Country Report

Republic of Korea

(32th Session of APPPC, 7-11 November 2022, Bangkok, Thailand)

Pesticide management

❍ Pesticides are regulated by Rural Development Administration (RDA) under the Pesticides Management Act (PMA), and are the most stringently regulated substances in Korea.

❍ Changes/improvements in national strategy, organization, legislation, regulations and registrations since 2021

- Establishment of ′Air plane dusting and spraying′ among the types of Pest controls in Pesticides Management Act (Article 3(2))
- Establishment of ′Registration standard of export pesticide′ in Pesticides Management Act (Article 8(2)) in case of producing and exporting pesticides in korea
- Establishment of ′Installation and management of the pesticide dispute mediation committee′ in Pesticides Management Act (Article 23(4)) to mediate disputes related to damage by pesticides
- Revision of Pesticides Management Act (Article 24) transfer of task of distribution management of pesticides from Rural Development Administration to National Agricultural Products Quality Management Service
- Registration guidelines of agrochemicals were revised 7 times (RDA Notifications 2021-4~2022-12)
  - ✓ Review guidelines of application documents for registration, types of test crop, test guidelines, acceptable daily intake, acceptable operator exposure level, designation of control chemicals, etc.

❍ Efforts and progress to reduce risk of highly hazardous pesticides

- Strengthening of labeling for honeybee, environmental organisms and worker etc.

❍ Development and application status of bio-pesticides

- In Korea, Most of the biological pesticides are used as organic agricultural materials, 28 pesticides such as Bacteriophage and *Bacillus subtilis* are used as registered bio-pesticides (Table 1.)

❍ Update list of banned/prohibited pesticides in Korea. (Table 2)

❍ Pesticide registration, establishment of labeling and safety standards during 2021 – 2022

- Pesticide registration: 13 Active ingredients (including copy items), 87 items.
- Establishment of safety standards and toxicity classification: All pesticides for registation
- Establishment of 9 acceptable daily intake(ADI) substances and 80 acceptable operator exposure level(AOEL) substances(Table 3, 4)

<Appendix>

❍ http://www.qia.go.kr

❍ http://www.rda.go.kr

- Table 1. Registration status of natural plant protection products (28 items)
- Table 2. List of banned/prohibited pesticides in Republic of Korea
- Table 3. List of acceptable daily intake (ADI)
- Table 4. List of acceptable operator exposure level (AOEL)

Table 1. Registration status of natural plant protection products (28 items)

(August 2022)

No.	Microbial pesticides	Concentrations
1	*Bacillus subtilis* DBB1501 WP	1.0×10^9cfu/g
2	*Bacillus subtilis* CJ-9 SM	1.0×10^7cfu/ml
3	*Bacillus subtilis* M 27 GM	2.0×10^8cfu/g
4	*Bacillus subtilis* EW42-1 SM	1.0×10^7cfu/ml
5	*Bacillus subtilis* GB0365 WP	3.0×10^7cfu/g
6	*Bacillus subtilis* GB0365 SC	1.0×10^7cfu/ml
7	*Bacillus subtilis* KB401 EM	2.0x10^7cfu/ml
8	*Bacillus subtilis* KBC1010 WP	1.0×10^5cfu/g
9	*Bacillus subtilis* QST713 WP	5.0x10^9cfu/g
10	*Bacillus subtilis* QST713 SC	1.0×10^9cfu/g
11	*Bacillus amyloliquefaciens* D747 WG	5.0×10^10cfu/g
12	*Bacillus amyloliquefaciens* MBI600 WP	5.5×10^10 cfu/g
13	*Bacillus amyloliquefaciens* KBC1121 WP	1.0×10^6 cfu/g
14	Bacteriophage active against *Erwinia amylovora* AS	5.0×10^12 cfu/g
15	*Simplicillium lamellicola* BCP WP	5.0x10^7cfu/g
16	*Ampelomyces quisqualis* AQ94013 WP	1.0x10^7cfu/g
17	*Trichoderma artrobyride* SKT-1 WP	1.0×10^8cfu/g
18	*Trichoderma harzianum* YC 459 GM	1.0×10^8 cfu/g
19	*Paenibacillus polymyxa* AC-1 SC	5.0×10^6cfu/ml
20	*Monacrosporium thaumasium* KBC3017 GM	1.0×10^4cfu/g
21	B.T. subsp. *aizawai* WG	35,000DBMU/mg
22	B.T. subsp. *aizawai* NT0423 WP	1.0x10^9cfu/g
23	B.T. subsp. *aizawai* NT0423 SC	1.0x10^8cfu/ml
24	B.T. subsp. *aizawai* GB413 SC	1.0x10^7cfu/ml
25	B.T. subsp. *kurstaki* WP	16BIU/kg
26	Blad SC	20%
27	Fatty alcohol EC	80.5%
28	Pelargonicacid EC	53%

Table 2. List of banned/prohibited pesticides in Republic of Korea

(August 2022)

Active Ingredients	
1,2-dibromoethane(Ethylene dibromide)	Zineb
2,4,5-T and its salts and esters	Carbophenothion
Nitrofen(NIP)	Camphechlor(Toxaphene)
Demeton-S-methyl	Captafol
Dodine	Quinalphos
Dinocap	Quinmerac
DDT	Quintozene(PCNB)
Dimepiperate	Chlorobenzilate
Disulfoton	Chlordane
Dialifos	Chlordimeform
Dinitro-ortho-cresol(DNOC) and its salts(such as ammonium salt, potassium salt and sodium salt)	Chlorfenvinphos
Dieldrin	Chlorpyrifos
Dicofol	Chlorpyrifos-methyl
Dichlofluanid	Chlomethoxyfen
Lindane(gamma-HCH)	Tolylfluanid
Maneb	Tralomethrin
Methamidophos	Triazamate
Methomyl	Triazophos
Monocrotophos	Trichlorfon
Vamidothion	Thiazopyr
Bensulide	Thiometon
Benzoximate	Parathion-methyl
Binapacryl	Parathion-ethyl
Lead arsenate	Paraquat dichloride
BHC	Perfluidone
Vinclozolin	Fenoprop(2,4,5-TP)
Tetrachloromethane(Carbon tetrachloride)	Fenoxycarb
Mercury compounds including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	Pentachlorophenol and its salts
Cinosulfuron	Phosalone
Amitrole	Leptophos(Phosvel)
Isofenphos	Propaphos
Aldrin	Propisochlor
Aldicarb	Fluoroacetamide
HCH (mixed isomers)	Pyrazoxyfen
Ethylene dichloride	Pyroquilon
Ethylene oxide	PMA
Endosulfan	Picloram
Endrin	PTA-B
MH-30	Halfenprox
Omethoate	Hexachlorobenzene
Tributyltin compounds	Hexaflumuron
Isazofos	Heptachlor
EPN	Heptenophos

Table 3. List of acceptable daily intake (ADI)

Pesticides	ADI (mg/kg bw/day)
Kasugamycin	0.11
Glufosinate (including Glufosinate-ammonium)	0.02
Glufosinate-P	0.0091
Glyphosate (including Glyphosate-ammonium, Glyphosate-isopropylamine and Glyphosate-potassium)	0.8
2-(1-naphthyl) acetamide	0.15
Napropamide	0.3
Novaluron	0.01
Nuarimol	0.025
Nicosulfuron	2
Daminozide	0.5
Daimuron	0.3
Diazinon	0.0002
Diquat dibromide	0.002(diquat ion)
Dazomet	0.01
Deltamethrin	0.01
Dinotefuran	0.02
Diniconazole	0.0023
Dimethametryn	0.0094
Dimethenamid (including Dimethenamid-P)	0.07
Dimethomorph	0.2
Dimethoate	0.002
DBEDC(Coppersulfate)	0.15
Diafenthiuron	0.003
Diethofencarb	0.43
Dicamba	0.03
Dichlorvos	0.004
Dichlorproptriethanolamine	0.031
Dichlobenil	0.01
Dichlobentiazox	0.05
Dithianon	0.01
Dithiopyr	0.0036
Difenoconazole	0.01
Diflubenzuron	0.02
Diflufenican	0.19
Lepimectin	0.02
Lufenuron	0.015
Linuron	0.0077
Rimsulfuron	0.12
Magnesiumphosphide	0.011
Myclobutanil	0.03
Mandestrobin	0.19
Mandipropamid	0.05

Mancozeb	0.05
Malathion	0.029
Maleichydrazide	0.3
Mesotrione	0.003
Mecoprop (including Mecoprop-P)	0.01
Metamifop	0.017
Methabenzthiazuron	0.004
Metazachlor	0.032
Metazosulfuron	0.023
Metaflumizone	0.1
Metalaxyl (including Metalaxyl-M)	0.08
Metam (including Metam-sodium and Metam-p)	0.001
Methoxyfenozide	0.1
Metrafenone	0.25
Metribuzin	0.013
Metaldehyde	0.02
Metconazole	0.04
Metiram	0.03
Methiozolin	0.41
Methiocarb	0.02
Methylbromide	0.0013
Mepanipyrim	0.02
Mefenacet	0.007
Metentrifluconazole	0.035
Mepronil	0.05
Mepiquatchloride	0.2
Meptyldinocap	0.02
Molinate	0.0021
Milbemectin(A3+A4)	0.03
ValidamycinA	0.13
Valifenalate	0.07
Benalaxyl-M	0.07
Benomyl	0.1
Bensultap	0.034
Bensulfuron-methyl	0.2
Benzobicyclon	0.016
Bentazone (including Bentazone-sodium)	0.1
Benthiavalicarb-isopropyl	0.069
Benfuracarb	0.01
Benfurasate	0.026
Benfluralin	0.005
Bordeauxmixture	0.15
Boscalid	0.04
Butachlor	0.01
Butafenacil	0.0036
Butralin	0.15
Buprofezin	0.009

Bromobutide	0.017
Broflanilide	0.017
Bistrifluron	0.073
Bispyribac-sodium	0.011
Bitertanol	0.01
Bifenazate	0.01
Bifenox	0.3
Bifenthrin	0.01
Vinclozolin	0.01
4-CPA(chlorophenoxyacetate)	0.006
Cyromazine	0.06
Cymoxanil	0.013
Cyazofamid	0.17
Cyantraniliprol	0.057
Cyenopyrafen	0.051
Cyclaniliprole	0.27
Cyclosulfamuron	0.03
Cypermethrin (including Alpha-cypermethrin, Zeta-cypermthrin)	0.02
Cyprodinil	0.03
Cyproconazole	0.02
Cyflumetofen	0.092
Cyfluthrin (including Beta-cyfluthrin)	0.04
Cyflufenamid	0.041
Cyhalothrin (including Gamma-cyhalothrin, Lambda-cyhalothrin)	0.02
Cyhalofop-butyl	0.01
Cyhexatin	0.007
Saflufenacil	0.046
Sulfoxaflor	0.05
Sethoxydim	0.14
Sodium 1-naphthyl-acetate	0.05
Streptomycin(sulfatesalt)	0.05
Spinetoram	0.05
Spinosad	0.02
Spirodiclofen	0.01
Spiromesifen	0.03
Spirotetramat	0.05
Spiropidion	0.05
Simazine	0.018
Simeconazole	0.0085
Simetryn	0.012
Cinmethylin	0.08
Silafluofen	0.11
Anilofos	0.001
Ametoctradin	8.48
Amisulbrom	0.1
Amitraz	0.01
Abamectin	0.002

Aviglycine	0.002
Acynonapyr	0.04
Acequinocyl	0.023
Acetamiprid	0.071
Acephate	0.03
Asulam-sodium	0.36
Acibenzolar-S-methyl	0.03
Isocycloseram	0.017
Isotianil	0.028
Isofetamid	0.053
Isoprocarb	0.004
Isoprothiolane	0.1
Isopyrazam	0.055
Isoxaben	0.05
Iodosulfuron-methylsodium	0.03
Azadirachtin	0.0077
Azocyclotin	0.003
Azoxystrobin	0.2
Azinphos-methyl	0.03
Azimsulfuron	0.096
Acrinathrin	0.01
Afidopyropen	0.08
Alachlor	0.01
Aluminumphosphide	0.019
Edifenphos	0.003
Emamectin benzoate	0.0025
S-Metolachlor	0.097
Esprocarb	0.01
Ethaboxam	0.055
Ethalfluralin	0.042
Ethephon	0.05
Etofenprox	0.03
Ethofumesate	0.07
Ethoprophos	0.0004
Etoxazole	0.04
Ethoxysulfuron	0.039
Etridiazole	0.016
Ethychlozate	0.17
Epoxiconazole	0.007
MCPB	0.015
MCPA	0.0019
Orthosulfamuron	0.05
Orysastrobin	0.052
Oryzalin	0.12
Ofurace	0.025
Oxadiargyl	0.008
Oxadiazon	0.0036

Oxadixyl	0.11
Oxaziclomefone	0.0091
Oxathiapiprolin	1.04
Oxycarboxin	0.15
Oxytetracycline	0.03
Oxyfluorfen	0.03
Inabenfide	0.14
Imazaquin	0.25
Imazapyr	3
Imazosulfuron	0.75
Iminoctadinetris (albesilate)	0.004
Iminoctadinetriacetate	0.004
Imidacloprid	0.06
Imibenconazole	0.0098
Imicyafos	0.0005
2,4-D (including 2,4-Dethylester)	0.01
Iprodione)	0.06
Iprovalicarb	0.026
Iprobenfos (IBP)	0.035
Ipconazole	0.015
Ipfencarbazon	0.001
Ipflufenoquin	0.05
Indanofan	0.0035
Indaziflam	0.02
Indoxacarb	0.01
1-Methylcyclopropene	0.003
Zoxamide	0.48
Cadusafos	0.0004
Carbaryl	0.0075
Carbendazim	0.03
Carbosulfan	0.01
Carbofuran	0.001
Carboxin	0.0082
Cartaphydrochloride	0.1
Cafenstrole	0.003
Carfentrazone-ethyl	0.03
Carpropamid	0.014
Captan	0.1
Coppersulfatebasic	0.15
Copperoxychloride	0.15
Copperhydroxide	0.15
Quinoclamine	0.0021
Quizalofop-ethyl	0.009
Quinmerac	0.079
Cuprousoxide	0.15
Kresoxim-methyl	0.4
Chromafenozide	0.27

Clethodim	0.01
Chlorantraniliprole	2
Chlorothalonil	0.02
Chlormequatchloride	0.05
Chlorfenapyr	0.026
Chlorpropham	0.05
Chlorfluazuron	0.033
Chlorpyrifos	0.01
Chlorpyrifos-methyl	0.01
Clomazone	0.13
Clothianidin	0.097
Clofentezine	0.02
Terbufos	0.0006
Tebuconazole	0.03
Tebufenozide	0.02
Tebufenpyrad	0.01
Tebufloquin	0.041
Tebupirimfos	0.0002
Tecloftalam	0.058
Tetraniliprole	0.88
Tetradifon	0.015
Tetraconazole	0.004
Tefuryltrione	0.0008
Teflubenzuron	0.01
Tefluthrin	0.005
Tolclofos-methyl	0.07
Tolpyralate	0.0093
Trinexapac-ethyl	0.0059
Tricyclazole	0.05
Triadimenol	0.03
Triadimefon	0.03
Triafamone	0.02
Triclopyr (including TEA)	0.05
Triticonazole	0.025
Triforine	0.02
Trifloxysulfuron-sodium	0.15
Trifloxystrobin	0.04
Trifludimoxazin	0.1
Trifluralin	0.015
Triflumexopyrim	0.12
Triflumuron	0.0082
Triflumizole	0.048
Thidiazuron	0.039
Thiram	0.01
Tiadinil	0.04
Thiamethoxam	0.08
Thiabendazole	0.1

Thiacloprid	0.01
Tiafenacil	0.011
Thiodicarb	0.03
Thiobencarb (benthiocarb)	0.009
Thiocyclamhydrogenoxalate	0.019
Thiophanate-methyl	0.08
Thifensulfuron-methyl	0.01
Thifluzamide	0.014
Famoxadone	0.006
Paclobutrazol	0.022
Fenarimol	0.01
Fenamidone	0.028
Fenazaquin	0.005
Fenobucarb (BPMC)	0.014
Fenothiocarb	0.015
Fenoxanil	0.007
Fenoxasulfone	0.018
Fenoxaprop-P-ethyl	0.011
Penoxsulam	0.05
Fenitrothion	0.005
Ferimzone	0.019
Pendimethalin	0.13
Fenvalerate	0.02
Fenbuconazole	0.03
Fenbutatinoxide	0.03
Pencycuron	0.2
Fenquinotrione	0.0017
Fenclorim	0.075
Phenthoate	0.003
Pentoxazone	0.23
Fentrazamide	0.0052
Penthiopyrad	0.081
Fenthion : MPP	0.007
Fenpropathrin	0.03
Penflufen	0.04
Fenpyrazamine	0.053
Fenpyroximate	0.01
Fenhexamid	0.2
Foramsulfuron	0.5
Phorate	0.0007
Fosetyl-aluminium	3
Fosthiazate	0.0042
Phosphamidon	0.0005
Phosphine	0.011
Forchlorfenuron	0.07
Phoxim	0.004
PolyoxinD	0.5

PolyoxinB	0.5
Folpet	0.1
Pretilachlor	0.018
Prodiamine	0.065
Probenazole	0.02
Procymidone	0.1
Proquinazid	0.012
Prochloraz (including Prochloraz-manganese and Prochlorazcopperchloride)	0.01
Prothiofos	0.000075
Propanil	0.02
Propamocarbhydrochloride	0.4
Propargite	0.01
Propaquizafop	0.015
Profenofos	0.03
Profoxydim	0.05
Propineb	0.007
Propyrisulfuron	0.011
Propisochlor	0.025
Propiconazole	0.07
Prohydrojasmon	0.14
Prohexadione-calcium	0.2
Flazasulfuron	0.013
Flonicamid	0.025
Florpyrauxifen-benzyl	2.4
Florylpicoxamid	0.1
Flometoquin	0.008
Fludioxonil	0.4
Fluroxypyr-meptyl	0.8
Flumioxazin	0.018
Flubendiamide	0.017
Flusulfamide	0.001
Flucetosulfuron	0.041
Flusilazole	0.007
Fluazinam	0.01
Fluazifop-P-butyl	0.01
Fluacrypyrim	0.059
Fluensulfone	0.014
Fluoroimide	0.093
Fluopyram	0.01
Fluopicolide	0.079
Fluindapyr	0.07
Fluquinconazole	0.002
Flutolanil	0.09
Flutriafol	0.011
Flutianil	2.49
Flufenacet	0.005
Flufenacet-methyl	0.001

Flufenoxuron	0.037
Flupoxam	0.0051
Flupyradifuron	0.078
Flupyrimin	0.01
Fluxametamide	0.0085
Fluxapyroxad	0.021
Pydiflumetofen	0.092
Pyrazosulfuron-ethyl	0.01
Pyrazoxyfen	0.0017
Pyrazolate (Pyrazolynate)	0.0037
Pyraziflumid	0.022
Pyraclonil	0.0044
Pyraclostrobin	0.03
Pyraclofos	0.001
Pyraflufen-ethyl	0.17
Pyroxasulfon	0.02
Pyridaben	0.005
Pyridaphenthion	0.00085
Pyridalyl	0.028
Pyrimethanil	0.2
Pyriminobac-methyl	0.02
Pyrimisulfan	0.1
Pirimiphos-methyl	0.03
Pyribenzoxim	0.25
Pyribencarb	0.039
Pyributicarb	0.0088
Pyriofenone	0.091
Pyriproxyfen	0.1
Pyriftalid	0.0056
Pyrifluquinazone	0.005
Pymetrozine	0.03
Picavutrazox	0.023
Picoxystrobin	0.043
Fipronil	0.0002
Pyflubumide	0.0074
Hydrogencyanide	0.05
Hymexazol	0.17
Halosulfuron-methyl	0.1
Haloxyfop (including Haloxyfop-R-methyl)	0.00065
Hexazinone	0.049
Hexaconazole	0.005
Hexythiazox	0.03

Table 4. List of acceptable operator exposure level (AOEL)

No	Pesticides	AOEL (mg/kg bw/day)
1	Kasugamycin	0.01
2	Glufosinate-ammonium	0.0021
3	Glufosinate-P	0.001
4	Glyphosate	0.1
5	Glyphosate-ammonium	0.1
6	Glyphosate-potassium	0.1
7	Novaluron	0.012
8	Diazinon	0.0002
9	Diquat	0.001
10	Dazomet	0.015
11	Deltamethrin	0.0075
12	Dinotefuran	0.22
13	Dimethomorph	0.15
14	Diethofencarb	0.5
15	Dichlobenil	0.01
16	Dithianon	0.014
17	Dithiopyr	0.0044
18	Difenoconazole	0.16
19	Diflufenican	0.11
20	Diflubenzuron	0.033
21	Lepimectin	0.013
22	Lufenuron(SY, YI)	0.01
23	Rimsulfuron	0.084
24	Mandestrobin	0.91
25	Mandipropamid	0.17
26	Mancozeb	0.035
27	Malathion	0.034
28	Mesotrione	0.005
29	Mecoprop	0.04
30	Mecoprop-P	0.04
31	Metamifop	0.017
32	Metazachlor	0.5
33	Metaflumizone	0.01
34	Metalaxyl	0.08

No	Pesticides	AOEL (mg/kg bw/day)
35	Metalaxyl-M	0.08
36	Methoxyfenozide	0.11
37	Metolachlor	0.15
38	Metaldehyde	0.1
39	Metiram	0.016
40	Mepronil	0.1
41	Mepiquat chloride	0.31
42	Myclobutanil	0.031
43	Milbemectin	0.0086
44	Valifenalate	0.68
45	Beta-cyfluthrin	0.02
46	Bensulfuron-methyl	0.12
47	Bentazone	0.13
48	Bentazone-sodium	0.13
49	Benthiavalicarb-isopropyl	0.1
50	Benfuracarb	0.01
51	Benfuresate	1.0
52	Butachlor	0.05
53	Buprofezin	0.04
54	Bistrifluron	0.095
55	Bifenox	0.13
56	Bifenthrin	0.0075
57	Cyromazine	0.057
58	Cyazofamid	0.3
59	Cyclaniliprole	0.027
60	Cypermethrin	0.063
61	Cyprodinil	0.031
62	Cyproconazole	0.02
63	Cyflumetofen	0.11
64	Cyfluthrin	0.02
65	Cyhalofop-butyl	0.03
66	Cyhexatin	0.00068
67	Sethoxydim	0.018
68	Sodium 1-naphthylacetate	0.05
69	Spinetoram	0.0065
70	Spinosad	0.012

No	Pesticides	AOEL (mg/kg bw/day)
71	Spirodiclofen	0.0094
72	Ametoctradin	1.55
73	Abamectin	0.0025
74	Acetamiprid	0.07
75	Acephate	0.0058
76	Isofetamid	0.053
77	Isopyrazam	0.036
78	Isotianil	0.12
79	Iodosulfuron-methyl-sodium	0.18
80	Azoxystrobin	0.21
81	Azimsulfuron	0.18
82	Acrinathrin	0.0071
83	Aluminium phosphide	0.019
84	Alpha-cypermethrin	0.011
85	Esfenvalerate	0.011
86	Ethalfluralin	0.2
87	Etofenprox	0.06
88	Etridiazole	0.031
89	Epoxiconazole	0.0095
90	MCPA	0.01
91	Orysastrobin	0.15
92	Oryzalin	0.05
93	Oxadiargyl	0.0059
94	Oxadiazon	0.12
95	Oxadixyl	0.0066
96	Oxaziclomefone	0.017
97	Oxolinic acid	0.035
98	Oxytetracycline calcium ammmonium complex	0.17
99	6-Benzyl aminopurine	0.05
100	Imazaquin	0.25
101	Imazapyr	2.0
102	Imazosulfuron	0.53
103	Imidacloprid	0.08
104	Imibenconazole	0.038
105	Iprodione	0.19
106	Ipconazole	0.02
107	Ipfencarbazone	0.0012
108	Indoxacarb	0.0036

No	Pesticides	AOEL (mg/kg bw/day)
109	Zeta-cypermethrin	0.019
110	Gibberellic acid	0.68
111	Gibberellin A4+7	0.18
112	Cadusafos	0.00067
113	Carbendazim	0.02
114	Carbosulfan	0.005
115	Carfentrazone-ethyl	0.58
116	Carpropamid	0.025
117	Copper sulfate basic	0.072
118	Copper oxychloride	0.072
119	Copper hydroxide	0.072
120	Quimerac	0.079
121	Clethodim	0.21
122	Chlorantraniliprole	0.36
123	Chlorothalonil	0.009
124	Chlorfenapyr	0.0042
125	Chlorpyrifos	0.001
126	Clothianidin	0.1
127	Tebuconazole	0.03
128	Tebufenozide	0.008
129	Tebufenpyrad	0.008
130	Tebufloquin	0.05
131	Tefuryltrione	0.0019
132	Teflubenzuron	0.016
133	Tefluthrin	0.0015
134	Tricyclazole	0.05
135	Triafamone	0.028
136	Triflumizole	0.041
137	Tiadinil	0.064
138	Thiamethoxam	0.082
139	Thiabendazole	0.07
140	Thiophanate-methyl	0.08
141	Thifluzamide	0.026
142	Famoxadone	0.0024
143	Fenazaquin	0.01
144	Fenobucarb(BPMC)	0.05
145	Fenoxanil	0.024
146	Penoxsulam	0.18
147	Fenitrothion	0.013
148	Pendimethalin	0.24

No	Pesticides	AOEL (mg/kg bw/day)
149	Pencycuron	0.3
150	Fentrazamide	0.025
151	Penthiopyrad	0.11
152	Fenpropathrin	0.019
153	Penflufen	0.077
154	Fanpyrazamine	0.25
155	Fenpyroximate	0.0054
156	Phorate	0.0005
157	Fosthiazate	0.005
158	Pretilachlor	0.04
159	Prodiamine	0.025
160	Procymidone	0.035
161	Prochloraz	0.018
162	Prochloraz Copper Chloride Complex	0.018
163	Prochloraz-mangenease	0.018
164	Propanil	0.017
165	Propamocarb hydrochloride	0.29
166	Propaquizafop	0.041
167	Propineb	0.046
168	Propyrisulfuron	0.075
169	Proquinazid	0.019
170	Prohexadione-calcium	0.8
171	Phthalide	0.004
172	Flazasulfuron	0.02
173	Flonicamid	0.025
174	Fludioxonil	0.59
175	Flusulfamide	0.0013
176	Fluazinam	0.0035
177	Fluazifop-P-butyl	0.02
178	Fluensulfon	0.031
179	Fluopyram	0.054
180	Fluopicolide	0.046
181	Flutolanil	0.56
182	Flutianil	0.35
183	Flufenoxuron	0.012
184	Flupoxam	0.03
185	Flupyradifurone	0.12
186	Pyrazosulfuron-ethyl	0.057
187	Pyraclonil	0.022
188	Pyridaben	0.005
189	Pyridalyl	0.036

No	Pesticides	AOEL (mg/kg bw/day)
190	Pyriminobac-methyl	0.05
191	Pyrimisulfan	0.1
192	Pyribencarb	0.12
193	Pyriofenone	0.15
194	Pyrifluquinazone	0.013
195	Picarbutrazox	0.11
196	Fipronil	0.0035
197	Pyflubumide	0.0062
198	Hexaconazole	0.0082
199	Hexythiazox	0.0086
200	Metentrifluconazole	0.035
201	Flutriafol	0.05
202	Triflumexopyrim	0.12
203	Fluxametamide	0.022
204	Tiafenacil	0.017
205	Florpyrauxifen-benzyl	1.0
206	Bacillus tequilensis BOR1	면제
207	Pydiflumetofen	0.18
208	Tetraniliprole	0.37
209	Pyraziflumid	0.071
210	Pyroxasulfone	0.02
211	Nitrophenolate mixture	0.007
212	Metconazole	0.015
213	Benzobicyclon	0.0011
214	Benfluralin	0.051
215	Bromobutide	0.22
216	Cymoxanil	0.01
217	Streptomycin	0.05
218	Acequinocyl	0.014
219	Isoxaben	0.25
220	Emamectin benzoate	0.00028
221	Ethoprophos	0.001
222	Oxytetracyclin dihydrate	0.13
223	Oxyfluorfen	0.013
224	Iminoctadine tris (albesilate)	0.0024
225	Iprobenfos (IBP)	0.029
226	Trinexapac-ethyl	0.34
227	Fosetyl-aluminium	5
228	Flucetosulfuron	0.13
229	Fluxapyrosad	0.041
230	Pyraclostrobin	0.015
231	Metam sodium	0.001

No	Pesticides	AOEL (mg/kg bw/day)
232	Boscalid	0.097
233	Isoprothiolane	0.037
234	Ethaboxam	0.16
235	Iminoctadine triacitate	0.00038
236	Tetraconazole	0.03
237	Trifloxystrobin	0.059
238	Fenquinotrione	0.0021
239	Pentoxazone	0.12
240	Probenazole	0.067
241	Tolpyrarate	0.013
242	Broflanilide	0.0031
243	Acynonapyr	0.027
244	Afidopyropen	0.087
245	Flometoquin	0.0042
246	Glyphosate-isopropylammonium	0.1
247	Napropamide-M	0.5
248	Napropamide	0.35
249	Daminozide	0.16
250	Linuron	0.01
251	Metalaxyl-M	0.08
252	Metrafenone	0.43
253	Benomyl	0.017
254	Bitertanol	0.01
255	Cyclosulfamuron	0.3
256	Sulfozaflor	0.06
267	Streptomycin	0.05
258	Streptomycin	0.05
259	Oxytetracycline	0.13
260	S-Metolachlor	0.15
261	Fenoxaprop-P	0.014
262	Fentrazamide	0.025
263	Flubendiamide	0.006
264	Dichlorvos	0.0005
265	Dicamba	0.3
266	Metribuzin	0.02
267	Pyrimethanil	0.12
268	2,4-D(2,4-Dethylester 포함)	0.02
269	Cartap hydrochloride	0.03
270	Methiozolin	1.6
271	Phenthoate	0.1
272	Simazine	0.018
273	Dichlobentiazox	0.05

No	Pesticides	AOEL (mg/kg bw/day)
274	Trifludimoxazin.	0.15
275	Florylpicoxamid	0.07
276	Flupyrimin	0.026
277	Dimethoate	0.001
278	Maleic hydrazide(choline salt of)	0.25
279	Azocyclotin	0.003
280	Acetamiprid	0.07
281	Carbaryl	0.01
282	Kresoxim-methyl	0.92
283	Triflumuron	0.036
284	Pyriproxyfen	0.04
285	Pycoxistrobin	0.09
286	Fenbuconazole	0.017
287	Fluquinconazole	0.0012
288	lambda-cyhalothrin	0.00063
289	validamycin-A	0.3
290	buprofezin	0.04
291	Cinmethylin	0.08
292	amitraz	0.0025
293	Isocycloseram	0.026
294	Ethephon	0.013
295	Ipflufenoquin	0.27
296	tetradifon	0.26
297	triadimefon	0.1
298	Thiacloprid	0.02
299	fenvalerate	0.011
300	folpet	0.1
301	propargite	0.023
302	Propiconazole	0.1
303	Halosulfuron-methyl	0.063
304	Metazosulfuron	0.1
305	Saflufenacil	0.037
306	Spirotetramat	0.05
307	Spiropidion	0.06
308	Terbufos	0.00059
309	Thiacloprid	0.02
310	Polyoxincomplex	11.48
311	Flumioxazin	0.022
312	Fluindapyr	0.1
313	Diniconazole	0.02
314	Benalaxyl-M	0.062
315	Bifenazate	0.0028

No	Pesticides	AOEL (mg/kg bw/day)
316	Cyantraniliprole	0.036
317	Spiromesifen	0.015
318	Amisulbrom	0.15
319	Acibenzolar-s-methyl	0.033
320	Alachlor	0.025
321	Etoxazole	0.03
322	Captan	0.1
323	Triclopyr-TEA	0.05
324	Thiodicarb	0.014
325	Pymetrozine	0.03