQPA SF* and Level of Concern for Risk Assessment	Study and Toxicological Effects
<i>Acute Dietary females 13-49 years of age</i>	<i>An endpoint of concern attributable to a single dose was not identified. An acute RfD was not established.</i>		
<i>Acute Dietary general population including infants and children</i>	<i>NOAEL= 9 mg/kg UF = 100 Acute RfD = 0.09 mg/kg</i>	<i>FQPA SF = 1X aPAD = 0.09 mg/kg (aRfD) 1X (FQPA SF) = 0.09 mg/kg</i>	<i>Acute oral rat neurotoxicity study (MP062). LOAEL = 38 mg/kg based on decreased body weight and body weight gain in females.</i>
<i>Chronic Dietary all Populations</i>	<i>NOAEL= 1.5 mg/kg UF = 100 Acute RfD = 0.015 mg/kg/day</i>	<i>FQPA SF = 1X cPAD = 0.015 mg/kg (cRfD) 1X (FQPA SF) = 0.015 mg/kg/day</i>	<i>Weight of evidence approach was used from four studies: 1) Subchronic toxicity study- rat (MP062) 2) Subchronic neurotoxicity study - rat (MP062) 3) Chronic/carcinogenicity study - rat (JW062) 4) Two generation rat reproduction study (JW062). LOAEL is based on decreased body weight, body weight gain, food consumption and food efficiency; decreased hematocrit, hemoglobin and red blood cells only at 6 months.</i>
<i>Cancer (oral, dermal, inhalation)</i>	<i>“not likely” to be carcinogenic to humans since no evidence of carcinogenicity in either the rat or mouse studies, and no evidence of mutagenicity.</i>		

¹ UF = uncertainty factor, FQPA SF = FQPA safety factor, NOAEL = no observed adverse effect level, LOAEL = lowest observed adverse effect level, PAD = population adjusted dose (a = acute, c = chronic) RfD = reference dose, MP062 = 75%KN128:25%KN127 formulation; JW062 = 50%KN128:50%KN127.

VI. Characterization of Inputs and Outputs

These analyses are considered to be somewhat conservative dietary exposure assessments. In some cases, tolerance-level residues, default DEEM processing factors, and/or 100% CT data were used. Further refinement to the analyses could be made through the use of ARs, incorporation of %CT for new uses and/or monitoring data that better reflect residues at the time of consumption. Since both acute and chronic risk estimates are below HED's level of concern, more highly refined analyses are not needed at this time.

VII. Results/Discussion

As stated above, for acute and chronic assessments, HED is concerned when dietary risk exceeds 100% of the aPAD and cPAD, respectively. The DEEM-FCID™ analyses estimate the dietary exposure of the U.S. population and various population subgroups. The acute and chronic results reported in Tables 8 and 9 are for the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, adults 20-49, and adults 50+ years.

Acute Dietary Exposure Results

Estimated acute dietary exposure to indoxacarb from food and drinking water is below HED's level of concern for all population subgroups. Combined dietary exposure from food and drinking water at the 99.9th percentile of exposure is estimated to be 0.034881 mg/kg/day for the overall U.S. population, equivalent to 39% of the aPAD. The population subgroup with the highest estimated acute dietary exposure to indoxacarb is children, 3 to 5 years old, with an estimated exposure at the 99.9th percentile of 0.075914 mg/kg/day, equivalent to 84% of the aPAD.

Table 8. Summary of Acute Dietary (Food + Drinking Water) Exposure and Risk for Indoxacarb.

Population Subgroup	aPAD (mg/kg/day)	95 th Percentile		99 th Percentile		99.9 th Percentile	
		Exposure (mg/kg/day)	% aPAD	Exposure (mg/kg/day)	% aPAD	Exposure (mg/kg/day)	% aPAD
General U.S. Population	0.09	0.007763	8.6	0.015056	17	0.034881	39
All Infants (< 1 year old)		0.011092	12	0.021882	24	0.039554	44
Children 1-2 years old		0.018245	20	0.027641	31	0.070299	78
Children 3-5 years old¹		0.013500	15	0.021957	24	0.075914	84
Children 6-12 years old		0.008839	9.8	0.013521	15	0.029817	33
Youth 13-19 years old		0.005670	6.3	0.011517	13	0.039626	44
Adults 20-49 years old		0.004719	5.2	0.008655	9.6	0.027228	30
Adults 50+ years old		0.004489	5.0	0.012210	14	0.031662	35

¹The population subgroup with the highest estimated acute dietary (food + drinking water) exposure and risk is indicated by bold text.

Chronic Dietary Exposure Results

Estimated chronic dietary exposure to indoxacarb from food and drinking water is below HED's level of concern. Combined dietary exposure from food and drinking water is estimated at 0.002411 mg/kg/day for the general U.S. population (16% of the cPAD) and 0.007940 mg/kg/day (53% of the cPAD) for children, 1 to 2 years old, the population subgroup with the highest estimated chronic dietary exposure to indoxacarb.

Table 9. Summary of Chronic Dietary (Food + Drinking Water) Exposure and Risk for Indoxacarb.

Population Subgroup	cPAD (mg/kg/day)	Exposure (mg/kg/day)	% cPAD
General U.S. Population	0.015	0.002411	16
All Infants (< 1 year old)		0.002574	17
Children 1-2 years old¹		0.007940	53
Children 3-5 years old		0.006068	41
Children 6-12 years old		0.003701	25

Youth 13-19 years old		0.002197	15
Adults 20-49 years old		0.001764	12
Adults 50+ years old		0.001747	12
Females 13-49 years old		0.001693	11

The population subgroup with the highest estimated chronic dietary (food + drinking water) exposure and risk is indicated by bold text.

VIII. Conclusions

The results of the acute and chronic dietary assessments indicate that dietary exposure to indoxacarb from food and drinking water is below HED's level of concern for the general U.S. population and all population subgroups.

IX. List of Attachments

- Attachment 1: RDFs for the Acute Analysis
- Attachment 2: DEEM-FCID™ Acute Residue File
- Attachment 3: DEEM-FCID™ Acute Exposure Estimates
- Attachment 4: DEEM-FCID™ Chronic Residue File
- Attachment 5: DEEM-FCID™ Chronic Exposure Estimates
- Attachment 6: Poultry Dose-Residue Chart and Tables
- Attachment 7: Milk Dose-Residue Chart and Tables
- Attachment 8: BEAD Projected %CT Data

cc: M. Sahafeyan; D. Rosenblatt (RD; 7505P)
 RDI: DE SAC (08-MAY-2007), G.F. Kramer (16-MAY-2007)
 M. Sahafeyan:S10944:PY-S:(703)305-0776:7509P:RAB1

Attachment 1: RDFs for the Acute Analysis

<p>RDF 1 Apple, highest adjusted FTD (D244253, p.128)=0.74 ToTALZ=95 doc max %CT=5%</p> <p>5,0.74</p>	<p>RDF 2 (blank)</p> <hr/> <p>RDF 3 Indoxacarb-Broccoli doc Max %CT=50% ToTALZ=20 doc adjusted for exaggeration rate (multiplied by 0.67) (MRID 44477401)</p> <p>0.19 0.23 1.34 1.5 0.57 0.62 0.25 0.45 1.34 1.68 0.80 0.94 0.26 0.52 0.36 0.49 0.23 0.26 0.38 0.54</p>	<p>RDF 4 Indoxacarb-subgroup 5A, Broccoli FTD, doc Max %CT=55% of Cauliflower (highest) ToTALZ=16 doc adjusted for exaggeration rate(multiplied by 0.67) (MRID 44477401)</p> <p>0.19 0.23 1.34 1.5 0.57 0.62 0.25 0.45 1.34 1.68 0.80 0.94 0.26 0.52 0.36 0.49 0.23 0.26 0.38 0.54</p>
<p>RDF 5 Indoxacarb-Cabbage without Wrapper Leaves doc Max %CT=25% ToTALZ=66</p> <p>0.02 0.04 0.01 0.03 0.08 0.11 0.05 0.05 0.03 0.07 0.06 0.1 0.01 0.02 0.11 0.21 0.02 0.03 0.03 0.04 0.02 0.02 0.03 0.08</p>	<p>RDF 6 Indox-Cherries, 46651504.der doc max CT= 100</p> <p>.07 .07 .15 .45 .22 .19 .15 .16 .3 .51 .24 .12 .26 .31 .13 .62 .07 .07 .15 .45 .21 .19 .15 .15 .32 .51 .28 .15 .26 .32 .13 .64</p>	<p>RDF 7 Indoxacarb, Mustard Green FTD, PHI=3 days, D290126, 45718701.der doc max CT=100% totalz=0</p> <p>3.5 3.4 1.2 1.2 9.6 10 9.5 9.4</p>

<p>RDF 8</p> <p>Indoxacarb - Head Lettuce w/o wrapper leaves doc 35% CT Max TOTALZ=33</p> <p>0.033 0.016 0.067 0.082 0.051 0.044 0.14 0.24 0.061 0.047 0.11 0.029 0.48 0.34 0.13 0.24 1.1 0.76</p>	<p>RDF 9</p> <p>Indoxacarb - Leaf Lettuce doc 11% CT Max TOTALZ=146</p> <p>8 8.7 6.8 7.9 6.6 5.6 3.5 4.6 6.6 7.7 5.9 7.2 8.3 8.1 3.4 3.7 2.7 2.9</p>	<p>RDF 10</p> <p>Indox-Peach FTD, 46651505.der doc max CT=100%</p> <p>07 .26 .13 .03 .04 .1 .09 .3 .16 .19 .58 .07 .06 .29 .13 .04 .04 .3 .16 .2 .59 .07 .09 .09 .09 .1 .1 .1 .1</p>
<p>RDF 11</p> <p>Indox-Pear, highest FTD, D244253, p.128 doc max CT=2.5% ToTALZ=39</p> <p>0.08</p>	<p>RDF 12</p> <p>Indox-tomato, highest adjusted FTD, D244253 ToTALZ=75</p> <p>25,0.27</p>	<p>RDF 13</p> <p>Indox-fruiting veg. besides pepper and tomatoes doc highest adjusted FTD for tomatoes is used, D244253 ToTALZ=0 doc max % CT=100%</p> <p>0.27</p>
<p>RDF 14</p> <p>Indox-Corn Sweet(k+CWHR), adjusted highest FTD, D244253 ToTALZ=39 doc max %CT=2.5</p> <p>0.008</p>	<p>RDF 15</p> <p>Indox-pepper(bell or non-bell), FTD, D244253 doc highest FTD used (adjusted for exaggeration) ToTALZ=85</p> <p>15,0.067</p>	<p>RDF 16-20 blank</p>
<p>RDF 21</p> <p>Indox-Mint, FTD, 46520902.der doc max CT=100% totalz=0</p> <p>6.84 5.9 5.3 6.81 3.61 2.62 2.24 2.73</p>	<p>RDF 22</p> <p>Indox-Spinach FTD, 46487001.der doc max CT=5% totalz=304</p> <p>7.9 13 2.5 4.5 3.7 3.3 5.7 5.7</p>	<p>RDF 23</p> <p>Indox-Plum, FTD, 46651506.der doc max CT=100% TotalZ=0</p> <p>.01 .01 .02 .02 .02 .03 .07</p>

2.18 2.1 2.75 3.36	4.7 4.3 4.3 4.2 7.2 6.7 2.2 4.4	.04 .07 .19 .02 .02 .01 .02 .02 .02 .03 .07 .04 .07 .18 .01
RDF 24 Indox-trimmed celery, FTD x 2.5, see p.14 of D325479 doc max CT=100% totalz=0 0.155 0.145 3.25 3 1.075 1.375 1.9 1.325 1.05 1.175 4.75 4	RDF 25 Indox-southern pea, FTD, 46520901.der doc max CT=100% totalz=0 4,.01 .0670 .0630 .0130 .0140 .0110 .0110 .0330 .0200 .0150 .0320	RDF 26 Indoxacarb, Grapes, FTD, D290126, 45900301.der, PHI=7 days doc max CT=100% totalz=0 0.196 0.163 1.72 1.32 0.133 0.198 0.105 0.0661 0.306 0.328 0.448 0.423 0.292 0.0888 0.482 0.353 1.35 1.31 0.447 0.329
RDF 27 indox-squash, FTD, 46651503.der doc max CT=100% totalz=0 0.12 .014 .11 .04 .01 .022 .035 .012 .026 .01 .01 .084 .013 .048 .032 .01 .034 .026 .013 .028 .01	RDF 28 Indox-Cucumber, FTD, 46651502.der doc max CT=100% totalz=0 .018 .015 .025 .025 .01 .023 .04 .031 .013 .019 .016 .02 .028 .014 .01 .022 .069 .031 .012 .018	RDF 29 Indox-Cantaloupe, FTD, 46651501.der doc max CT=100% totalz=0 0.027 0.247 0.13 .393 .088 .031 .05 .036 .05 .116 .018 .064 .197 .17 .23 .068 .022 .064 .035 .052 .124

.022		.024
RDF 30	RDF 31	RDF 32
Indox-Apricot, Nectarine, used Peach FTD, 46651505.der ToTALZ=0 doc max CT=100%	Indox-cranberry, FTD, 46651507.der, PHI=28-30 days doc max CT=100% totalz=0	Indox-Spinach FTD, 46487001.der used for rest of group 4A (100% CT as doc max CT=100% totalz=0
	.086	7.9
.07	.151	13
.26	.099	2.5
.13	.190	4.5
.03	.13	3.7
.04	.57	3.3
.1	.146	5.7
.09	.149	5.7
.3	.11	4.7
.16	.16	4.3
.19	.11	4.3
.58	.69	4.2
.07		7.2
.06		6.7
.29		2.2
.13		4.4
.04		
.04		
.3		
.16		
.2		
.59		
.07		
.09		
.09		
.09		
.09		
.1		
.1		
.1		
.1		

RDF 33

Indox-potato ; tolerance, D276516
doc max % CT=2.5
totalz=39

0.01

Attachment 2: DEEM-FCID™ Acute Residue File

Filename: C:\Documents and Settings\msahafey\Desktop\indox-053007\067710a-Rev2-053007.R98

Chemical: Indoxacarb

RfD(Chronic): .015 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day

RfD(Acute): .09 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day

Date created/last modified: 05-30-2007/09:57:09/8 Program ver. 2.03

RDL indices and parameters for Monte Carlo Analysis:

Index #	Dist Code	Parameter #1	Param #2	Param #3	Comment
1	6	Indoxacarb-041207-apple.rdf			
2	6	Indoxacarb-blank6.rdf			
3	6	Indoxacarb-041207-broccoli.rdf			
4	6	Indoxacarb-041207-Grp5A-rest.rdf			
5	6	Indoxacarb-041107-cabbage-WithoutWrapper.rdf			
6	6	Indoxacarb-053007-cherries.rdf			
7	6	indoxacarb-040307-MustrdGrn-FTD.rdf			
8	6	Indoxacarb-041107-HeadLettuce-NoWrapper.rdf			
9	6	Indoxacarb-041707-LeafLettuce.rdf			
10	6	Indoxacarb-053007-peach.rdf			
11	6	Indoxacarb-041207-pear.rdf			
12	6	Indoxacarb-041507-tomato.rdf			
13	6	Indoxacarb-041507-FruitgVeg.rdf			
14	6	Indoxacarb-041707-sweet-corn.rdf			
15	6	Indoxacarb-041507-Pepper.rdf			
16	6	Indoxacarb-blank1.rdf			
17	6	Indoxacarb-blank2.rdf			
18	6	Indoxacarb-blank3.rdf			
19	6	Indoxacarb-blank4.rdf			
20	6	Indoxacarb-blank5.rdf			
21	6	Indoxacarb-041007-mint.rdf			
22	6	indoxacarb-040907-spinach.rdf			
23	6	Indoxacarb-040907-plum.rdf			
24	6	Indoxacarb-040907-3-dayPHI-UntrimdCelery.rdf			
25	6	Indoxacarb-040907-southern-pea.rdf			
26	6	indoxacarb-040307-grapeFTD.rdf			
27	6	Indoxacarb-041007.squash.rdf			
28	6	Indoxacarb-041007-cucumber.rdf			
29	6	Indoxacarb-041007-cantaloupe.rdf			
30	6	Indoxacarb-040907-Apricot-Nectarine.rdf			
31	6	Indoxacarb-041007-cranberry.rdf			
32	6	indoxacarb-042307-Grp-4A-rest.rdf			
33	6	Indoxacarb-042307-potato.rdf			

EPA Comment Code	Crop Commodity Name Grp	Def Res (ppm)	Adj.Factors #1	#2	RDL Pntr
04010050	4A Amaranth, leafy	14.000000	1.000	1.000	32
11000070	11 Apple, fruit with peel	1.000000	1.000	1.000	1

11000080	11	Apple, peeled fruit	1.000000	1.000	1.000	1
11000081	11	Apple, peeled fruit-babyfood	1.000000	1.000	1.000	1
11000090	11	Apple, dried	0.037000	8.000	1.000	
11000091	11	Apple, dried-babyfood	0.037000	8.000	1.000	
11000100	11	Apple, juice	1.000000	0.010	1.000	1
11000101	11	Apple, juice-babyfood	1.000000	0.010	1.000	1
11000110	11	Apple, sauce	1.000000	1.000	1.000	1
11000111	11	Apple, sauce-babyfood	1.000000	1.000	1.000	1
12000120	12	Apricot	0.900000	1.000	1.000	30
12000121	12	Apricot-babyfood	0.900000	1.000	1.000	30
12000130	12	Apricot, dried	0.155300	6.000	1.000	
12000140	12	Apricot, juice	0.900000	1.000	1.000	30
12000141	12	Apricot, juice-babyfood	0.900000	1.000	1.000	30
01030150	1CD	Arrowroot, flour	0.010000	1.000	1.000	
01030151	1CD	Arrowroot, flour-babyfood	0.010000	1.000	1.000	
01030170	1CD	Artichoke, Jerusalem	0.010000	1.000	1.000	
04010180	4A	Arugula	14.000000	1.000	1.000	32
09020210	9B	Balsam pear	0.600000	1.000	1.000	27
06030340	6C	Bean, cowpea, seed	0.100000	1.000	1.000	25
21000440	M	Beef, meat	0.050000	1.000	1.000	
21000441	M	Beef, meat-babyfood	0.050000	1.000	1.000	
21000450	M	Beef, meat, dried	0.050000	1.920	1.000	
21000460	M	Beef, meat byproducts	0.030000	1.000	1.000	
21000461	M	Beef, meat byproducts-babyfood	0.030000	1.000	1.000	
21000470	M	Beef, fat	1.500000	1.000	1.000	
21000471	M	Beef, fat-babyfood	1.500000	1.000	1.000	
21000480	M	Beef, kidney	0.030000	1.000	1.000	
21000490	M	Beef, liver	0.030000	1.000	1.000	
21000491	M	Beef, liver-babyfood	0.030000	1.000	1.000	
05010610	5A	Broccoli	12.000000	1.000	1.000	3
05010611	5A	Broccoli-babyfood	12.000000	1.000	1.000	3
05010620	5A	Broccoli, Chinese	12.000000	1.000	1.000	3
05020630	5B	Broccoli raab	12.000000	1.000	1.000	7
05010640	5A	Brussels sprouts	12.000000	1.000	1.000	4
05010690	5A	Cabbage	12.000000	1.000	1.000	5
05020700	5B	Cabbage, Chinese, bok choy	12.000000	1.000	1.000	7
05010710	5A	Cabbage, Chinese, napa	12.000000	1.000	1.000	4
05010720	5A	Cabbage, Chinese, mustard	12.000000	1.000	1.000	4
09010750	9A	Cantaloupe	0.600000	1.000	1.000	29
04020760	4B	Cardoon	14.000000	1.000	1.000	24
09010800	9A	Casaba	0.600000	1.000	1.000	29
01030820	1CD	Cassava	0.010000	1.000	1.000	
01030821	1CD	Cassava-babyfood	0.010000	1.000	1.000	
05010830	5A	Cauliflower	12.000000	1.000	1.000	4
04020850	4B	Celery	14.000000	1.000	1.000	24
04020851	4B	Celery-babyfood	14.000000	1.000	1.000	24
04020860	4B	Celery, juice	14.000000	1.000	1.000	24
04020870	4B	Celtuce	14.000000	1.000	1.000	24
09020880	9B	Chayote, fruit	0.600000	1.000	1.000	27
12000900	12	Cherry	0.900000	1.000	1.000	6
12000901	12	Cherry-babyfood	0.900000	1.000	1.000	6
12000910	12	Cherry, juice	0.900000	1.500	1.000	6
12000911	12	Cherry, juice-babyfood	0.900000	1.500	1.000	6
40000930	P	Chicken, meat	0.045000	1.000	1.000	
40000931	P	Chicken, meat-babyfood	0.045000	1.000	1.000	
40000940	P	Chicken, liver	0.052000	1.000	1.000	
40000950	P	Chicken, meat byproducts	0.052000	1.000	1.000	

40000951	P	Chicken, meat byproducts-babyfoo	0.052000	1.000	1.000	
40000960	P	Chicken, fat	0.457000	1.000	1.000	
40000961	P	Chicken, fat-babyfood	0.457000	1.000	1.000	
40000970	P	Chicken, skin	0.079000	1.000	1.000	
40000971	P	Chicken, skin-babyfood	0.079000	1.000	1.000	
09021020	9B	Chinese waxgourd	0.600000	1.000	1.000	27
04011040	4A	Chrysanthemum, garland	14.000000	1.000	1.000	32
05021170	5B	Collards	12.000000	1.000	1.000	7
15001270	15	Corn, sweet	0.020000	1.000	1.000	14
15001271	15	Corn, sweet-babyfood	0.020000	1.000	1.000	14
95001280	O	Cottonseed, oil	0.670000	0.040	1.000	
Blende						
Full comment: Blended						
95001281	O	Cottonseed, oil-babyfood	0.670000	0.040	1.000	
Blende						
Full comment: Blended						
11001290	11	Crabapple	1.000000	1.000	1.000	1
95001300	O	Cranberry	0.900000	1.000	1.000	31
95001301	O	Cranberry-babyfood	0.900000	1.000	1.000	31
95001310	O	Cranberry, dried	0.900000	1.000	1.000	31
95001320	O	Cranberry, juice	0.900000	1.100	1.000	31
95001321	O	Cranberry, juice-babyfood	0.900000	1.100	1.000	31
04011330	4A	Cress, garden	14.000000	1.000	1.000	32
04011340	4A	Cress, upland	14.000000	1.000	1.000	32
09021350	9B	Cucumber	0.600000	1.000	1.000	28
04011380	4A	Dandelion, leaves	14.000000	1.000	1.000	32
01031390	1CD	Dasheen, corm	0.010000	1.000	1.000	
70001450	P	Egg, whole	0.119000	1.000	1.000	
70001451	P	Egg, whole-babyfood	0.119000	1.000	1.000	
70001460	P	Egg, white	0.119000	1.000	1.000	
70001461	P	Egg, white (solids)-babyfood	0.119000	1.000	1.000	
70001470	P	Egg, yolk	0.119000	1.000	1.000	
70001471	P	Egg, yolk-babyfood	0.119000	1.000	1.000	
08001480	8	Eggplant	0.270000	1.000	1.000	
04011500	4A	Endive	14.000000	1.000	1.000	32
04021520	4B	Fennel, Florence	14.000000	1.000	1.000	24
01031660	1CD	Ginger	0.010000	1.000	1.000	
01031661	1CD	Ginger-babyfood	0.010000	1.000	1.000	
01031670	1CD	Ginger, dried	0.010000	1.000	1.000	
23001690	M	Goat, meat	0.050000	1.000	1.000	
23001700	M	Goat, meat byproducts	0.030000	1.000	1.000	
23001710	M	Goat, fat	1.500000	1.000	1.000	
23001720	M	Goat, kidney	0.030000	1.000	1.000	
23001730	M	Goat, liver	0.030000	1.000	1.000	
95001750	O	Grape	2.000000	1.000	1.000	26
95001760	O	Grape, juice	2.000000	0.007	1.000	26
95001761	O	Grape, juice-babyfood	2.000000	0.007	1.000	26
95001770	O	Grape, leaves	2.000000	1.000	1.000	26
95001780	O	Grape, raisin	6.000000	2.700	1.000	26
95001790	O	Grape, wine and sherry	2.000000	0.007	1.000	26
09011870	9A	Honeydew melon	0.600000	1.000	1.000	29
24001890	M	Horse, meat	0.050000	1.000	1.000	
05021940	5B	Kale	12.000000	1.000	1.000	7
05011960	5A	Kohlrabi	12.000000	1.000	1.000	4
04012040	4A	Lettuce, head	14.000000	1.000	1.000	8
04012050	4A	Lettuce, leaf	14.000000	1.000	1.000	9
11002100	11	Loquat	1.000000	1.000	1.000	1

27002220	D	Milk, fat	2.430000	1.000	1.000	
27002221	D	Milk, fat - baby food/infant for	2.430000	1.000	1.000	
27012230	D	Milk, nonfat solids	0.500000	1.000	1.000	
27012231	D	Milk, nonfat solids-baby food/in	0.500000	1.000	1.000	
05022290	5B	Mustard greens	12.000000	1.000	1.000	7
12002300	12	Nectarine	0.900000	1.000	1.000	30
08002340	8	Okra	0.270000	1.000	1.000	
04012480	4A	Parsley, leaves	14.000000	1.000	1.000	32
12002600	12	Peach	0.900000	1.000	1.000	10
12002601	12	Peach-babyfood	0.900000	1.000	1.000	10
12002610	12	Peach, dried	0.003900	4.000	1.000	
12002611	12	Peach, dried-babyfood	0.003900	4.000	1.000	
12002620	12	Peach, juice	0.900000	1.000	1.000	10
12002621	12	Peach, juice-babyfood	0.900000	1.000	1.000	10
95002630	O	Peanut	0.000075	1.000	1.000	
Blende						
Full comment: Blended						
95002640	O	Peanut, butter	0.000075	1.890	1.000	
Blende						
Full comment: Blended						
95002650	O	Peanut, oil	0.000075	1.400	1.000	
Blende						
Full comment: Blended						
11002660	11	Pear	0.110000	1.000	1.000	11
11002661	11	Pear-babyfood	0.110000	1.000	1.000	11
11002670	11	Pear, dried	0.002000	6.250	1.000	
Blende						
Full comment: Blended						
11002680	11	Pear, juice	0.110000	0.010	1.000	11
11002681	11	Pear, juice-babyfood	0.110000	0.010	1.000	11
08002700	8	Pepper, bell	0.500000	1.000	1.000	15
08002701	8	Pepper, bell-babyfood	0.500000	1.000	1.000	15
08002710	8	Pepper, bell, dried	0.010100	1.000	1.000	
Blende						
Full comment: Blended						
08002711	8	Pepper, bell, dried-babyfood	0.010100	1.000	1.000	
Blende						
Full comment: Blended						
08002720	8	Pepper, nonbell	0.500000	1.000	1.000	15
08002721	8	Pepper, nonbell-babyfood	0.500000	1.000	1.000	15
08002730	8	Pepper, nonbell, dried	0.010100	1.000	1.000	
Blende						
Full comment: Blended						
95002750	O	Peppermint	3.870000	1.000	1.000	21
95002760	O	Peppermint, oil	3.870000	0.028	1.000	
Blende						
Full comment: Blended						
12002850	12	Plum	0.900000	1.000	1.000	23
12002851	12	Plum-babyfood	0.900000	1.000	1.000	23
12002860	12	Plum, prune, fresh	0.900000	1.000	1.000	23
12002861	12	Plum, prune, fresh-babyfood	0.900000	1.000	1.000	23
12002870	12	Plum, prune, dried	0.045000	4.000	1.000	
Blende						
Full comment: Blended						
12002871	12	Plum, prune, dried-babyfood	0.045000	4.000	1.000	
Blende						
Full comment: Blended						

12002880	12	Plum, prune, juice	0.900000	1.400	1.000	23
12002881	12	Plum, prune, juice-babyfood	0.900000	1.400	1.000	23
25002900	M	Pork, meat	0.050000	1.000	1.000	
25002901	M	Pork, meat-babyfood	0.050000	1.000	1.000	
25002910	M	Pork, skin	1.500000	1.000	1.000	
25002920	M	Pork, meat byproducts	0.030000	1.000	1.000	
25002921	M	Pork, meat byproducts-babyfood	0.030000	1.000	1.000	
25002930	M	Pork, fat	1.500000	1.000	1.000	
25002931	M	Pork, fat-babyfood	1.500000	1.000	1.000	
25002940	M	Pork, kidney	0.030000	1.000	1.000	
25002950	M	Pork, liver	0.030000	1.000	1.000	
01032960	1C	Potato, chips	0.000100	0.850	1.000	
Blende						
Full comment: Blended, %CT unknown						
01032970	1C	Potato, dry (granules/ flakes)	0.000100	0.850	1.000	
Blende						
Full comment: Blended						
01032971	1C	Potato, dry (granules/ flakes)-b	0.000100	0.850	1.000	
Blende						
Full comment: Blended						
01032980	1C	Potato, flour	0.000100	1.000	1.000	
Blende						
Full comment: Blended						
01032981	1C	Potato, flour-babyfood	0.000100	1.000	1.000	
Blende						
Full comment: Blended						
01032990	1C	Potato, tuber, w/peel	0.010000	1.000	1.000	33
01032991	1C	Potato, tuber, w/peel-babyfood	0.010000	1.000	1.000	33
01033000	1C	Potato, tuber, w/o peel	0.010000	1.000	1.000	33
01033001	1C	Potato, tuber, w/o peel-babyfood	0.010000	1.000	1.000	33
60003010	P	Poultry, other, meat	0.045000	1.000	1.000	
60003020	P	Poultry, other, liver	0.052000	1.000	1.000	
60003030	P	Poultry, other, meat byproducts	0.052000	1.000	1.000	
60003040	P	Poultry, other, fat	0.457000	1.000	1.000	
60003050	P	Poultry, other, skin	0.079000	1.000	1.000	
09023080	9B	Pumpkin	0.600000	1.000	1.000	27
09023090	9B	Pumpkin, seed	0.600000	1.000	1.000	27
11003100	11	Quince	1.000000	1.000	1.000	1
04013130	4A	Radicchio	14.000000	1.000	1.000	32
05023180	5B	Rape greens	12.000000	1.000	1.000	7
04023220	4B	Rhubarb	14.000000	1.000	1.000	24
26003390	M	Sheep, meat	0.050000	1.000	1.000	
26003391	M	Sheep, meat-babyfood	0.050000	1.000	1.000	
26003400	M	Sheep, meat byproducts	0.030000	1.000	1.000	
26003410	M	Sheep, fat	1.500000	1.000	1.000	
26003411	M	Sheep, fat-babyfood	1.500000	1.000	1.000	
26003420	M	Sheep, kidney	0.030000	1.000	1.000	
26003430	M	Sheep, liver	0.030000	1.000	1.000	
06003470	6	Soybean, seed	0.000880	1.000	1.000	
Blende						
Full comment: Blended						
06003480	6	Soybean, flour	0.000880	1.000	1.000	
Blende						
Full comment: Blended						
06003481	6	Soybean, flour-babyfood	0.000880	1.000	1.000	
Blende						
Full comment: Blended						

06003490	6	Soybean, soy milk	0.000880	1.000	1.000	
Blende						
Full comment: Blended						
06003491	6	Soybean, soy milk-babyfood or in	0.000880	1.000	1.000	
Blende						
Full comment: Blended						
06003500	6	Soybean, oil	0.000880	0.640	1.000	
Blende						
Full comment: Blended						
06003501	6	Soybean, oil-babyfood	0.000880	0.640	1.000	
Blende						
Full comment: Blended						
95003520	O	Spearmint	3.870000	1.000	1.000	21
95003530	O	Spearmint, oil	3.870000	0.028	1.000	
Blende						
Full comment: Blended						
04013550	4A	Spinach	14.000000	1.000	1.000	22
04013551	4A	Spinach-babyfood	14.000000	1.000	1.000	22
09023560	9B	Squash, summer	0.600000	1.000	1.000	27
09023561	9B	Squash, summer-babyfood	0.600000	1.000	1.000	27
09023570	9B	Squash, winter	0.600000	1.000	1.000	27
09023571	9B	Squash, winter-babyfood	0.600000	1.000	1.000	27
01033660	1CD	Sweet potato	0.010000	1.000	1.000	
01033661	1CD	Sweet potato-babyfood	0.010000	1.000	1.000	
04023670	4B	Swiss chard	14.000000	1.000	1.000	24
01033710	1CD	Tanier, corm	0.010000	1.000	1.000	
08003740	8	Tomatillo	0.270000	1.000	1.000	
08003750	8	Tomato	0.500000	1.000	1.000	12
08003751	8	Tomato-babyfood	0.500000	1.000	1.000	12
08003760	8	Tomato, paste	0.067500	1.400	1.000	
Blende						
Full comment: Blended						
08003761	8	Tomato, paste-babyfood	0.067500	1.400	1.000	
Blende						
Full comment: Blended						
08003770	8	Tomato, puree	0.067500	0.520	1.000	
Blende						
Full comment: Blended						
08003771	8	Tomato, puree-babyfood	0.067500	0.520	1.000	
Blende						
Full comment: Blended						
08003780	8	Tomato, dried	0.067500	14.300	1.000	
Blende						
Full comment: Blended						
08003781	8	Tomato, dried-babyfood	0.067500	14.300	1.000	
Blende						
Full comment: Blended						
08003790	8	Tomato, juice	0.500000	0.520	1.000	12
50003820	P	Turkey, meat	0.045000	1.000	1.000	
50003821	P	Turkey, meat-babyfood	0.045000	1.000	1.000	
50003830	P	Turkey, liver	0.052000	1.000	1.000	
50003831	P	Turkey, liver-babyfood	0.052000	1.000	1.000	
50003840	P	Turkey, meat byproducts	0.052000	1.000	1.000	
50003841	P	Turkey, meat byproducts-babyfood	0.052000	1.000	1.000	
50003850	P	Turkey, fat	0.460000	1.000	1.000	
50003851	P	Turkey, fat-babyfood	0.460000	1.000	1.000	
50003860	P	Turkey, skin	0.079000	1.000	1.000	

50003861	P	Turkey, skin-babyfood	0.079000	1.000	1.000	
01033870	1CD	Turmeric	0.010000	1.000	1.000	
05023890	5B	Turnip, greens	12.000000	1.000	1.000	7
86010000	O	Water, direct, all sources	0.025000	1.000	1.000	
86020000	O	Water, indirect, all sources	0.025000	1.000	1.000	
09013990	9A	Watermelon	0.600000	1.000	1.000	29
09014000	9A	Watermelon, juice	0.600000	1.000	1.000	29
01034060	1CD	Yam, true	0.010000	1.000	1.000	
01034070	1CD	Yam bean	0.010000	1.000	1.000	

Attachment 3: DEEM-FCID™ Acute Exposure Estimates

U.S. Environmental Protection Agency
 DEEM-FCID ACUTE Analysis for INDOXACARB
 Residue file: 067710a-Rev2-053007.R98
 used.

Ver. 2.02
 (1994-98 data)
 Adjustment factor #2 NOT

Analysis Date: 05-30-2007/10:28:35 Residue file dated: 05-30-2007/09:57:09/8

Daily totals for food and foodform consumption used.

MC iterations = 1000 MC list in residue file MC seed = 10

Run Comment: "Revised run using 100%CT for cherries and peaches"

=====

Summary calculations (per capita):

	95th Percentile		99th Percentile		99.9th Percentile	
	Exposure	% aRfD	Exposure	% aRfD	Exposure	% aRfD
	-----	-----	-----	-----	-----	-----
U.S. Population:	0.007763	8.63	0.015056	16.73	0.034881	38.76
All infants:	0.011092	12.32	0.021882	24.31	0.039554	43.95
Children 1-2 yrs:	0.018245	20.27	0.027641	30.71	0.070299	78.11
Children 3-5 yrs:	0.013500	15.00	0.021957	24.40	0.075914	84.35
Children 6-12 yrs:	0.008839	9.82	0.013521	15.02	0.029817	33.13
Youth 13-19 yrs:	0.005670	6.30	0.011517	12.80	0.039626	44.03
Adults 20-49 yrs:	0.004719	5.24	0.008655	9.62	0.027228	30.25
Adults 50+ yrs:	0.004489	4.99	0.012210	13.57	0.031662	35.18

Attachment 4: DEEM-FCID™ Chronic Residue File

Filename: C:\Documents and Settings\msahafey\Desktop\inxox-053007\067710c-Rev2-053007.R98

Chemical: Indoxacarb

RfD(Chronic): .015 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day

RfD(Acute): .09 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day

Date created/last modified: 05-30-2007/09:58:48/8

Program ver. 2.03

EPA Comment Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors	
				#1	#2
95000010	O	Acerola	0.000000	1.000	1.000
18000020	18	Alfalfa, seed	0.000000	1.000	1.000
14000030	14	Almond	0.000000	1.000	1.000
14000031	14	Almond-babyfood	0.000000	1.000	1.000
14000040	14	Almond, oil	0.000000	1.000	1.000
14000041	14	Almond, oil-babyfood	0.000000	1.000	1.000
04010050	4A	Amaranth, leafy	5.270000	1.000	1.000
95000060	O	Amaranth, grain	0.000000	1.000	1.000
11000070	11	Apple, fruit with peel	0.007400	1.000	1.000
11000080	11	Apple, peeled fruit	0.007400	1.000	1.000
11000081	11	Apple, peeled fruit-babyfood	0.007400	1.000	1.000
11000090	11	Apple, dried	0.007400	8.000	1.000
11000091	11	Apple, dried-babyfood	0.007400	8.000	1.000
11000100	11	Apple, juice	0.007400	0.010	1.000
11000101	11	Apple, juice-babyfood	0.007400	0.010	1.000
11000110	11	Apple, sauce	0.007400	1.000	1.000
11000111	11	Apple, sauce-babyfood	0.007400	1.000	1.000
12000120	12	Apricot	0.155000	1.000	1.000
12000121	12	Apricot-babyfood	0.155000	1.000	1.000
12000130	12	Apricot, dried	0.155000	6.000	1.000
12000140	12	Apricot, juice	0.155000	1.000	1.000
12000141	12	Apricot, juice-babyfood	0.155000	1.000	1.000
01030150	1CD	Arrowroot, flour	0.010000	1.000	1.000
01030151	1CD	Arrowroot, flour-babyfood	0.010000	1.000	1.000
95000160	O	Artichoke, globe	0.000000	1.000	1.000
01030170	1CD	Artichoke, Jerusalem	0.010000	1.000	1.000
04010180	4A	Arugula	5.270000	1.000	1.000
95000190	O	Asparagus	0.000000	1.000	1.000
95000200	O	Avocado	0.000000	1.000	1.000
09020210	9B	Balsam pear	0.033000	1.000	1.000
95000220	O	Bamboo, shoots	0.000000	1.000	1.000
95000230	O	Banana	0.000000	1.000	1.000
95000231	O	Banana-babyfood	0.000000	1.000	1.000
95000240	O	Banana, dried	0.000000	1.000	1.000
95000241	O	Banana, dried-babyfood	0.000000	1.000	1.000
15000250	15	Barley, pearled barley	0.000000	1.000	1.000
15000251	15	Barley, pearled barley-babyfood	0.000000	1.000	1.000
15000260	15	Barley, flour	0.000000	1.000	1.000
15000261	15	Barley, flour-babyfood	0.000000	1.000	1.000
15000270	15	Barley, bran	0.000000	1.000	1.000

19010280	19A	Basil, fresh leaves	0.000000	1.000	1.000
19010281	19A	Basil, fresh leaves-babyfood	0.000000	1.000	1.000
19010290	19A	Basil, dried leaves	0.000000	1.000	1.000
19010291	19A	Basil, dried leaves-babyfood	0.000000	1.000	1.000
06030300	6C	Bean, black, seed	0.000000	1.000	1.000
06020310	6B	Bean, broad, succulent	0.000000	1.000	1.000
06030320	6C	Bean, broad, seed	0.000000	1.000	1.000
06020330	6B	Bean, cowpea, succulent	0.000000	1.000	1.000
06030340	6C	Bean, cowpea, seed	0.022800	1.000	1.000
06030350	6C	Bean, great northern, seed	0.000000	1.000	1.000
06030360	6C	Bean, kidney, seed	0.000000	1.000	1.000
06020370	6B	Bean, lima, succulent	0.000000	1.000	1.000
06030380	6C	Bean, lima, seed	0.000000	1.000	1.000
06030390	6C	Bean, mung, seed	0.000000	1.000	1.000
06030400	6C	Bean, navy, seed	0.000000	1.000	1.000
06030410	6C	Bean, pink, seed	0.000000	1.000	1.000
06030420	6C	Bean, pinto, seed	0.000000	1.000	1.000
06010430	6A	Bean, snap, succulent	0.000000	1.000	1.000
06010431	6A	Bean, snap, succulent-babyfood	0.000000	1.000	1.000
21000440	M	Beef, meat	0.050000	1.000	1.000
21000441	M	Beef, meat-babyfood	0.050000	1.000	1.000
21000450	M	Beef, meat, dried	0.050000	1.920	1.000
21000460	M	Beef, meat byproducts	0.030000	1.000	1.000
21000461	M	Beef, meat byproducts-babyfood	0.030000	1.000	1.000
21000470	M	Beef, fat	1.500000	1.000	1.000
21000471	M	Beef, fat-babyfood	1.500000	1.000	1.000
21000480	M	Beef, kidney	0.030000	1.000	1.000
21000490	M	Beef, liver	0.030000	1.000	1.000
21000491	M	Beef, liver-babyfood	0.030000	1.000	1.000
01010500	1AB	Beet, garden, roots	0.000000	1.000	1.000
01010501	1AB	Beet, garden, roots-babyfood	0.000000	1.000	1.000
02000510	2	Beet, garden, tops	0.000000	1.000	1.000
01010520	1A	Beet, sugar	0.000000	1.000	1.000
01010521	1A	Beet, sugar-babyfood	0.000000	1.000	1.000
01010530	1A	Beet, sugar, molasses	0.000000	1.000	1.000
01010531	1A	Beet, sugar, molasses-babyfood	0.000000	1.000	1.000
95000540	O	Belgium endive	0.000000	1.000	1.000
13010550	13A	Blackberry	0.000000	1.000	1.000
13010560	13A	Blackberry, juice	0.000000	1.000	1.000
13010561	13A	Blackberry, juice-babyfood	0.000000	1.000	1.000
13020570	13B	Blueberry	0.000000	1.000	1.000
13020571	13B	Blueberry-babyfood	0.000000	1.000	1.000
13010580	13A	Boysenberry	0.000000	1.000	1.000
14000590	14	Brazil nut	0.000000	1.000	1.000
95000600	O	Breadfruit	0.000000	1.000	1.000
05010610	5A	Broccoli	0.259000	1.000	1.000
05010611	5A	Broccoli-babyfood	0.259000	1.000	1.000
05010620	5A	Broccoli, Chinese	0.226600	1.000	1.000
05020630	5B	Broccoli raab	5.980000	1.000	1.000
05010640	5A	Brussels sprouts	0.226600	1.000	1.000
15000650	15	Buckwheat	0.000000	1.000	1.000
15000660	15	Buckwheat, flour	0.000000	1.000	1.000
01010670	1AB	Burdock	0.000000	1.000	1.000
14000680	14	Butternut	0.000000	1.000	1.000
05010690	5A	Cabbage	0.008700	1.000	1.000
05020700	5B	Cabbage, Chinese, bok choy	5.980000	1.000	1.000
05010710	5A	Cabbage, Chinese, napa	0.226600	1.000	1.000

05010720	5A	Cabbage, Chinese, mustard	0.226600	1.000	1.000
95000730	O	Cactus	0.000000	1.000	1.000
95000740	O	Canistel	0.000000	1.000	1.000
09010750	9A	Cantaloupe	0.101600	1.000	1.000
04020760	4B	Cardoon	1.930000	1.000	1.000
95000770	O	Carob	0.000000	1.000	1.000
01010780	1AB	Carrot	0.000000	1.000	1.000
01010781	1AB	Carrot-babyfood	0.000000	1.000	1.000
01010790	1AB	Carrot, juice	0.000000	1.000	1.000
09010800	9A	Casaba	0.101600	1.000	1.000
14000810	14	Cashew	0.000000	1.000	1.000
01030820	1CD	Cassava	0.010000	1.000	1.000
01030821	1CD	Cassava-babyfood	0.010000	1.000	1.000
05010830	5A	Cauliflower	0.226600	1.000	1.000
01010840	1AB	Celeriac	0.000000	1.000	1.000
04020850	4B	Celery	1.930000	1.000	1.000
04020851	4B	Celery-babyfood	1.930000	1.000	1.000
04020860	4B	Celery, juice	1.930000	1.000	1.000
04020870	4B	Celtuce	1.930000	1.000	1.000
09020880	9B	Chayote, fruit	0.033100	1.000	1.000
95000890	O	Cherimoya	0.000000	1.000	1.000
12000900	12	Cherry	0.250000	1.000	1.000
12000901	12	Cherry-babyfood	0.250000	1.000	1.000
12000910	12	Cherry, juice	0.250000	1.500	1.000
12000911	12	Cherry, juice-babyfood	0.250000	1.500	1.000
14000920	14	Chestnut	0.000000	1.000	1.000
40000930	P	Chicken, meat	0.045000	1.000	1.000
40000931	P	Chicken, meat-babyfood	0.045000	1.000	1.000
40000940	P	Chicken, liver	0.052000	1.000	1.000
40000950	P	Chicken, meat byproducts	0.052000	1.000	1.000
40000951	P	Chicken, meat byproducts-babyfoo	0.052000	1.000	1.000
40000960	P	Chicken, fat	0.457000	1.000	1.000
40000961	P	Chicken, fat-babyfood	0.457000	1.000	1.000
40000970	P	Chicken, skin	0.079000	1.000	1.000
40000971	P	Chicken, skin-babyfood	0.079000	1.000	1.000
06030980	6C	Chickpea, seed	0.000000	1.000	1.000
06030981	6C	Chickpea, seed-babyfood	0.000000	1.000	1.000
06030990	6C	Chickpea, flour	0.000000	1.000	1.000
01011000	1AB	Chicory, roots	0.000000	1.000	1.000
02001010	2	Chicory, tops	0.000000	1.000	1.000
09021020	9B	Chinese waxgourd	0.033100	1.000	1.000
19011030	19A	Chive	0.000000	1.000	1.000
04011040	4A	Chrysanthemum, garland	5.270000	1.000	1.000
19021050	19B	Cinnamon	0.000000	1.000	1.000
19021051	19B	Cinnamon-babyfood	0.000000	1.000	1.000
10001060	10	Citrus citron	0.000000	1.000	1.000
10001070	10	Citrus hybrids	0.000000	1.000	1.000
10001080	10	Citrus, oil	0.000000	1.000	1.000
95001090	O	Cocoa bean, chocolate	0.000000	1.000	1.000
95001100	O	Cocoa bean, powder	0.000000	1.000	1.000
95001110	O	Coconut, meat	0.000000	1.000	1.000
95001111	O	Coconut- meat-babyfood	0.000000	1.000	1.000
95001120	O	Coconut, dried	0.000000	1.000	1.000
95001130	O	Coconut, milk	0.000000	1.000	1.000
95001140	O	Coconut, oil	0.000000	1.000	1.000
95001141	O	Coconut, oil-babyfood	0.000000	1.000	1.000
95001150	O	Coffee, roasted bean	0.000000	1.000	1.000

95001160	O	Coffee, instant	0.000000	1.000	1.000
05021170	5B	Collards	5.980000	1.000	1.000
19011180	19A	Coriander, leaves	0.000000	1.000	1.000
19011181	19A	Coriander, leaves-babyfood	0.000000	1.000	1.000
19021190	19B	Coriander, seed	0.000000	1.000	1.000
19021191	19B	Coriander, seed-babyfood	0.000000	1.000	1.000
15001200	15	Corn, field, flour	0.000000	1.000	1.000
15001201	15	Corn, field, flour-babyfood	0.000000	1.000	1.000
15001210	15	Corn, field, meal	0.000000	1.000	1.000
15001211	15	Corn, field, meal-babyfood	0.000000	1.000	1.000
15001220	15	Corn, field, bran	0.000000	1.000	1.000
15001230	15	Corn, field, starch	0.000000	1.000	1.000
15001231	15	Corn, field, starch-babyfood	0.000000	1.000	1.000
15001240	15	Corn, field, syrup	0.000000	1.000	1.000
15001241	15	Corn, field, syrup-babyfood	0.000000	1.000	1.000
15001250	15	Corn, field, oil	0.000000	1.000	1.000
15001251	15	Corn, field, oil-babyfood	0.000000	1.000	1.000
15001260	15	Corn, pop	0.000000	1.000	1.000
15001270	15	Corn, sweet	0.000080	1.000	1.000
15001271	15	Corn, sweet-babyfood	0.000080	1.000	1.000
95001280	O	Cottonseed, oil	0.670000	0.040	1.000
95001281	O	Cottonseed, oil-babyfood	0.670000	0.040	1.000
11001290	11	Crabapple	0.740000	1.000	1.000
95001300	O	Cranberry	0.216000	1.000	1.000
95001301	O	Cranberry-babyfood	0.216000	1.000	1.000
95001310	O	Cranberry, dried	0.216000	1.000	1.000
95001320	O	Cranberry, juice	0.216000	1.100	1.000
95001321	O	Cranberry, juice-babyfood	0.216000	1.100	1.000
04011330	4A	Cress, garden	5.270000	1.000	1.000
04011340	4A	Cress, upland	5.270000	1.000	1.000
09021350	9B	Cucumber	0.023000	1.000	1.000
13021360	13B	Currant	0.000000	1.000	1.000
13021370	13B	Currant, dried	0.000000	1.000	1.000
04011380	4A	Dandelion, leaves	5.270000	1.000	1.000
01031390	1CD	Dasheen, corm	0.010000	1.000	1.000
02001400	2	Dasheen, leaves	0.000000	1.000	1.000
95001410	O	Date	0.000000	1.000	1.000
13011420	13A	Dewberry	0.000000	1.000	1.000
19021430	19B	Dill, seed	0.000000	1.000	1.000
19011440	19A	Dillweed	0.000000	1.000	1.000
70001450	P	Egg, whole	0.119000	1.000	1.000
70001451	P	Egg, whole-babyfood	0.119000	1.000	1.000
70001460	P	Egg, white	0.119000	1.000	1.000
70001461	P	Egg, white (solids)-babyfood	0.119000	1.000	1.000
70001470	P	Egg, yolk	0.119000	1.000	1.000
70001471	P	Egg, yolk-babyfood	0.119000	1.000	1.000
08001480	8	Eggplant	0.270000	1.000	1.000
13021490	13B	Elderberry	0.000000	1.000	1.000
04011500	4A	Endive	5.270000	1.000	1.000
95001510	O	Feijoa	0.000000	1.000	1.000
04021520	4B	Fennel, Florence	1.930000	1.000	1.000
95001530	O	Fig	0.000000	1.000	1.000
95001540	O	Fig, dried	0.000000	1.000	1.000
14001550	14	Filbert	0.000000	1.000	1.000
14001560	14	Filbert, oil	0.000000	1.000	1.000
80001570	F	Fish-freshwater finfish	0.000000	1.000	1.000
80001580	F	Fish-freshwater finfish, farm ra	0.000000	1.000	1.000

80001590	F	Fish-saltwater finfish, tuna	0.000000	1.000	1.000
80001600	F	Fish-saltwater finfish, other	0.000000	1.000	1.000
80001610	F	Fish-shellfish, crustacean	0.000000	1.000	1.000
80001620	F	Fish-shellfish, mollusc	0.000000	1.000	1.000
20001630	20	Flaxseed, oil	0.000000	1.000	1.000
03001640	3	Garlic	0.000000	1.000	1.000
03001650	3	Garlic, dried	0.000000	1.000	1.000
03001651	3	Garlic, dried-babyfood	0.000000	1.000	1.000
01031660	1CD	Ginger	0.010000	1.000	1.000
01031661	1CD	Ginger-babyfood	0.010000	1.000	1.000
01031670	1CD	Ginger, dried	0.010000	1.000	1.000
01011680	1AB	Ginseng, dried	0.000000	1.000	1.000
23001690	M	Goat, meat	0.050000	1.000	1.000
23001700	M	Goat, meat byproducts	0.030000	1.000	1.000
23001710	M	Goat, fat	1.500000	1.000	1.000
23001720	M	Goat, kidney	0.030000	1.000	1.000
23001730	M	Goat, liver	0.030000	1.000	1.000
13021740	13B	Gooseberry	0.000000	1.000	1.000
95001750	O	Grape	0.503000	1.000	1.000
95001760	O	Grape, juice	0.503000	0.007	1.000
95001761	O	Grape, juice-babyfood	0.503000	0.007	1.000
95001770	O	Grape, leaves	0.503000	1.000	1.000
95001780	O	Grape, raisin	0.503000	2.700	1.000
95001790	O	Grape, wine and sherry	0.503000	0.007	1.000
10001800	10	Grapefruit	0.000000	1.000	1.000
10001810	10	Grapefruit, juice	0.000000	1.000	1.000
06031820	6C	Guar, seed	0.000000	1.000	1.000
06031821	6C	Guar, seed-babyfood	0.000000	1.000	1.000
95001830	O	Guava	0.000000	1.000	1.000
95001831	O	Guava-babyfood	0.000000	1.000	1.000
19011840	19A	Herbs, other	0.000000	1.000	1.000
19011841	19A	Herbs, other-babyfood	0.000000	1.000	1.000
14001850	14	Hickory nut	0.000000	1.000	1.000
95001860	O	Honey	0.000000	1.000	1.000
95001861	O	Honey-babyfood	0.000000	1.000	1.000
09011870	9A	Honeydew melon	0.101600	1.000	1.000
95001880	O	Hop	0.000000	1.000	1.000
24001890	M	Horse, meat	0.050000	1.000	1.000
01011900	1AB	Horseradish	0.000000	1.000	1.000
13021910	13B	Huckleberry	0.000000	1.000	1.000
95001920	O	Jaboticaba	0.000000	1.000	1.000
95001930	O	Jackfruit	0.000000	1.000	1.000
05021940	5B	Kale	5.980000	1.000	1.000
95001950	O	Kiwifruit	0.000000	1.000	1.000
05011960	5A	Kohlrabi	0.226600	1.000	1.000
10001970	10	Kumquat	0.000000	1.000	1.000
03001980	3	Leek	0.000000	1.000	1.000
10001990	10	Lemon	0.000000	1.000	1.000
10002000	10	Lemon, juice	0.000000	1.000	1.000
10002001	10	Lemon, juice-babyfood	0.000000	1.000	1.000
10002010	10	Lemon, peel	0.000000	1.000	1.000
19012020	19A	Lemongrass	0.000000	1.000	1.000
06032030	6C	Lentil, seed	0.000000	1.000	1.000
04012040	4A	Lettuce, head	0.039700	1.000	1.000
04012050	4A	Lettuce, leaf	0.541000	1.000	1.000
10002060	10	Lime	0.000000	1.000	1.000
10002070	10	Lime, juice	0.000000	1.000	1.000

10002071	10	Lime, juice-babyfood	0.000000	1.000	1.000
13012080	13A	Loganberry	0.000000	1.000	1.000
95002090	O	Longan	0.000000	1.000	1.000
11002100	11	Loquat	0.740000	1.000	1.000
95002110	O	Lychee	0.000000	1.000	1.000
95002120	O	Lychee, dried	0.000000	1.000	1.000
14002130	14	Macadamia nut	0.000000	1.000	1.000
95002140	O	Mamey apple	0.000000	1.000	1.000
95002150	O	Mango	0.000000	1.000	1.000
95002151	O	Mango-babyfood	0.000000	1.000	1.000
95002160	O	Mango, dried	0.000000	1.000	1.000
95002170	O	Mango, juice	0.000000	1.000	1.000
95002171	O	Mango, juice-babyfood	0.000000	1.000	1.000
95002180	O	Maple, sugar	0.000000	1.000	1.000
95002190	O	Maple syrup	0.000000	1.000	1.000
19012200	19A	Marjoram	0.000000	1.000	1.000
19012201	19A	Marjoram-babyfood	0.000000	1.000	1.000
28002210	M	Meat, game	0.000000	1.000	1.000
27002220	D	Milk, fat	2.430000	1.000	1.000
27002221	D	Milk, fat - baby food/infant for	2.430000	1.000	1.000
27012230	D	Milk, nonfat solids	0.500000	1.000	1.000
27012231	D	Milk, nonfat solids-baby food/in	0.500000	1.000	1.000
27022240	D	Milk, water	0.000000	1.000	1.000
27022241	D	Milk, water-babyfood/infant form	0.000000	1.000	1.000
27032251	D	Milk, sugar (lactose)-baby food/	0.000000	1.000	1.000
15002260	15	Millet, grain	0.000000	1.000	1.000
95002270	O	Mulberry	0.000000	1.000	1.000
95002280	O	Mushroom	0.000000	1.000	1.000
05022290	5B	Mustard greens	5.980000	1.000	1.000
12002300	12	Nectarine	0.155300	1.000	1.000
15002310	15	Oat, bran	0.000000	1.000	1.000
15002320	15	Oat, flour	0.000000	1.000	1.000
15002321	15	Oat, flour-babyfood	0.000000	1.000	1.000
15002330	15	Oat, groats/rolled oats	0.000000	1.000	1.000
15002331	15	Oat, groats/rolled oats-babyfood	0.000000	1.000	1.000
08002340	8	Okra	0.270000	1.000	1.000
95002350	O	Olive	0.000000	1.000	1.000
95002360	O	Olive, oil	0.000000	1.000	1.000
03002370	3	Onion, dry bulb	0.000000	1.000	1.000
03002371	3	Onion, dry bulb-babyfood	0.000000	1.000	1.000
03002380	3	Onion, dry bulb, dried	0.000000	1.000	1.000
03002381	3	Onion, dry bulb, dried-babyfood	0.000000	1.000	1.000
03002390	3	Onion, green	0.000000	1.000	1.000
10002400	10	Orange	0.000000	1.000	1.000
10002410	10	Orange, juice	0.000000	1.000	1.000
10002411	10	Orange, juice-babyfood	0.000000	1.000	1.000
10002420	10	Orange, peel	0.000000	1.000	1.000
95002430	O	Palm heart, leaves	0.000000	1.000	1.000
95002440	O	Palm, oil	0.000000	1.000	1.000
95002441	O	Palm, oil-babyfood	0.000000	1.000	1.000
95002450	O	Papaya	0.000000	1.000	1.000
95002451	O	Papaya-babyfood	0.000000	1.000	1.000
95002460	O	Papaya, dried	0.000000	1.000	1.000
95002470	O	Papaya, juice	0.000000	1.000	1.000
04012480	4A	Parsley, leaves	5.270000	1.000	1.000
19012490	19A	Parsley, dried leaves	0.000000	1.000	1.000
19012491	19A	Parsley, dried leaves-babyfood	0.000000	1.000	1.000

01012500	1AB	Parsley, turnip rooted	0.000000	1.000	1.000
01012510	1AB	Parsnip	0.000000	1.000	1.000
01012511	1AB	Parsnip-babyfood	0.000000	1.000	1.000
95002520	O	Passionfruit	0.000000	1.000	1.000
95002521	O	Passionfruit-babyfood	0.000000	1.000	1.000
95002530	O	Passionfruit, juice	0.000000	1.000	1.000
95002531	O	Passionfruit, juice-babyfood	0.000000	1.000	1.000
95002540	O	Pawpaw	0.000000	1.000	1.000
06022550	6B	Pea, succulent	0.000000	1.000	1.000
06022551	6B	Pea, succulent-babyfood	0.000000	1.000	1.000
06032560	6C	Pea, dry	0.000000	1.000	1.000
06032561	6C	Pea, dry-babyfood	0.000000	1.000	1.000
06012570	6A	Pea, edible podded, succulent	0.000000	1.000	1.000
06032580	6C	Pea, pigeon, seed	0.000000	1.000	1.000
06022590	6B	Pea, pigeon, succulent	0.000000	1.000	1.000
12002600	12	Peach	0.155000	1.000	1.000
12002601	12	Peach-babyfood	0.155000	1.000	1.000
12002610	12	Peach, dried	0.155000	4.000	1.000
12002611	12	Peach, dried-babyfood	0.155000	4.000	1.000
12002620	12	Peach, juice	0.155000	1.000	1.000
12002621	12	Peach, juice-babyfood	0.155000	1.000	1.000
95002630	O	Peanut	0.000030	1.000	1.000
95002640	O	Peanut, butter	0.000030	1.890	1.000
95002650	O	Peanut, oil	0.000030	1.400	1.000
11002660	11	Pear	0.000800	1.000	1.000
11002661	11	Pear-babyfood	0.000800	1.000	1.000
11002670	11	Pear, dried	0.000800	6.250	1.000
11002680	11	Pear, juice	0.000800	0.010	1.000
11002681	11	Pear, juice-babyfood	0.000800	0.010	1.000
14002690	14	Pecan	0.000000	1.000	1.000
08002700	8	Pepper, bell	0.006700	1.000	1.000
08002701	8	Pepper, bell-babyfood	0.006700	1.000	1.000
08002710	8	Pepper, bell, dried	0.006700	1.000	1.000
08002711	8	Pepper, bell, dried-babyfood	0.006700	1.000	1.000
08002720	8	Pepper, nonbell	0.006700	1.000	1.000
08002721	8	Pepper, nonbell-babyfood	0.006700	1.000	1.000
08002730	8	Pepper, nonbell, dried	0.006700	1.000	1.000
19022740	19B	Pepper, black and white	0.000000	1.000	1.000
19022741	19B	Pepper, black and white-babyfood	0.000000	1.000	1.000
95002750	O	Peppermint	3.870000	1.000	1.000
95002760	O	Peppermint, oil	3.870000	0.028	1.000
95002770	O	Persimmon	0.000000	1.000	1.000
95002780	O	Pine nut	0.000000	1.000	1.000
95002790	O	Pineapple	0.000000	1.000	1.000
95002791	O	Pineapple-babyfood	0.000000	1.000	1.000
95002800	O	Pineapple, dried	0.000000	1.000	1.000
95002810	O	Pineapple, juice	0.000000	1.000	1.000
95002811	O	Pineapple, juice-babyfood	0.000000	1.000	1.000
14002820	14	Pistachio	0.000000	1.000	1.000
95002830	O	Plantain	0.000000	1.000	1.000
95002840	O	Plantain, dried	0.000000	1.000	1.000
12002850	12	Plum	0.045000	1.000	1.000
12002851	12	Plum-babyfood	0.045000	1.000	1.000
12002860	12	Plum, prune, fresh	0.045000	1.000	1.000
12002861	12	Plum, prune, fresh-babyfood	0.045000	1.000	1.000
12002870	12	Plum, prune, dried	0.045000	4.000	1.000
12002871	12	Plum, prune, dried-babyfood	0.045000	4.000	1.000

12002880	12	Plum, prune, juice	0.045000	1.000	1.000
12002881	12	Plum, prune, juice-babyfood	0.045000	1.000	1.000
95002890	O	Pomegranate	0.000000	1.000	1.000
25002900	M	Pork, meat	0.050000	1.000	1.000
25002901	M	Pork, meat-babyfood	0.050000	1.000	1.000
25002910	M	Pork, skin	1.500000	1.000	1.000
25002920	M	Pork, meat byproducts	0.030000	1.000	1.000
25002921	M	Pork, meat byproducts-babyfood	0.030000	1.000	1.000
25002930	M	Pork, fat	1.500000	1.000	1.000
25002931	M	Pork, fat-babyfood	1.500000	1.000	1.000
25002940	M	Pork, kidney	0.030000	1.000	1.000
25002950	M	Pork, liver	0.030000	1.000	1.000
01032960	1C	Potato, chips	0.000040	1.000	1.000
01032970	1C	Potato, dry (granules/ flakes)	0.000040	0.850	1.000
01032971	1C	Potato, dry (granules/ flakes)-b	0.000040	0.850	1.000
01032980	1C	Potato, flour	0.000040	1.000	1.000
01032981	1C	Potato, flour-babyfood	0.000040	1.000	1.000
01032990	1C	Potato, tuber, w/peel	0.000100	1.000	1.000
01032991	1C	Potato, tuber, w/peel-babyfood	0.000100	1.000	1.000
01033000	1C	Potato, tuber, w/o peel	0.000100	1.000	1.000
01033001	1C	Potato, tuber, w/o peel-babyfood	0.000100	1.000	1.000
60003010	P	Poultry, other, meat	0.045000	1.000	1.000
60003020	P	Poultry, other, liver	0.052000	1.000	1.000
60003030	P	Poultry, other, meat byproducts	0.052000	1.000	1.000
60003040	P	Poultry, other, fat	0.457000	1.000	1.000
60003050	P	Poultry, other, skin	0.079000	1.000	1.000
95003060	O	Psyllium, seed	0.000000	1.000	1.000
10003070	10	Pummelo	0.000000	1.000	1.000
09023080	9B	Pumpkin	0.033100	1.000	1.000
09023090	9B	Pumpkin, seed	0.033100	1.000	1.000
11003100	11	Quince	0.740000	1.000	1.000
95003110	O	Quinoa, grain	0.000000	1.000	1.000
29003120	M	Rabbit, meat	0.000000	1.000	1.000
04013130	4A	Radicchio	5.270000	1.000	1.000
01013140	1AB	Radish, roots	0.000000	1.000	1.000
02003150	2	Radish, tops	0.000000	1.000	1.000
01013160	1AB	Radish, Oriental, roots	0.000000	1.000	1.000
02003170	2	Radish, Oriental, tops	0.000000	1.000	1.000
05023180	5B	Rape greens	5.980000	1.000	1.000
20003190	20	Rapeseed, oil	0.000000	1.000	1.000
20003191	20	Rapeseed, oil-babyfood	0.000000	1.000	1.000
13013200	13A	Raspberry	0.000000	1.000	1.000
13013201	13A	Raspberry-babyfood	0.000000	1.000	1.000
13013210	13A	Raspberry, juice	0.000000	1.000	1.000
13013211	13A	Raspberry, juice-babyfood	0.000000	1.000	1.000
04023220	4B	Rhubarb	1.930000	1.000	1.000
15003230	15	Rice, white	0.000000	1.000	1.000
15003231	15	Rice, white-babyfood	0.000000	1.000	1.000
15003240	15	Rice, brown	0.000000	1.000	1.000
15003241	15	Rice, brown-babyfood	0.000000	1.000	1.000
15003250	15	Rice, flour	0.000000	1.000	1.000
15003251	15	Rice, flour-babyfood	0.000000	1.000	1.000
15003260	15	Rice, bran	0.000000	1.000	1.000
15003261	15	Rice, bran-babyfood	0.000000	1.000	1.000
01013270	1AB	Rutabaga	0.000000	1.000	1.000
15003280	15	Rye, grain	0.000000	1.000	1.000
15003290	15	Rye, flour	0.000000	1.000	1.000

20003300	20	Safflower, oil	0.000000	1.000	1.000
20003301	20	Safflower, oil-babyfood	0.000000	1.000	1.000
01013310	1AB	Salsify, roots	0.000000	1.000	1.000
02003320	2	Salsify, tops	0.000000	1.000	1.000
95003330	O	Sapote, Mamey	0.000000	1.000	1.000
19013340	19A	Savory	0.000000	1.000	1.000
95003350	O	Seaweed	0.000000	1.000	1.000
95003351	O	Seaweed-babyfood	0.000000	1.000	1.000
95003360	O	Sesame, seed	0.000000	1.000	1.000
95003361	O	Sesame, seed-babyfood	0.000000	1.000	1.000
95003370	O	Sesame, oil	0.000000	1.000	1.000
95003371	O	Sesame, oil-babyfood	0.000000	1.000	1.000
03003380	3	Shallot	0.000000	1.000	1.000
26003390	M	Sheep, meat	0.050000	1.000	1.000
26003391	M	Sheep, meat-babyfood	0.050000	1.000	1.000
26003400	M	Sheep, meat byproducts	0.030000	1.000	1.000
26003410	M	Sheep, fat	1.500000	1.000	1.000
26003411	M	Sheep, fat-babyfood	1.500000	1.000	1.000
26003420	M	Sheep, kidney	0.030000	1.000	1.000
26003430	M	Sheep, liver	0.030000	1.000	1.000
15003440	15	Sorghum, grain	0.000000	1.000	1.000
15003450	15	Sorghum, syrup	0.000000	1.000	1.000
95003460	O	Soursop	0.000000	1.000	1.000
06003470	6	Soybean, seed	0.000880	1.000	1.000
06003480	6	Soybean, flour	0.000880	1.000	1.000
06003481	6	Soybean, flour-babyfood	0.000880	1.000	1.000
06003490	6	Soybean, soy milk	0.000880	1.000	1.000
06003491	6	Soybean, soy milk-babyfood or in	0.000880	1.000	1.000
06003500	6	Soybean, oil	0.000880	0.640	1.000
06003501	6	Soybean, oil-babyfood	0.000880	0.640	1.000
95003510	O	Spanish lime	0.000000	1.000	1.000
95003520	O	Spearmint	3.870000	1.000	1.000
95003530	O	Spearmint, oil	3.870000	0.028	1.000
19023540	19B	Spices, other	0.000000	1.000	1.000
19023541	19B	Spices, other-babyfood	0.000000	1.000	1.000
04013550	4A	Spinach	0.263400	1.000	1.000
04013551	4A	Spinach-babyfood	0.263400	1.000	1.000
09023560	9B	Squash, summer	0.033100	1.000	1.000
09023561	9B	Squash, summer-babyfood	0.033100	1.000	1.000
09023570	9B	Squash, winter	0.033100	1.000	1.000
09023571	9B	Squash, winter-babyfood	0.033100	1.000	1.000
95003580	O	Starfruit	0.000000	1.000	1.000
95003590	O	Strawberry	0.000000	1.000	1.000
95003591	O	Strawberry-babyfood	0.000000	1.000	1.000
95003600	O	Strawberry, juice	0.000000	1.000	1.000
95003601	O	Strawberry, juice-babyfood	0.000000	1.000	1.000
95003610	O	Sugar apple	0.000000	1.000	1.000
95003620	O	Sugarcane, sugar	0.000000	1.000	1.000
95003621	O	Sugarcane, sugar-babyfood	0.000000	1.000	1.000
95003630	O	Sugarcane, molasses	0.000000	1.000	1.000
95003631	O	Sugarcane, molasses-babyfood	0.000000	1.000	1.000
20003640	20	Sunflower, seed	0.000000	1.000	1.000
20003650	20	Sunflower, oil	0.000000	1.000	1.000
20003651	20	Sunflower, oil-babyfood	0.000000	1.000	1.000
01033660	1CD	Sweet potato	0.010000	1.000	1.000
01033661	1CD	Sweet potato-babyfood	0.010000	1.000	1.000
04023670	4B	Swiss chard	1.930000	1.000	1.000

95003680	O	Tamarind	0.000000	1.000	1.000
10003690	10	Tangerine	0.000000	1.000	1.000
10003700	10	Tangerine, juice	0.000000	1.000	1.000
01033710	1CD	Tanier, corm	0.010000	1.000	1.000
95003720	O	Tea, dried	0.000000	1.000	1.000
95003730	O	Tea, instant	0.000000	1.000	1.000
08003740	8	Tomatillo	0.270000	1.000	1.000
08003750	8	Tomato	0.040500	1.000	1.000
08003751	8	Tomato-babyfood	0.040500	1.000	1.000
08003760	8	Tomato, paste	0.040500	1.400	1.000
08003761	8	Tomato, paste-babyfood	0.040500	1.400	1.000
08003770	8	Tomato, puree	0.040500	0.520	1.000
08003771	8	Tomato, puree-babyfood	0.040500	0.520	1.000
08003780	8	Tomato, dried	0.040500	14.300	1.000
08003781	8	Tomato, dried-babyfood	0.040500	14.300	1.000
08003790	8	Tomato, juice	0.040500	0.520	1.000
95003800	O	Tomato, Tree	0.000000	1.000	1.000
15003810	15	Triticale, flour	0.000000	1.000	1.000
15003811	15	Triticale, flour-babyfood	0.000000	1.000	1.000
50003820	P	Turkey, meat	0.045000	1.000	1.000
50003821	P	Turkey, meat-babyfood	0.045000	1.000	1.000
50003830	P	Turkey, liver	0.052000	1.000	1.000
50003831	P	Turkey, liver-babyfood	0.052000	1.000	1.000
50003840	P	Turkey, meat byproducts	0.052000	1.000	1.000
50003841	P	Turkey, meat byproducts-babyfood	0.052000	1.000	1.000
50003850	P	Turkey, fat	0.457000	1.000	1.000
50003851	P	Turkey, fat-babyfood	0.457000	1.000	1.000
50003860	P	Turkey, skin	0.079000	1.000	1.000
50003861	P	Turkey, skin-babyfood	0.079000	1.000	1.000
01033870	1CD	Turmeric	0.010000	1.000	1.000
05023890	5B	Turnip, greens	5.980000	1.000	1.000
01013880	1AB	Turnip, roots	0.000000	1.000	1.000
95003900	O	Vinegar	0.000000	1.000	1.000
14003910	14	Walnut	0.000000	1.000	1.000
86010000	O	Water, direct, all sources	0.005370	1.000	1.000
ave. 1					
Full comment: ave. 1 in 10 yr, cotton scenario					
86011000	O	Water, direct, tap	0.000000	1.000	1.000
86012000	O	Water, direct, bottled	0.000000	1.000	1.000
86013000	O	Water, direct, other	0.000000	1.000	1.000
86014000	O	Water, direct, source-NS	0.000000	1.000	1.000
86020000	O	Water, indirect, all sources	0.005370	1.000	1.000
ave. 1					
Full comment: ave. 1 in 10 yr, cotton scenario					
86021000	O	Water, indirect, tap	0.000000	1.000	1.000
86022000	O	Water, indirect, bottled	0.000000	1.000	1.000
86023000	O	Water, indirect, other	0.000000	1.000	1.000
86024000	O	Water, indirect, source-NS	0.000000	1.000	1.000
95003970	O	Water chestnut	0.000000	1.000	1.000
95003980	O	Watercress	0.000000	1.000	1.000
09013990	9A	Watermelon	0.101600	1.000	1.000
09014000	9A	Watermelon, juice	0.101600	1.000	1.000
15004010	15	Wheat, grain	0.000000	1.000	1.000
15004011	15	Wheat, grain-babyfood	0.000000	1.000	1.000
15004020	15	Wheat, flour	0.000000	1.000	1.000
15004021	15	Wheat, flour-babyfood	0.000000	1.000	1.000
15004030	15	Wheat, germ	0.000000	1.000	1.000

15004040	15	Wheat, bran	0.000000	1.000	1.000
15004050	15	Wild rice	0.000000	1.000	1.000
01034060	1CD	Yam, true	0.010000	1.000	1.000
01034070	1CD	Yam bean	0.010000	1.000	1.000

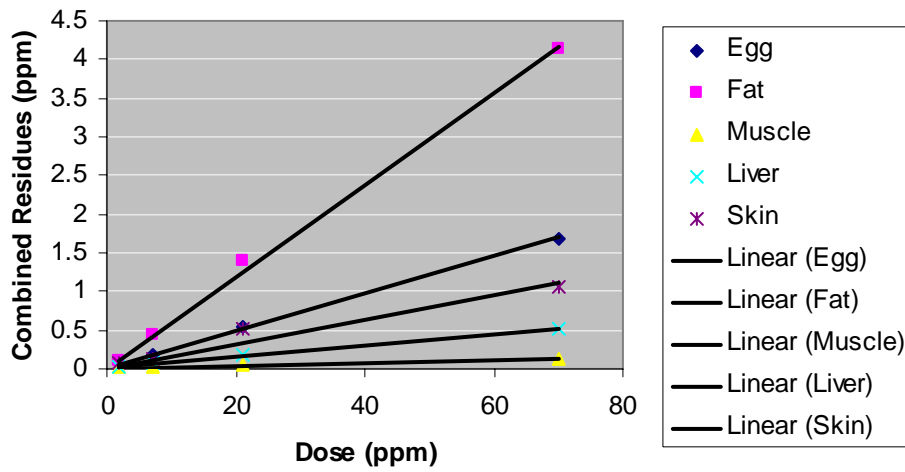
Attachment 6: Poultry Dose-Residue Chart and Tables

Combined Indoxacarb Residues (ppm) in Poultry Feeding Study (D297936)					
dose (ppm)	Egg	Fat	Muscle	Liver	Skin
1.75	0.08	0.1	0.03	0.03	0.07
7	0.17	0.44	0.03	0.08	0.12
21	0.54	1.4	0.06	0.18	0.51
70	1.69	4.13	0.12	0.52	1.06

slope of line	0.0243	0.0597	0.0018	0.0076	0.0159
R-sqrd	R2 = 0.9985	R2 = 0.9976	R2 = 0.7141	R2 = 0.9894	R2 = 0.9433

Res. From dose of 2.72 ppm	0.066	0.162	0.005 but change to 0.03 due to <LOQ	0.021	0.043
Total Res. Of Concern / Res. From Feeding Study	1.800	2.813	1.500	2.500	1.818
Total Res. Of Concern	0.119	0.457	0.045	0.052	0.079

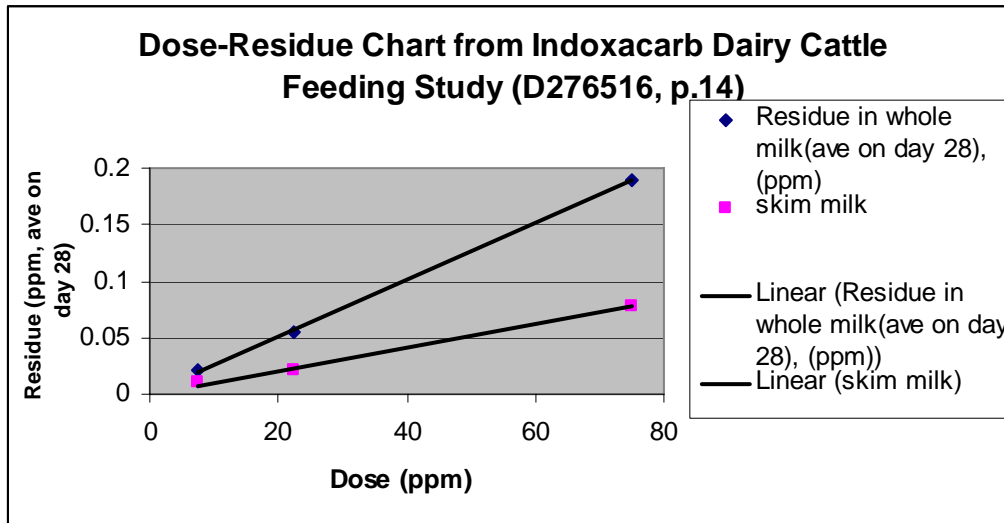
Dose-Residue Chart from Indoxacarb Poultry Feeding Study (D297936)



Attachment 7: Milk Dose-Residue Chart and Tables

Dietary Burden\	21.75
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Dose (ppm)	Residue in whole milk(ave on day 28), (ppm)	Residue in Skim milk, (ppm)
7.5	0.021	0.01
22.5	0.054	0.022
75	0.19	0.078
slope of line	0.0025	0.001
R squared	0.9992	0.997



Attachment 8: BEAD %CT Data

April 2, 2007

Screening Level Estimates of Agricultural Uses of Indoxacarb 067710 Sorted Alphabetically

	Crop	Lbs. A.I.	Percent Crop Treated	
			Avg.	Max.
2	Alfalfa	10,000	<1	<2.5
3	Apples	1,000	<1	5
4	Broccoli**	4,000	40	50
5	Brussels Sprouts*	<500	N/C	N/C
6	Cabbage	2,000	15	25
7	Cauliflower**	1,000	35	55
8	Cherries	<500	<1	<2.5
9	Cotton	30,000	<1	5
10	Lettuce***	6,000	20	35
11	Peaches	<500	<1	<2.5
12	Peanuts	<500	<1	<2.5
13	Pears	<500	<1	<2.5
14	Peppers	1,000	10	15
15	Potatoes	1,000	<1	<2.5
17	Spinach	<500	5	5
18	Sweet Corn	<500	<1	<2.5
19	Tomatoes	4,000	15	25

All numbers rounded.

'<500' indicates less than 500 pounds of active ingredient.

'<2.5' indicates less than 2.5 percent of crop is treated.

'<1' indicates less than 1 percent of crop is treated.

* CA data only, but 95% or more of U.S. acres are in California

** Electronic communication, A. Halvorson to S. Levy, 10-MAY-2007 (Either cauliflower or broccoli %CT may be used for the following 4 minor crops: Chinese broccoli, Chinese napa cabbage, Chinese mustard cabbage, and kohlrabi.)

*** Electronic communication, A. Halvorson to M. Sahafeyan, 12-APR-2007 (head lettuce: 18% average, 25% maximum; other lettuce: 9% average, 11% maximum)

N/C = Not Calculated