USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Voluntary _ Public

Date: 2/14/2017
GAIN Report Number: TH7021

Thailand

Post: Bangkok

Thai FDA Revises Pesticide Residue Standards and MRLs in Food

Report Categories:
Sanitary/Phytosanitary/Food Safety
WTO Notifications

Approved By:
Paul Welcher, Agricultural Attaché

Prepared By:
Sukanya Sirikeratikul, Marketing Specialist

Report Highlights:
On January 27, 2017, the Thai Food and Drug Administration notified the WTO (G/SPS/N/THA/183/Rev.1) on the Ministry of Public Health (MOPH) Notification Regarding Food Containing Pesticide Residue. This notification revises maximum residue limits and standards for pesticide residues in food. This measure may impact U.S. exports of fresh fruit, meat, spices, oilseeds, pulses, and milk to Thailand. The final date for WTO comments is March 28, 2017.

General Information:
Thai FDA Revision on Pesticide Residue Standards and MRLs in Foods

On January 27, the Thai Food and Drug Administration notified the WTO (G/SPS/N/THA/183/Rev.1) on the Ministry of Public Health (MOPH) Notification Regarding Food Containing Pesticide Residue. This notification revises maximum residue limits and standards for pesticide residue in food as follows:

1. The Ministry of Public Health notifications on Food Containing Pesticide Residue (No.1) dated April 14, 2011 and Ministry of Public Health notification (No. 361) on Food Containing Pesticide Residue (No. 2) dated August 6, 2013 are repealed.
2. The term "default limit" is introduced and defined as the residue limit permitted to be found in food for a pesticide in which its maximum residue limit has not been defined. It is expressed in milligrams of pesticide residue per kilogram of the food.
3. The pesticide residue for any pesticide defined as a type 4 hazardous substance under the Hazardous Substance Act 1992 including the 1998 revision of the Hazardous Substance Act is not permitted in food. Type 4 hazardous substances are listed in Schedule 1 that is annexed to this notification.
4. Pesticide residues other than those defined as a type 4 hazardous substances (Schedule 1) are permitted in food as per the below standards and requirements:
    a. The detected level of pesticide residues in food cannot exceed the maximum residue limit (MRL) prescribed under Schedule 2 which is annexed to this notification.
    b. The detected level of a pesticide residue in foods not listed under Schedule 2 of this notification cannot exceed the MRL recommended by Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme.
    c. The detected level of a pesticide residue in food other than (a) and (b), cannot exceed the default limit of 0.01 ppm for plant and animal food products except where the default limit for plants products is defined in Schedule 3 which is annexed to this notification.
    d. The detected level of a pesticide residue in food cannot exceed the extraneous maximum residue limit (EMRL) prescribed in Schedule 4 which is annexed to the notification.
5. This notification also prescribes the analytical methods to be used to detect pesticides residues in foods. These are listed in Schedule 5 which is annexed to the notification.

U.S. products potentially impacted by this regulation include fresh fruits (such as grapes, apples, cherries, oranges, and strawberries), fresh vegetables (such as potatoes), fresh meat, milk, pulses, and spices. This notification will come into force on the day following the date of its publication in the Royal Gazette. The final date for WTO comments is March 28, 2017.

Below is the unofficial translation of the proposed revised regulation notified to the WTO as G/SPS/N/THA/183/Rev.1

(Unofficial Translation)
(Draft)

Notification of Ministry of Public Health
(No….) B.E…. Re: Food Containing Pesticide Residue

It is appropriate to revise the Ministry of Public Health Notification Re: Food Containing Pesticide Residue.

By the authority of Section 5, Section 6(2), 6(3), and 6(9) of the Food Act B.E. 2522 (1979), the Minister of Public Health hereby issues the notification as follows:

Clause 1: The following notifications of Ministry of Public Health shall be repealed.

(1) The Notification of Ministry of Public Health Re: Food Containing Pesticide Residue dated 14th April B.E. 2554 (2011)

(2) The Notification of Ministry of Public Health (No. 361) B.E. 2556 (2013) Re: Food Containing Pesticide Residue (No. 2) dated 6th August B.E. 2556 (2013)

Clause 2: Foods containing pesticide residues are prescribed to be standardized food.

Clause 3: In this notification:

"Pesticide Residue" means any specified substance contaminates or remains in food resulting from the use of a pesticide. This also includes any derivatives of a pesticide such as conversion products, metabolites, reaction products, and impurities considered to be of toxicological significance.

"Maximum Residue Limit (MRL)" refers to the maximum concentration of a pesticide residue in a food resulting from the use of a pesticide. It is expressed in milligrams of pesticide residue per kilogram of the food (ppm).

"Extraneous Maximum Residue Limit (EMRL)" refers to an unavoidable pesticide residue or a contaminant arising from environmental sources. This includes former agricultural practices that are now nationally banned.

"Pesticide" means any substance intended for preventing, destroying, attracting, repelling, or controlling any pest including unwanted species of plants or animals during the production, storage, transport, distribution and processing of food, agricultural commodities, or animal feeds or which may be administered to animals for the control of ectoparasites. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant, fruit thinning agent, or sprouting inhibitor as well as substances applied either before or after harvest to protect commodities from deterioration during storage and transport. The term normally excludes fertilizers, plant and animal nutrients, food additives, feed additives and veterinary drug.

"Default Limit" means the residue limit permitted to be found in food for a pesticide in which its maximum residue limit has not been defined. It is expressed in milligrams of pesticide residue per kilogram of the food.

"Definition of residues" means an individual type of residue or a combination of several types of residues that are required to be tested in order to ensure compliance with MRLs as listed in this regulation. The term "type of pesticide residue" will also be used to describe this concept.

"Hazardous Substance Type 4" means a hazardous substance that is not permitted to be manufactured, imported, exported, or occupied as per the Notification of the Ministry of Industry Re:

List of Hazardous Substances issued under the Hazardous Substance Act B.E.2535 (1992), and revised in B.E. 2551 (1998).

Clause 4: Foods containing pesticide residue shall comply with the standards for type 4 hazardous substances under the Hazardous Substance Act B.E.2535 (1992), and the revision in B.E. 2551 (1998). Listed in Schedule 1 that is annexed to this notification, these substances shall not be found, except for those pesticides which are specified as follows:

(1) Detected pesticide residues in food shall not exceed the maximum residue limit (MRL) prescribed in the list under Schedule 2 that is annexed to this notification.

(2) Detected pesticide residues in foods that are not listed under Schedule 2 of this notification shall not exceed the limits recommended by Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme.

(3) Other than (1) and (2), detected pesticide residues in food shall not exceed the default limit of 0.01 ppm for plant and animal products except for the default limit for plant products as defined in Schedule 3 that is annexed to this notification.

(4) Detected pesticide residue in food shall not exceed the extraneous maximum residue limit (EMRL) prescribed in Schedule 4 that is annexed to this notification.

Clause 5: The analytical methods are prescribed in Schedule 5 that is annexed to this notification.

Clause 6: This notification shall come into force on the day following date of its publication in the Government Gazette.

Notified on_____

Schedule 1

Type 4 Hazardous Substances under the Hazardous Substance Act B.E. 2535 (1992)

Annexed to the Notification of the Ministry of Public Health RE: Food Containing Pesticide Residue

1	2,4,5-T or [(2,4,5-trichlorophenoxy) acetic acid]
2	2,4,5-TCP or 2,4,5-trichlorophenol
3	2,4,5-TP or [(+/-)-2-(2,4,5-trichlorophenoxy)propionic acid)]
4	[4-(4-chhloro-o-tolyloxy) butyric acid] or MCPB
5	chlordimeform
6	chlordecone
7	chlorthiophos
8	chlorobenzilate
9	chlorophenol
10	copper arsenate hydroxide or copper (II) aresenate
11	carbon tetrachloride or tetrachloromethane
12	captafol
13	calcium arsenate
14	sulfotep
15	safrole
16	sodium chlorate
17	sodium arsenite
18	cycloheximide
19	cyhexatin
20	daminozide
21	DBCP or 1,2-dibromo-3-chloropropane
22	demeton
23	demephion
24	dicrotophos
25	4,6-dinitro-o-cresol or DNOC
26	disulfoton
27	dinoseb
28	dinoterb
29	dimefox
30	toxaphene or camphechlor
31	TEPP or tetraethyl pyrophosphate
32	thallium sulfate
33	nitrofen
34	beta - HCH or 1,3,5/2,4,6-hexachlorocyclohexane
35	BHC(benzene hexachloride) or HCH (hexachlorocyclohexane)
36	benzidine
37	bromophos
38	bromophos-ethyl
39	binapacryl
40	paris green

41	parathion
42	parathion methyl
43	pentachlorophenate sodium or pentachlorophenoxide sodium
44	pentachlorophenol
45	prothoate
46	pyrinuron (piriminil)
47	fluoroacetate sodium
48	fluoroacetamide
49	phosphamidon (E)+(Z)-isomers
50	phosphamidon (Z)-isomers
51	phosphamidon (E)-isomers
52	phenothiol or MCPA-thioethyl or S-ethyl 4-chloro-o-tolyloxythioacetate
53	fensulfothion
54	fentin
55	fonofos (unstated stereochemistry)
56	fonofos (racemate)
57	fonofos (R)-isomer
58	fonofos (S)-isomer
59	phorate
60	methamidophos
61	mecoprop (unstated stereochemistry)
62	mecoprop (racemate)
63	mephosfolan
64	mevinphos
65	monocrotophos
66	mirex
67	lead arsenate
68	leptophos
69	strobane or polychloroterpenes
70	azinphos-methyl
71	azinphos-ethyl
72	amitrole
73	aminocarb
74	aramite
75	EDB or ethylene dibromide
76	EPN or O-ethyl O-4-nitrophenyl phenylphosphonothioate or O-ethyl O-p-nitrophenyl phenylphosphorothioate
77	ethyl hexyleneglycol or ethyl hexane diol or ethohexadiol
78	ethylene dichloride or 1,2-dichloroethane
79	ethylene oxide or 1,2-epoxyethane
80	endosulfan
81	MGK repellent-11 or 1,5a,6,9,9a,9b-hexahydro-4a(4H)-dibenzofurancarboxaldehyde
82	hexachlorobenzene

Schedule 2
Maximum Residue Limit, MRL
Annexed to the Notification of the Ministry of Public Health RE: Food Containing Pesticide Residue

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
1	Chlorpyrifos	Chlorpyrifos (fat-soluble)	Okra	0.5
			Banana	2
			Paddy[1]	0.5
			Rice[2]	0.1
			Seed spices	5
			Fruit spices	1
			Root spices	1
			Kale	1
			Rambutan	0.5
			Celery	0.05
			Soybean	0.1
			Fresh bean pod	1
			Durian	0.4
			Oil palm	0.05
			Iceberg lettuce	0.1
			Chili	3
			Dried chili[3]	20
			Sweet pepper	2
			Eggplant	0.2
			Coconut	0.05
			Peanut	0.05
			Sweet potato	0.05
			Longan	0.9
			Lychee	2
			Shallot	0.2
			Onion	0.2
			Mushroom	0.05
			Beef, meat of buffalo	1 (fat)
			Mutton, meet of goat	1 (fat)
			Bovine and buffalo offal	0.01
			Sheep and goat offal	0.01
			Pork	0.02 (fat)
			Swine offal	0.01
			Poultry meat	0.01 (fat)
			Poultry offal	0.01

			Egg	0.01
			Milk	0.02

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
2	Chlorothalonil	Plant: Chlorothalonil Animal: (2,5,6-trichloro-4-hydroxy isophthalonitrile)	Soybean	0.2
			Fresh bean pod	2
			Chinese white cabbage	1
			Chinese cabbage	1
			Chinese Broccoli	4
			Tomato	5
			Potato	0.2
			Peanut	0.1
3	Carbaryl	Carbaryl	Lead tree	0.02
			Fresh corn	0.1
			Fresh baby corn	0.1
			Corn	0.02
			Sorghum	10
			Rice[2]	1
			Rambutan	1
			Watermelon	1
			Durian	30
			Oil palm	0.05
			Brassica vegetables[44]	1
			Cucumber and other melons except watermelon	2
			Chili	0.5
			Dried chili[3]	2
			Sweet pepper	5
			Coconut	1
			Mango	3
			Mangosteen	1
			Potato	0.2
			Cacao bean	0.02
			Peanut	2
			Cashew nut	1
			Longan	20
			Lychee	1
			Orange	7
			Grape	0.5

			Sugarcane	0.05
			Mammal meat	0.05
			Mammal offal	1

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
			Poultry meat	0.05
			Egg	0.05
			Milk	0.05
4	Carbendazim/benomyl	Combination of carbendazim, benomyl, thiophanatemethyl is reported as carbendazim	Chinese leek	3
			Rice[2]	2
			Rambutan	3
			Spring onion	3
			Green bean	0.5
			Soybean	0.5
			Fresh bean pod	3
			Mulberry leaf	0.1
			Chili	2
			Dried chili[3]	20
			Tomato	0.5
			Mango	2
			Cotton seeds	0.1
			Peanut	0.1
			Asparagus	0.2
			Shallot	3
			Onion	2
			Grape	3
			Sugarcane	0.1
			Beef, buffalo meat	0.05
			Mammal offal	0.05
			Poultry meat	0.05
			Poultry fat	0.05

			Poultry offal	0.1
			Egg	0.05
			Milk	0.05
5	Carbosulfan	Carbosulfan	Okra	0.5
			Lead tree	0.2
			Fresh corn	0.05
			Fresh baby corn	0.05
			Corn	0.05
			Sorghum	0.05
			Rice[2]	0.2
			Rambutan	0.2

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Cucumber and other melons except watermelon	0.5
			Watermelon	0.2
			Green bean	0.05
			Cow peas	0.1
			Fresh green peas	0.1
			Soybean	0.05
			Fresh bean pod	0.5
			Durian	0.2
			Oil palm	0.05
			Brassica vegetables[4]	0.5
			Chili	0.5
			Dried chili[3]	5
			Long eggplant, small eggplant and other eggplants excluding tomato	0.03
			Tomato	0.5
			Coconut	0.2
			Sweet potato	0.05
			Potato	0.05
			Coffee bean	0.05
			Cacao bean	0.05
			Sesame	0.2
			Sunflower kernel	0.05
			Peanut	0.05
			Cotton seed	0.05

			Castor bean	0.05
			Orange	0.1
			Asparagus	0.02
			Grape	0.1
			Mammal meat	0.05 (fat)
			Mammal offal	0.05
			Poultry meat	0.05
			Poultry offal	0.05
			Egg	0.05
			Milk	0.05

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
		Combination of carbofuran and 3-hydroxy carbofuran is reported as carbofuran	Okra	0.15
			Lead tree	0.2
			Fresh corn	0.01
			Fresh baby corn	0.01
			Corn	0.05
			Sorghum	0.1
			Rice[2]	0.1
			Rambutan	0.05
			Green bean	0.2
			Cow peas	0.1
			Fresh green peas	0.15
			Soybean	0.1
			Fresh bean pod	0.02
			Durian	0.02
			Oil palm	0.1
			Brassica vegetables[4]	0.03
			Orange	0.02
			Chili	0.5
			Dried chili[3]	2
			Long eggplant, small eggplant and other eggplants excluding tomato	0.1
			Tomato	0.1
			Coconut	0.02

			Coffee bean	1
			Cacao bean	0.05
			Sesame	0.1
			Peanut	0.1
			Sunflower kernel	0.05
			Cotton seed	0.1
			Castor bean	0.1
			Asparagus	0.06
			Grape	0.02
			Mammal meat	0.05
			Mammal offal	0.05
			Poultry meat	0.01
			Poultry offal	0.01
			Egg	0.01
			Milk	0.01

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
6	Captan	Captan	Barley	0.02
			Soybean	5
			Fresh bean pod	5
			Oil palm	5
			Mango	5
			Cotton seed	5
			Peanut	5
			Grape	10
7	Quintozene	Plant: Quintozene (fat soluble) Animal: Combination of quintozene penta-chloroaniline and methyl pentachlorophenyl sulphide is reported as quintozene (fat soluble)	Seed spices	0.1
			Fruit spices	0.02
			Root spices	2
8	Clothianidin	Clothianidin	Durian	0.9
9	Sulfury fluoride	Sulfury fluoride	Rice[2]	0.1
10	Cypermethrin	Cypermethrin	Okra	0.5
			Fresh corn	0.05
			Fresh baby corn	0.05
			Corn	0.05

			Fruit spices	0.1
			Root spices	0.2
			Cow pea	0.7
			Fresh green pea	0.05
			Soybean	0.05
			Fresh bean pod	5
			Durian	1
			Brassica vegetables[4]	1
			Chili	2
			Dried chili[3]	10
			Tomato	0.2

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Long eggplant, small eggplant and other eggplants excluding tomato	0.03
			Mango	0.7
			Papaya	0.5
			Cotton seed	0.1
			Longan	1
			Lychee	2
			Orange	0.3
			Grapefruit	0.5
			Pomelo	0.5
			Asparagus	0.4
			Shallot	0.1
			Onion	0.01
			Sugar cane	0.2
			Mammal meat	2 (fat)
			Mammal offal	0.05
			Poultry meat	0.1 (fat)
			Poultry offal	0.05
			Chicken fat	0.1
			Egg	0.05
			Milk	0.05

11	2, 4-D	Combination of 2, 4-D and salt and ester of 2, 4-D reported as 2, 4-D	Fresh corn	0.05
			Fresh baby corn	0.05
			Corn	0.05
			Sorghum	0.01
			Rice[2]	0.1
			Spring onion	0.05
			Pineapple	0.05
			Mammal meat	0.2
			Mammal offal	1
			Poultry meat	0.05
			Poultry offal	0.05
			Egg	0.01
			Milk	0.01

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
12	Deltamethrin	Combination of alpha-R Deltamethrin and trans-deltamethrin (fat soluble)	Garlic	0.1
			Banana	0.05
			Fresh baby corn	0.02
			Corn	1
			Fresh corn	0.02
			Spring onion	0.5
			Cow pea	0.2
			Oil palm	0.05
			Chinese cabbage-PAI TSAI	2
			Chinese white cabbage	2
			Chinese Broccoli	2
			Other Brassica vegetables[4]	0.1
			Chili	0.1
			Dried chili[3]	1
			Tomato	0.3
			Mango	0.2
			Coffee bean	2

			Cocoa bean	0.05
			Peanut	0.01
			Cotton seed	0.05
			Cashew nut	0.02
			Pineapple	0.01
			Asparagus	0.1
			Shallot	0.1
			Onion	0.05
			Sugar cane	0.05
			Beef, buffalo meat	0.5 (fat)
			Goat meat, mutton	0.5 (fat)
			Bovine offal, buffalo offal	0.03
			Goat and sheep offal	0.03
			Pork	0.5 (fat)
			Swine offal	0.03
			Poultry meat	0.1 (fat)
			Poultry offal	0.02
			Poultry fat	0.1 (fat)
			Egg	0.02
			Milk	0.05F

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
13	Dichlorvos	Dichlorvos	Spices	0.1
			Orange	0.2
			Grain	0.2
			Mammal meat	0.05
			Poultry meat	0.05
			Milk	0.02
14	Dicofol	Plant: Dicofol (combination of o,p' & p,p'-isomers) (fat soluble) Animal: combination of dicofol and 2,2-dichloro-1, 1-bis (4-Chloro-1,1-bis (4-	Seed spices	0.05
			Fruit spices	0.1
			Root spices	0.1
			Cucumber	0.5
			Green bean	0.1
			Soybean	0.05

		chlorophenyl) ethanol (p,p'-FW152)} reported as Dicofol (fat soluble)	Tomato	1
			Beef, buffalo meat	3 (fat)
			Bovine offal, buffalo offal	1
			Poultry meat	0.1 (Fat)
			Poultry offal	0.05
			Egg	0.05
			Milk	0.01F
15	Dithiocarbamates e.g. zineb, ziram, thiram, propineb, maneb and mancozeb	Dithiocarbamates analyzed and reported as CS_2	Okra	0.2
			Garlic	0.5
			Rice[2]	0.05
			Rambutan	2
			Spring onion	10
			Cucumber	2
			Musk melon	0.5
			Water melon	1
			Other melons except cucumber, musk melon and watermelon	0.5
			Soybean	0.1
			Fresh bean pod	0.2
			Durian	2
			Oil palm	0.1
			Chinese cabbage-PAI TSAI	5
			Chinese broccoli	15

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Morning glory	0.3
			Taro	0.1
			Chili	3
			Sweet pepper	1
			Dried chilli[3]	20
			Pumpkin	0.2

			Tomato	2
			Mango	2
			Potato	0.2
			Peanut	0.1
			Orange	2
			Asparagus	0.1
			Shallot	0.5
			Onion	0.5
			Grape	2
			Mammal meat	0.05
			Mammal offal	0.1
			Poultry meat	0.1
			Poultry offal	0.1
			Egg	0.05
			Milk	0.05
16	Difenoconazole	Plant: Difenoconazole (fat-soluble) Animal: Combination of difenoconazole and metabolite CGA 205375 reported as difenoconazole (fat soluble)	Mango	0.6
17	Dimethoate	Dimethoate	Sorghum	0.01
			Seed spices	5
			Fruit spices	0.5
			Root spices	0.1
			Cucumber and other melons except watermelon	1
			Cantaloupe	1
			Cow pea	0.05
			Pulses	0.1
			Tomato	2
No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Cotton seed	0.05
			Orange	5
			Shallot	0.05
			Onion	0.05
			Mammal meat	0.05
			Mammal fat	0.05

			Mammal offal	0.05
			Poultry meat	0.05
			Poultry fat	0.05
			Poultry offal	0.05
			Egg	0.05
			Milk	0.05
18	Diazinon	Diazinon	Fresh corn	0.02
			Fresh baby corn	0.02
			Corn	0.02
			Sorghum	0.02
			Seed spices	5
			Fruit spices	0.1
			Tea	0.1
			Chinese white cabbage	0.05
			Chinese broccoli	0.05
			Other Brassica vegetables[4]	0.5
			Coffee bean	0.2
			Cotton seed	0.1
			Mammal meat	2 (Fat)
			Mammal offal	0.03
			Poultry meat	0.02
			Poultry offal	0.02
			Egg	0.02
			Milk	0.02F
19	Triazophos	Triazophos	Garlic	0.05
			Sorghum	0.05
			Fruit spices	0.07
			Root spices	0.1
			Green bean	0.2
			Cow pea	0.4
			Soybean	0.05
			Fresh soybean	0.5
			Fresh bean pod	1

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Jujube	0.03
			Coffee bean	0.05
			Peanut	0.05

			Cacao bean	0.05
			Sesame	0.05
			Sunflower kernel	0.05
			Shallot	0.05
			Onion	0.05
			Grape	0.02
			Beef, buffalo meat	0.01
			Poultry meat	0.01
			Milk	0.01
20	Tebuconazole	Tebuconazole (fat soluble)	Onion	0.1
21	Thiamethoxam	Thiamethoxam	Mango	0.2
		Clothianidin	Mango	0.04
22	Buprofezin	Buprofezin	Cotton seed	0.35
23	Paraquat	Paraquat cation	Fresh corn	0.05
			Fresh baby corn	0.05
			Corn	0.03
			Sorghum	0.03
			Paddy[1]	0.05
			Rice[2]	0.05
			Pulses except soybean	0.5
			Soybean	0.1
			Fruits (inedible shell except orange)	0.01
			Orange	0.02
			Leafy vegetables	0.07
			Cucumber and other melons	0.02
			Tuber and root	0.05
			Tomato	0.05
			Potato	0.05
			Cotton seed	2
			Strawberry	0.01
			Grape	0.01

No.	**Pesticide**	**Type of pesticide residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Mammal meat	0.005
			Mammal offal	0.05

			Poultry meat	0.005
			Poultry offal	0.005
			Egg	0.005
			Milk	0.005
24	Pirimiphos-Methyl	Pirimiphos-Methyl	Fresh corn	1
			Fresh baby corn	1
			Corn	1
			Paddy[1]	7
			Rice[2]	5
			Seed spices	3
			Fruit spices	0.5
			Oil palm	0.1
			Cacao bean	0.05
			Kapok seed	0.1
			Cashew nut	0.1
			Mammal meat	0.01
			Mammal offal	0.01
			Poultry meat	0.01
			Poultry offal	0.01
			Egg	0.01
			Milk	0.01
25	Permethrin	Permethrin – all isomers (fat soluble)	All kinds of spices	0.05
26	Prochloraz	Combination of prochloraz and matabolyte, which consists of 2,4,6-trichlorphenol moiety reported as prochloraz	Mango	7
27	Prothiofos	Prothiofos	Green bean	0.05
			Chili	3
			Dried chili[3]	20
			Peanut	0.05
			Potato	0.05
28	Profenofos	Profenofos (fat soluble)	Cabbage	1
			Rose apple	0.05
			Spring Onion	0.05
			Soybean	0.05

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
			Durian	0.05
			Cotton seed oil	0.05
			Orange except pomelo and lime	0.1
			Brassica vegetables[4] except cabbage	0.5
			Chili	3
			Sweet pepper	0.5
			Dried chili[3]	20
			Tomato	10
			Lime	0.05
			Mango	0.2
			Mangosteen	10
			Potato	0.05
			Cotton seed	3
			Pomelo	2
			Shallot	0.05
			Onion	0.05
			Grape	0.05
			Mammal meat	0.05
			Mammal offal	0.05
			Poultry meat	0.05
			Poultry offal	0.05
			Egg	0.02
			Milk	0.01
29	Fipronil	Plant: Fipronil (fat soluble) Animal: Combination of fipronil and fipronil sulfone reported as fipronil (fat soluble)	Basil	0.2
			Paddy[1]	0.01
			Rice[2]	0.01
			Cow pea	0.04
			Cotton seed	0.01
			Sweet basil	0.2
30	Famoxadone	Famoxadone (fat soluble)	Potato	0.02

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL

				(mg/kg of food)
31	Fenvalerate	Fenvalerate- all isomers (fat soluble)	Cabbage	3
			Fresh corn	0.1
			Fresh baby corn	0.1
			Cow pea	1
			Soybean	0.1
			Oil palm	0.5
			Chinese white cabbage	1
			Chinese broccoli	3
			Other Brassica vegetables[4]	2
			Tomato	1
			Mango	1.5
			Potato	0.05
			Cotton seed	0.2
			Peanut	0.1
			Longan	1
			Lychee	1
			Mammal meat	1 (Fat)
			Mammal offal	0.02
			Milk	0.1F
32	Fenitrothion	Fenitrothion	Fresh corn	1
			Fresh baby corn	1
			Corn	1
			Paddy[1]	6
			Rice[2]	1
			Seed spices	7
			Fruit spices	1
			Root spices	0.1
			Tea	0.5
			Soybean	0.5
			Fresh bean pod	0.5
			Coffee bean	0.05
			Mammal meat	0.05
			Poultry meat	0.05
			Egg	0.05
			Milk	0.01
33	Phosalone	Phosalone (fat soluble)	Seed spices	2
			Fruit spices	2
			Root spices	3
			Spring onion	0.5
			Cow pea	0.5

No.	Pesticide	Type of pesticide Residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
			Fresh green peas	0.5
			Soybean	0.05
			Fresh bean pod	0.5
			Durian	1
			Mulberry leaf	0.1
			Brassica vegetables[4]	0.5
			Chili	0.5
			Sweet pepper	1
			Dried chili[3]	4
			Tomato	0.5
			Long eggplant, small eggplant and other eggplants	0.5
			Orange	1
			Mangosteen	1
			Cotton seed	1
			Asparagus	0.5
			Shallot	0.5
			Onion	0.5
34	Folpet	Folpet (fat soluble)	Rambutan	0.1
35	Phenthoate	Phenthoate (fat soluble)	Seed spices	7
36	Malathion	Malathion (fat soluble)	Brassica vegetables	0.5
			Cabbage	8
			Fresh corn	0.02
			Fresh baby corn	0.02
			Corn	0.05
			Sorghum	3
			Seed spices	2
			Fruit spices	1
			Root spices	0.5
			Spring onion	5
			Broccoli	5
			Orange except pomelo	7
			Chinese white cabbage	8
			Kale	3
			Chili	0.1
			Dried chili[3]	1
			Tomato	0.5

			Tapioca	0.5
No.	**Pesticide**	**Type of pesticide Residue**	**Type of food**	**Maximum Residue Limit, MRL** (mg/kg of food)
			Pomelo	0.2
			Shallot	1
			Onion	1
			Sugar cane	0.02
37	Metalaxyl or Metalaxyl-M	Metalaxyl	Fresh corn	0.05
			Fresh baby corn	0.05
			Corn	0.05
			Seed spices	5
			Cucumber	0.5
			Cantaloupe	0.2
			Watermelon	0.2
			Long cucumber	0.5
			Durian	0.5
			Angled Gourd	0.2
			Orange	5
			Chinese broccoli	2
			Morning glory	2
			Taro	0.5
			Pepper	0.05
			Betel	0.05
			Pumpkin	0.2
			Wax Gourd	0.2
			Tomato	0.2
			Potato	0.05
			Pineapple	0.1
			Onion	2
			Grape	1
38	Methidathion	Methidathion	Rambutan	0.2
			Durian	0.2
			Custard apple	0.2
			Pears	0.1
			Orange	0.5
			Grape	0.1
			Apple	0.1
			Mammal meat	0.02
			Mammal offal	0.02
			Poultry meat	0.02
			Poultry offal	0.02
			Egg	0.02

			Milk	0.001

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
39	Methyl bromide	Bromide ion from use of methyl bromide and from all sources but not including covalently bound bromine	Paddy[2]	50
		Methyl bromide	Paddy[2] (at the port or fumigation area after release gas out and let paddy exposure to air not less than 24 hours)	1
			Paddy[2] (at the selling area)	0.01
40	Lambda-cyhalothrin	Lambda-cyhalothrin all isomers (fat soluble)	Okra	0.03
			Basil	0.7
			Sorghum	0.2
			Rambutan	0.5
			Green bean	0.2
			Soybean	0.2
			Fresh bean pod	0.2
			Durian	0.5
			Oil palm	0.2
			Other cauliflower[4]	0.3
			Broccoli and cauliflower	0.5
			Chili	0.3
			Sweet pepper	0.3
			Dried chili[3]	3
			Mango	0.2
			Long eggplant, small eggplant and other eggplants	0.3
			Tomato	0.3
			Cacao bean	0.02
			Sesame	0.2
			Kapok seed	0.02
			Cotton seed	0.02
			Hoary basil	0.7
			Cumin	0.7

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
			Longan	0.2
			Lychee	0.5
			Asparagus	0.02
			Sweet basil	0.7
41	Azoxystrobin	Azoxystrobin (fat soluble)	Mango	0.7
42	Acephate	Acephate	Paddy[1]	1
			Rice[2]	1
			All spices	0.2
			Green bean	0.3
			Soybean	0.3
			Potato	0.5
			Coffee bean	0.05
			Cacao bean	0.05
			Cotton seed	2
			Peanut	0.2
			Mammal meat	0.05
			Mammal offal	0.05
			Poultry meat	0.01
			Poultry offal	0.01
			Egg	0.01
			Milk	0.02
43	Atrazine	Atrazine	Fresh corn	0.1
			Fresh baby corn	0.1
			Corn	0.1
			Pineapple	0.1
			Sugar cane	0.1
44	Abamectin	Avermectin B1a (fat soluble)	Watermelon	0.01
			Cow pea	0.01
			Fresh green pea	0.01
			Chinese Cabbage-PAI TSAI	0.01
			Chinese broccoli	0.01
			Brassica vegetables[4]	0.01
			Chili	0.005
			Sweet pepper	0.09
			Dried chili[3]	0.5
			Small eggplant	0.02
			Cotton seed	0.01

			Orange	0.01

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
			Mammal meat	0.01
			Mammal fat	0.1
			Mammal offal	0.1
			Poultry meat	0.01
			Poultry offal	0.02
			Egg	0.01
			Milk	0.005
45	Amitraz	Combination of amitraz and N-(2,4-dimethylphenyl)-N'-methyl formamidine reported as N-(2,4-dimethylphenyl)-N'-methyl formamidine	Longan	2
46	Ametryn	Ametryn	Tea	0.05
			Coffee bean	0.05
			Pineapple	0.05
			Sugarcane	0.05
47	Imidacloprid	Combination of imidacloprid and metabolite consist of 6-chloropyridinyl moiety, reported as Imidacloprid.	Basil	20
			Okra	0.1
			Paddy[1]	0.05
			Rice[2]	0.05
			Mango	0.4
			Hoary basil	20
			Cumin	20
			Longan	0.8
			Orange	1
			Sweet basil	20
48	Ethephon	**Plant and animal**: Ethephon (**For grains**: Ethephon and conjugates) Reported as Ethephon	Banana	2
			Cherry	3
			Durian	2
			Mango	2
			Pineapple	2

			Grape	1
			Apple	1
			Mammal meat	0.1

No.	Pesticide	Type of pesticide residue	Type of food	Maximum Residue Limit, MRL (mg/kg of food)
			Mammal offal	0.2
			Poultry meat	0.1
			Poultry offal	0.2
			Egg	0.2
			Milk	0.05
49	Ethion	Ethion (fat soluble)	Seed spices	3
			Fruit spices	5
			Root spices	0.3
			Pulses	0.1
			Fresh bean pod	0.3
			Chili	3
			Dried chili[3]	20
			Lime	1
			Orange	2
			Pomelo	1
50	Iprodion	Iprodion	Seed spices	0.05
			Root spices	0.1
51	Omethoate	Omethoate	Lead tree	0.05
			Green bean	0.05
			Cow pea	0.05
			Soybean	0.05
			Tapioca	0.02
			Coffee	0.05

			bean	
			Cotton seed	0.05
52	Hydrogen phosphide in the form of aluminium phosphide or Magnesium phosphide or phosphine	Hydrogen phosphide	Rice[2]	0.1

Remarks:

- For plants, this category will be defined according to the classification of agricultural commodities: plant TAS 9045-2016
- Paddy[1] means non-glutinous rice or glutinous rice with husk
- Rice[2] means paddy in which husk has been removed or polished.
- Dried chili[3] means dried chili made from chili peppers e.g. bird pepper, goat pepper, sweet pepper
- Brassica vegetables[4] means vegetables under category 010 brassica vegetables, except for brassica leafy vegetables (such as cabbages, head; cauliflower; broccoli) and the sub-category 013B brassica leafy vegetables (such as Chinese broccoli, flowering white cabbage)
- The letter F following the maximum residue limits in milk for fat-soluble residue refers to values set out for milk and dairy product by total weight of such milk or dairy product based on fat volume in as follows:
  (1) If fat volume is less than 2%, half of the maximum residue limit for milk shall be applied.
  (2) If fat volume is larger than or equal to 2%, 25 times the maximum residue limit for milk shall be applied as opposed to analytical results of milk or dairy product representing in residue quantity per fat weight in such milk.
- When "(fat)" is placed following the maximum residue limit for meat, the fat soluble residue refers to the maximum residue designated exclusively for the fat portion of such meat.

Schedule 3
Default Limits for Plants

Annexed to the Notification of the Ministry of Public Health RE: Food Containing Pesticide Residue

No.	**Pesticide**	**Type of Pesticide Residue**	**Default Limits** (Maximum Residue Limit, MRL)
1	Chlormequat	Chlormequat cation	0.1
2	Carbendazim/benomyl	Combination of carbendazim and thiophanate-myth, reported as carbendazim	0.1
3	Cypermethrin	Cypermethrin	0.02
4	Cyfluthrin	Cyfluthrin - all isomers (fat soluble)	0.02
5	Deltamethrin	Combination of deltamethrin alpha-R and trans-deltamethrin (fat soluble)	0.05
6	Triadimenol	Combination of triadimefon and triadimenol	0.1
7	Triadimefon	Combination of triadimefon and triadimenol (fat soluble)	0.1
8	Thiabendazole	Plant: thiabendazole	0.1
9	Bifenthrin	Bifenthrin – all isomers (fat soluble)	0.05

10	Permethrin	Permethrin – all isomers (fat soluble)	0.1
11	Fipronil	Plant: fipronil (fat soluble)	0.005
12	Fenpropathrin	Fenpropathrin (fat soluble)	0.05
13	Fenvalerate	Fenvalerate – all isomers (fat soluble)	0.02
14	Lambda-cyhalothrin	Cyhalothrin – all isomers (fat soluble)	0.05
15	Acephate	Acephate	0.05
16	Emamectin benzoate	Emamectin B1a benzoate	0.005
17	Omethoate	Omethoate	No detection

Remark:

- For plants, this category will be defined according to the classification of agricultural commodities: plant TAS 9045-2016

Schedule 4
Extraneous Maximum Residue Limit, EMRL
Annexed to the Notification of the Ministry of Public Health RE: Food Containing Pesticide Residue

Food type	**Extraneous Maximum Residue Limit, EMRL (mg/kg of food)**				
	Aldrin[1] and dieldrin	**Chlordane[2]**	**DDT[3]**	**Endrin[4]**	**Heptachlor[5]**
Grain	0.02	0.02	0.1	0.01	0.02
Fruit	0.05	0.02	0.01	0.01	0.01
Vegetable, herbs, and spices	-	0.02	-	-	-
Vegetable, herbs, and spices except melons and tuber and root	0.05	-	-	-	-
Vegetable, herbs, and spices except melons	-	-	-	0.01	-
Vegetable, herbs, and spices except carrot	-	-	0.01	-	-
Vegetable, herbs, and spices except pulses	-	-	-	-	0.05
Melons	0.1	-	-	0.05	-
Tuber and root	0.1	-	-	-	-
Carrot	-	-	0.2	-	-
Pulses	-	-	-	-	0.02
Sugar plant	0.05	0.02	0.01	0.01	0.01
Beverage plant	0.2	0.02	0.01	0.01	0.05
Tree nuts	0.05	0.02	0.01	0.01	0.02
Oilseed	0.05	0.02	0.01	0.01	0.02
Plant oil and fat	0.2	0.02	0.05	0.05	0.02

Animal oil and fat	0.2	0.05	1	0.05	0.2
Mammal meat and offal	0.2 (fat)	0.05 (fat)	5 (fat)	0.05 (fat)	0.2 (fat)
Poultry meat and offal	0.2 (fat)	0.05 (fat)	0.3 (fat)	0.1(fat)	0.2 (fat)
Aquatic meat, crustacean and invertebrates	0.2 (fat)	0.05 (fat)	1(fat)	0.05 (fat)	0.2 (fat)
Amphibians	0.2 (fat)	0.05 (fat)	1(fat)	0.05 (fat)	0.2 (fat)
Egg	0.1	0.02	0.1	0.005	0.05
Milk	0.006F	0.002F	0.02F	0.0008F	0.006F

Remarks:

- For plants, this category will be defined according to the classification of agricultural commodities: plant TAS 9045-2016
- Specify the analytical procedure to express the amount of pesticide residue as follows:

[1]Aldrin and dieldrin shall be the sum of HHDN and HEOD (fat soluble).

[2]Chlordane in plant derived food shall be the sum of cis- and trans- chlordane (fat soluble). Chlordane in animal derived food shall be the sum of cis- and trans-chlordane and oxychlordane (fat soluble).

[3]DDT shall be the sum of (p, p'-DDT), (o,p'-DDT), (p,p'-DDE) and {p,p'-TDE (DDD)} (fat soluble).

[4]Endrin shall be the sum of endrin and delta-keto-endrin (fat soluble).

[5]Heptachlor shall be the sum of heptachlor and heptachlor epoxide (fat soluble).

- The letter F following the maximum residue limits in milk for fat-soluble residue refers to values set out for milk and dairy product by total weight of such milk or dairy product based on fat volume as follows:

(1) If fat volume is less than 2%, half the maximum residue limit for milk shall be applied.

(2) If fat volume is larger than or equal to 2%, 25 times the maximum residue limit for milk shall be applied as opposed to analytical results of milk or dairy product representing in residue quantity per fat weight in such milk.

- When "(fat)" is placed following the maximum residue limit for meat, the fat soluble residue refers to maximum residue designated exclusively for the fat portion of such meat.

Schedule 5

The Analytical Methods for Detecting Pesticide Residues in Food Resulting from the Use of Hazardous Substances in Agriculture.

Annexed to the Notification of Ministry of Public Health Re: Food Containing Pesticide Residue

---

The analytical methods for detecting pesticide residues in food resulting from the use of hazardous substances in agriculture shall be one of the following:

1. Analytical methods specified in the latest edition of Codex Alimentarius: Recommended Methods of Analysis for Pesticide Residues, established by Codex Alimentarius Commission, Joint FAO/WHO Food Standard Programme.

2. Analytical methods issued by National Organizations or International Standards Organizations, or published in the manuals or publications which are internationally recognized.

3. Performance characteristics of pesticide residue analytical methods must be accurate and reliable. Method validation is performed by a collaborative study or single laboratory based on international guidelines. The documented results shall comply with the latest version of ISO/IEC

17025.

The methods of analysis as stated under items 2 and 3 shall provide the reliable outcome of defined maximum residue level.