

Supporting Information

Relationship between urinary *N*-desmethyl-acetamiprid and typical symptoms including neurological findings: A prevalence case-control study

Jemima Tiwaa Marfo¹, Kazutoshi Fujioka², Yoshinori Ikenaka^{1,3}, Shouta M. M. Nakayama¹,

Hazuki Mizukawa⁴, Yoshiko Aoyama⁵, Mayumi Ishizuka¹, Kumiko Taira^{6*}

¹Laboratory of Toxicology, Department of Environmental Science, Faculty of Veterinary Medicine, Hokkaido University, Hokkaido, Japan

²Hawaii Institute of Molecular Education, Hawaii, US

³Water Research Group, School of Environmental Sciences and Development, North-West University, South Africa

⁴Department of Environmental Science, Faculty of Veterinary Medicine, Hokkaido University, Hokkaido, Japan

⁵Aoyama Allergy Clinic, Gunma, Japan

⁶Department of Anesthesiology, Tokyo Women's Medical University Medical Center East, Tokyo, Japan

S2 Table. Maximum residue levels (MRLs) of neonicotinoid insecticides in Japan, in compared to EU, US, and CODEX.

Tea leaves

	JPN	EU	US	CODEX
Acetamprid	30	0.05*	50**	-
Clothianidin	50	0.7	70**	0.7
Imidacloprid	10	0.05*	-	-
Nitenpyram	10	-	-	-
Thiacloprid	30	10	-	-
Thiamethoxam	20	20	20**	20
Dinotefuran	25	-	50**	-

* indicates lower limit of analytical determination.; **US import tolerance.

Grape, table

	JPN	EU	US	CODEX
Acetamprid	5	0.5	0.35	0.5
Clothianidin	5	0.7	0.6	0.7
Imidacloprid	3	1	1	1
Nitenpyram	5	-	-	-
Thiacloprid	5	0.02*	-	-
Thiamethoxam	2	0.9	0.2	0.5
Dinotefuran	15	0.9	0.9	0.9

* indicates lower limit of analytical determination.

Strawberry

	JPN	EU	US	CODEX
Acetamprid	3	0.5	0.6	0.5
Clothianidin	0.7	0.02*	-	0.07
Imidacloprid	0.5	0.5	0.5	0.5
Nitenpyram	5	-	-	-
Thiacloprid	5	1.0	-	1
Thiamethoxam	2	0.5	0.3	0.5
Dinotefuran	2	-	-	-

* indicates lower limit of analytical determination.

Pear

	JPN	EU	US	CODEX
Acetamprid	2	0.8	1	0.8
Clothianidin	1	0.4	1	0.4
Imidacloprid	0.7	0.5	0.6	1
Nitenpyram	0.5	-	-	-
Thiacloprid	2	0.3	0.3	0.7
Thiamethoxam	1	0.5	0.2	0.3
Dinotefuran	1	-	2***	-

***Expires 12/31/2015.

Peach

	JPN	EU	US	CODEX
Acetamprid	2	0.8	1.2	0.7
Clothianidin	0.7	0.1	0.8	0.2
Imidacloprid	0.5	0.5	3	0.5
Nitenpyram	0.5	-	-	-
Thiacloprid	1	0.3	0.5	0.5
Thiamethoxam	0.5	0.3	0.5	1
Dinotefuran	3	0.8	2*	0.8

***Expires 12/31/2015.

Apple

	JPN	EU	US	CODEX
Acetamprid	2	0.8	1	0.8
Clothianidin	1	0.4	1	0.4
Imidacloprid	0.5	0.5	0.5	0.5
Nitenpyram	0.5	-	-	-
Thiacloprid	2	0.3	0.3	0.7
Thiamethoxam	0.3	0.5	0.2	0.3
Dinotefuran	2	-	2***	-

***Expires 12/31/2015.

Mandarin, Satsuma (Unsyu)

	JPN	EU	US	CODEX
Acetamprid	0.5	0.9	1	1
Clothianidin	1	0.1	0.07****	0.07
Imidacloprid	0.3	1	0.7	1
Nitenpyram	0.5	-	-	-
Thiacloprid	5	0.02*	-	-
Thiamethoxam	0.3	0.2	0.4	0.5
Dinotefuran	2	-	-	-

* indicates lower limit of analytical determination.; ****Expires 12/31/2017.

Cucumber

	JPN	EU	US	CODEX
Acetamprid	2	0.3	0.5	0.2
Clothianidin	2	0.02*	0.06	0.02
Imidacloprid	1	1	0.5	1
Nitenpyram	5	-	-	-
Thiacloprid	1	0.3	-	0.3
Thiamethoxam	0.5	0.5	0.2	0.5
Dinotefuran	2	-	0.5	0.5

* indicates lower limit of analytical determination.

Cabbage

	JPN	EU	US	CODEX
Acetamprid	3	0.7	1.2	0.7
Clothianidin	0.7	0.02*	1.9	0.2
Imidacloprid	0.5	0.5	3.5	0.5
Nitenpyram	0.03	-	-	-
Thiacloprid	1	0.2	-	-
Thiamethoxam	5	5	4.5	5
Dinotefuran	2	-	1.4	2

* indicates lower limit of analytical determination.

Reference: Codex Pesticide Residues in Food Online Database accessed 2015/09/24; EU Pesticides database accessed 2015/09/24; Global MRL Database™, A service of Bryant

Christie INC. accessed 2015/09/29; The Japan Food Chemical Research Foundation MRLs
List accessed 2015/09/24