## **SUPPORTING MATERIALS**

**Table 1S. Recoveries evaluation and mass selected monitoring parameters for all tested pesticides.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Wheat** | **Corn** | **LC** | **MS/MS parameters** |
|  | **Mean Recovery % ±** **RSD %** | **All Levels** | **Mean Recovery % ± RSD %** | **All Levels** |
| **Pesticides** | **0.01 ppm** | **0.05 ppm** | **0.1 ppm** | **Qtype**  | **RSD****pooled** | **0.01 ppm** | **0.05 ppm** | **0.1 ppm** | **Qtype**  | **RSD pooled** | **RT** | **Q1** | **DP** | **Q3 Qan (CE)** | **Q3 Conf (CE)** |
| **Abamectin**  | 83 ± 19.7 | 108 ± 13.6 | 82 ± 20 | 91 | 17.7 | 114 ± 16.7 | 85 ± 20.3 | 86 ± 17.2 | 95 | 18.0 | 13.5 | 890.5 | 81 | 305.3 (37) | 567.4 (19) |
| **Acephate \*** | 72 ± 6 | 73 ± 8.4 | 68 ± 37.4 | 71 | 22.4 | 79 ± 11.3 | 72 ± 2.9 | 65 ± 7 | 72 | 7.8 | 0.94 | 184 | 81 | 125 (25) | 143 (19) |
| **Acetamiprid**  | 71 ± 4.9 | 106 ± 11.1 | 104 ± 17.8 | 94 | 12.5 | 92 ± 3.5 | 99 ± 2.5 | 85 ± 4.4 | 92 | 3.5 | 1.47 | 223 | 62 | 126 (27) | 90 (45) |
| **Aldicarb**  | 83 ± 18.8 | 102 ± 17.4 | 83 ± 19 | 89 | 18.4 | 123 ± 15 | 89 ± 19.6 | 77 ± 17.6 | 97 | 17.5 | 2.32 | 208.2 | 35 | 89 (20) | 116 (14) |
| **Ametoctradin**  | 73 ± 6.1 | 96 ± 11.7 | 97 ± 15 | 89 | 11.5 | 86 ± 5.8 | 95 ± 2.5 | 85 ± 3.7 | 88 | 4.2 | 10.4 | 276.2 | 96 | 149 (51) | 176.1 (53) |
| **Ametryn**  | 83 ± 13.3 | 98 ± 10.4 | 90 ± 17.5 | 91 | 14.0 | 91 ± 3.2 | 96 ± 2.6 | 84 ± 2.9 | 90 | 2.9 | 6.52 | 228 | 80 | 116 (27) | 186 (29) |
| **Amidosulfuron**  | 73 ± 6.1 | 100 ± 11.3 | 95 ± 15.5 | 89 | 11.6 | 86 ± 5.6 | 93 ± 0.9 | 86 ± 3.2 | 88 | 3.8 | 3.18 | 370.1 | 87 | 261 (19) | 218 (33) |
| **Aminocarb**  | 72 ± 3.3 | 101 ± 10.5 | 94 ± 10.1 | 89 | 8.6 | 86 ± 2 | 95 ± 2.8 | 86 ± 3.1 | 89 | 2.6 | 1.72 | 209 | 66 | 137 (33) | 152 (23) |
| **Amisulbrom**  | 71 ± 4.9 | 89 ± 13.1 | 90 ± 17.2 | 83 | 12.8 | 93 ± 4.6 | 103 ± 3 | 88 ± 3.3 | 95 | 3.7 | 10.8 | 466 | 81 | 227 (25) | 229 (25) |
| **Anilofos**  | 76 ± 4 | 89 ± 10.2 | 91 ± 17 | 85 | 11.7 | 90 ± 4.4 | 100 ± 2 | 86 ± 3 | 92 | 3.3 | 9.37 | 367.9 | 72 | 125.1 (45) | 198.9 (21) |
| **Atrazine**  | 79 ± 4.9 | 89 ± 11 | 89 ± 20 | 82 | 14.0 | 88 ± 3.2 | 96 ± 2.9 | 88 ± 6.4 | 91 | 4.5 | 5.1 | 216.1 | 82 | 104 (37) | 174 (23) |
| **Azaconazol**  | 73 ± 4.6 | 89 ± 12.7 | 88 ± 16.4 | 83 | 12.2 | 89 ± 3.1 | 99 ± 2 | 92 ± 4.2 | 93 | 3.2 | 5.68 | 300 | 67 | 159 (59) | 231 (23) |
| **Azamethiphos**  | 74 ± 4.8 | 97 ± 10 | 94 ± 17.8 | 89 | 12.1 | 88 ± 3.6 | 95 ± 2 | 90 ± 7.9 | 91 | 5.1 | 3.02 | 325 | 76 | 183 (27) | 112 (47) |
| **Azimsulfuron**  | 71 ± 6.3 | 92 ± 12.9 | 89 ± 12.6 | 84 | 11.0 | 88 ± 4.6 | 98 ± 4 | 91 ± 6.3 | 92 | 5.1 | 4.45 | 425 | 62 | 156 (47) | 182 (25) |
| **Azinphos methyl**  | 79 ± 13.9 | 118 ± 18 | 127 ± 20 | 118 | 17.3 | 101 ± 6.6 | 106 ± 6.6 | 93 ± 7.2 | 100 | 6.8 | 6.12 | 318 | 101 | 132 (21) | 160.1 (11) |
| **Azoxystrobin**  | 79 ± 7 | 104 ± 12 | 118 ± 17.5 | 101 | 12.9 | 89 ± 8.1 | 97 ± 2.1 | 74 ± 2.7 | 87 | 5.1 | 6.79 | 404.1 | 71 | 372.1 (19) | 344.2 (35) |
| **Barban**  | 96 ± 18.5 | 93 ± 11.6 | 87 ± 19.4 | 92 | 17.7 | 100 ± 8.7 | 108 ± 2.9 | 93 ± 4.1 | 100 | 5.8 | 7.54 | 258 | 46 | 143 (27) | 178 (21) |
| **Beflubutamid**  | 80 ± 8.9 | 93 ± 13.8 | 100 ± 16.5 | 91 | 13.5 | 96 ± 4.9 | 98 ± 2.3 | 78 ± 4.1 | 91 | 3.9 | 9.21 | 356 | 97 | 162 (39) | 91.1 (55) |
| **Benalaxyl**  | 75 ± 5.1 | 90 ± 12 | 86 ± 16.9 | 84 | 12.3 | 90 ± 2.6 | 99 ± 2.8 | 89 ± 2.5 | 93 | 2.6 | 9.45 | 326.3 | 50 | 208.2 (20) | 148.1 (26) |
| **Bendiocarb**  | 72 ± 5.7 | 98 ± 10.2 | 98 ± 17.3 | 89 | 12.1 | 93 ± 2.7 | 96 ± 1.6 | 84 ± 2.7 | 91 | 2.4 | 3.45 | 224 | 50 | 167 (14) | 109.1 (22) |
| **Bensulfuron methyl**  | 75 ± 9.6 | 95 ± 13.5 | 99 ± 15.1 | 90 | 12.9 | 89 ± 3.7 | 98 ± 1.2 | 90 ± 4.2 | 93 | 3.3 | 6.31 | 411 | 70 | 182.1 (31) | 149 (31) |
| **Benthiavalicarb isopropyl**  | 74 ± 4 | 89 ± 9.8 | 85 ± 15.6 | 83 | 10.9 | 94 ± 3.1 | 102 ± 1.5 | 92 ± 2.9 | 96 | 2.6 | 7.62 | 382.1 | 77 | 116.1 (39) | 180.1 (53) |
| **Bifenazate**  | 74 ± 7.5 | 95 ± 11.3 | 98 ± 23.5 | 89 | 15.7 | 93 ± 4.4 | 92 ± 3.2 | 74 ± 5.5 | 86 | 4.5 | 8 | 301 | 116 | 170 (27) | 198 (21) |
| **Bispyribac**  | 70 ± 10.3 | 91 ± 9.7 | 86 ± 16.6 | 82 | 12.6 | 73 ± 3.2 | 79 ± 1.8 | 71 ± 2.2 | 74 | 2.5 | 6.69 | 431.2 | 82 | 275.1 (17) | 413 (25) |
| **Bitertanol**  | 71 ± 19.6 | 79 ± 19.6 | 100 ± 12.3 | 83 | 17.1 | 92 ± 19.5 | 120.4 ± 12.4 | 109 ± 11.5 | 107 | 14.9 | 9.98 | 338.2 | 51 | 269.2 (15) | 99.2 (21) |
| **Boscalid**  | 72 ± 8.5 | 90 ± 7.9 | 93 ± 16.4 | 85 | 11.6 | 93 ± 4.9 | 99 ± 1.4 | 87 ± 3.4 | 93 | 3.5 | 7.21 | 343 | 77 | 307.2 (29) | 139.9 (29) |
| **Bromacil**  | 78 ± 4.8 | 99 ± 10.5 | 98 ± 16.5 | 91 | 11.6 | 91 ± 3 | 96 ± 2 | 84 ± 2.6 | 90 | 2.6 | 3.39 | 261.2 | 37 | 205 (11) | 188 (37) |
| **Bromuconazole**  | 70 ± 11.5 | 92 ± 13.2 | 93 ± 17.5 | 85 | 14.3 | 90 ± 5.2 | 97 ± 3.5 | 84 ± 4.1 | 90 | 4.3 | 7.8 | 376 | 51 | 159 (41) | 161 (43) |
| **Bupirimate**  | 74 ± 5.3 | 95 ± 12.7 | 92 ± 15.9 | 87 | 12.2 | 94 ± 4 | 97 ± 3 | 83 ± 3.6 | 91 | 3.6 | 8.76 | 317 | 75 | 210.2 (31) | 166.2 (35) |
| **Buprofezin**  | 75 ± 5.5 | 96 ± 9.1 | 98 ± 13.4 | 90 | 9.9 | 87 ± 7.9 | 95 ± 1.2 | 79 ± 1.8 | 87 | 4.7 | 11.4 | 306.2 | 66 | 201.1 (17) | 116 (22) |
| **Butachlor**  | 77 ± 10.6 | 90 ± 10.7 | 94 ± 15.7 | 87 | 12.6 | 92 ± 6.6 | 100 ± 1.1 | 84 ± 3.5 | 92 | 4.4 | 11.5 | 312.3 | 42 | 162 (33) | 238 (17) |
| **Butralin**  | 70 ± 5.92 | 89 ± 12 | 86 ± 16.3 | 81 | 12.2 | 88 ± 2.8 | 98 ± 2.6 | 90 ± 3 | 92 | 2.8 | 12.3 | 296 | 87 | 240.1 (21) | 222.2 (31) |
| **Butylate**  | 73 ± 5.1 | 81 ± 13.3 | 81 ± 14.7 | 78 | 11.8 | 88 ± 4.5 | 101 ± 1.7 | 91 ± 3.4 | 93 | 3.4 | 10.9 | 218.1 | 62 | 57.1 (25) | 156.2 (15) |
| **Carbaryl**  | 72 ± 6.9 | 90 ± 9.5 | 88 ± 19.7 | 83 | 13.2 | 92 ± 3.5 | 94 ± 1.7 | 86 ± 2.7 | 90 | 2.8 | 4.04 | 202.1 | 65 | 145.1 (16) | 127.1 (39) |
| **Carbendazim**  | 71 ± 5.2 | 94 ± 11.3 | 87 ± 15.8 | 84 | 11.6 | 85 ± 3.5 | 91 ± 1.5 | 84 ± 5.3 | 87 | 3.7 | 1.71 | 192.1 | 55 | 160.1 (26) | 132.1 (44) |
| **Carbetamide**  | 74 ± 4.5 | 97 ± 12.2 | 95 ± 15.5 | 89 | 11.7 | 84 ± 6.7 | 86 ± 3 | 92 ± 15.8 | 87 | 10.0 | 2.74 | 237.2 | 42 | 192.1 (11) | 118.1 (17) |
| **Carbofuran**  | 82 ± 5.8 | 117 ± 11.5 | 109 ± 16.1 | 103 | 11.9 | 96 ± 2.6 | 106 ± 1.7 | 91 ± 2.5 | 98 | 2.3 | 3.51 | 222.1 | 45 | 123 (28) | 165 (16) |
| **Carbofuran 3OH**  | 81 ± 5.4 | 99 ± 14.8 | 101 ± 20.1 | 94 | 15.7 | 89 ± 3.9 | 94 ± 7.1 | 85 ± 7.8 | 89 | 6.5 | 1.48 | 238.3 | 97 | 181.1 (7) | 163.1 (13) |
| **Carboxin**  | 76 ± 5.1 | 97 ± 9.1 | 90 ± 17.3 | 88 | 11.7 | 87 ± 2.5 | 90 ± 1.7 | 86 ± 4.1 | 87 | 3.0 | 3.94 | 236.1 | 64 | 142.9 (21) | 87 (33) |
| **Chlorantraniliprole**  | 71 ± 7.1 | 91 ± 11 | 92 ± 16.6 | 85 | 12.2 | 92 ± 3.2 | 96 ± 1.8 | 86 ± 3.6 | 91 | 3.0 | 6.22 | 484 | 61 | 285.9 (21) | 452.9 (23) |
| **Chlorbromuron**  | 75 ± 6.1 | 90 ± 9.8 | 91 ± 16.9 | 85 | 11.8 | 91 ± 2 | 97 ± 1.1 | 84 ± 5.3 | 91 | 3.3 | 6.96 | 293 | 62 | 182.1 (21) | 205.9 (27) |
| **Chlorfenvinphos**  | 72 ± 4.9 | 94 ± 8.6 | 95 ± 15.4 | 87 | 10.5 | 91 ± 5.6 | 98 ± 1.8 | 84 ± 3.5 | 91 | 4.0 | 9.62 | 358.9 | 71 | 155.1 (17) | 99 (39) |
| **Chlorfluazuron**  | 77 ± 5.7 | 87 ± 10.8 | 82 ± 16.7 | 82 | 12.0 | 92 ± 1.9 | 101 ± 2.1 | 90 ± 2.9 | 94 | 2.3 | 12.7 | 539.9 | 96 | 158 (27) | 383 (35) |
| **Chloridazon**  | 75 ± 5.3 | 96 ± 13.5 | 95 ± 18.4 | 89 | 13.5 | 89 ± 2.8 | 94 ± 1.3 | 85 ± 3.4 | 89 | 2.6 | 1.63 | 222 | 102 | 104 (41) | 92 (37) |
| **Chloroxuron**  | 70 ± 9.36 | 87 ± 12.7 | 98 ± 22 | 84 | 14.7 | 91 ± 5.4 | 97 ± 4.1 | 83 ± 3 | 90 | 4.3 | 7.88 | 291 | 91 | 218 (37) | 72 (23) |
| **Chlorpyrifos**  | 79 ± 8.5 | 88 ± 9.1 | 85 ± 15.9 | 84 | 11.6 | 84 ± 3.2 | 101 ± 0.9 | 90 ± 2.9 | 92 | 2.6 | 11.8 | 350 | 76 | 198 (25) | 97 (59) |
| **Chlorpyrifos methyl**  | 73 ± 7.2 | 84 ± 13.2 | 81 ± 14.5 | 79 | 12.1 | 89 ± 4.2 | 98 ± 3 | 90 ± 4 | 92 | 3.7 | 10.2 | 322 | 100 | 124.9 (35) | 290 (22) |
| **Chlorsulfuron**  | 72 ± 8.7 | 96 ± 9.6 | 93 ± 14.9 | 87 | 11.4 | 89 ± 5.1 | 95 ± 2.4 | 88 ± 2.7 | 91 | 3.6 | 3.12 | 358 | 71 | 167 (23) | 141 (23) |
| **Chlorthiophos**  | 71 ± 7.2 | 80 ± 9.2 | 83 ± 15.8 | 76 | 11.3 | 87 ± 4.4 | 96 ± 1.6 | 86 ± 2.9 | 90 | 3.2 | 12.1 | 360.9 | 117 | 192 (47) | 304.9 (23) |
| **Cinidon Ethyl**  | 83 ± 14.8 | 98 ± 9.7 | 90 ± 15.5 | 90 | 13.6 | 83 ± 9.6 | 105 ± 5.5 | 90 ± 5.1 | 93 | 7.0 | 11.3 | 394 | 162 | 107 (55) | 348.1 (29) |
| **Cinosulfuron**  | 72 ± 6.8 | 92 ± 12.6 | 93 ± 14.9 | 85 | 11.9 | 87 ± 3.9 | 99 ± 2.2 | 90 ± 4.4 | 92 | 3.6 | 2.52 | 414.1 | 72 | 157 (33) | 183 (25) |
| **Clethodim**  | 70 ± 7.11 | 97 ± 10.9 | 91 ± 17 | 86 | 12.3 | 92 ± 7.2 | 118 ± 7 | 111 ± 5.3 | 107 | 6.6 | 10.6 | 360 | 115 | 268 (20) | 164 (24) |
| **Clodinafop propargyl**  | 77 ± 8.2 | 101 ± 7.7 | 108 ± 16.3 | 96 | 11.5 | 93 ± 3.7 | 102 ± 1 | 80 ± 2 | 92 | 2.5 | 9.15 | 350 | 115 | 266 (24) | 91.1 (35) |
| **Clofentazine**  | 70 ± 7 | 96 ± 9.7 | 101 ± 14.9 | 89 | 11.0 | 85 ± 5.1 | 96 ± 3.9 | 82 ± 4.3 | 88 | 4.5 | 9.83 | 303 | 107 | 102.1 (53) | 138 (21) |
| **Clomazone**  | 76 ± 6.2 | 85 ± 9.9 | 89 ± 18 | 84 | 12.4 | 90 ± 3.1 | 99 ± 2.4 | 87 ± 3.1 | 92 | 2.9 | 6.25 | 240.1 | 57 | 89.1 (73) | 125 (27) |
| **Cloquintocet mexyl**  | 73 ± 4.8 | 94 ± 10.2 | 87 ± 16 | 84 | 11.3 | 91 ± 4.2 | 97 ± 1.8 | 87 ± 2.7 | 92 | 3.1 | 11.4 | 336.2 | 92 | 192.1 (47) | 238 (25) |
| **Clothianidin**  | 82 ± 11.5 | 102 ± 9.3 | 109 ± 4 | 98 | 8.8 | 86 ± 1.3 | 96 ± 2.2 | 85 ± 3 | 89 | 2.3 | 1.34 | 250 | 40 | 132 (26) | 169 (26) |
| **Coumaphos**  | 73 ± 9.7 | 94 ± 13 | 107 ± 16.4 | 91 | 13.3 | 93 ± 3 | 101 ± 2.3 | 80 ± 2.5 | 91 | 2.6 | 9.46 | 363 | 152 | 307 (29) | 226.9 (43) |
| **Coumatetralyl**  | 70 ± 11.1 | 89 ± 9.8 | 85 ± 18.5 | 81 | 13.7 | 90 ± 3.7 | 90 ± 1.8 | 83 ± 4.4 | 88 | 3.5 | 7.25 | 293.2 | 87 | 91.1 (55) | 175 (31) |
| **Cyazofamid**  | 76 ± 6.4 | 105 ± 10.8 | 104 ± 17.5 | 95 | 12.4 | 99 ± 5.5 | 105 ± 2.7 | 88 ± 3.4 | 97 | 4.1 | 8.47 | 325 | 51 | 108 (19) | 108 (21) |
| **Cyflufenamid**  | 75 ± 3.3 | 103 ± 8.3 | 105 ± 14.3 | 94 | 9.8 | 91 ± 2.6 | 98 ± 1.5 | 81 ± 2.7 | 90 | 2.4 | 10 | 413.2 | 122 | 241 (33) | 203.1 (59) |
| **Cyhalothrin L**  | 74 ± 12.6 | 78 ± 9.3 | 84 ± 16.1 | 79 | 12.9 | 81 ± 7 | 92 ± 5.1 | 83 ± 9 | 85 | 7.2 | 12.6 | 467 | 51 | 225 (27) | 141 (59) |
| **Cymoxanil**  | 78 ± 7.6 | 101 ± 10.7 | 103 ± 17.1 | 94 | 12.4 | 100 ± 2.6 | 95 ± 1.6 | 82 ± 3.9 | 92 | 2.9 | 1.82 | 199 | 101 | 128 (19) | 83 (33) |
| **Cypermethrin**  | 81 ± 25 | 87 ± 7.9 | 85 ± 20.2 | 84 | 19.1 | 86 ± 8.5 | 116 ± 10.2 | 110 ± 6.8 | 104 | 8.6 | 12.7 | 435 | 76 | 193 (21) | 191 (27) |
| **Cyproconazole**  | 70 ± 5.7 | 98 ± 11.2 | 103 ± 16.5 | 90 | 12.0 | 91 ± 3.7 | 98 ± 2.2 | 81 ± 2.6 | 90 | 2.9 | 8.01 | 292 | 71 | 70 (49) | 125 (59) |
| **Cyprodinil**  | 70 ± 9.11 | 76 ± 12.9 | 78 ± 17.1 | 73 | 13.9 | 96 ± 5.4 | 96 ± 1.2 | 89 ± 3.9 | 93 | 3.9 | 9.13 | 226 | 55 | 118.1 (46) | 93 (46) |
| **Deltamethrin**  | 79 ± 14.5 | 96 ± 14 | 89 ± 19 | 88 | 16.0 | 97 ± 10.7 | 105 ± 3.5 | 87 ± 5.9 | 96 | 7.3 | 12.8 | 521 | 66 | 279 (21) | 281 (29) |
| **Demeton S methyl**  | 71 ± 5.4 | 88 ± 11.1 | 93 ± 17.8 | 84 | 12.5 | 70 ± 12.2 | 94 ± 11.1 | 90 ± 16.9 | 84 | 13.6 | 0 | 231 | 22 | 89 (19) | 61 (45) |
| **Desmedipham**  | 72 ± 4.7 | 96 ± 11.7 | 93 ± 17.8 | 87 | 12.6 | 90 ± 3.4 | 92 ± 1.9 | 85 ± 4.5 | 89 | 3.4 | 5.94 | 318.1 | 64 | 182.2 (19) | 136 (33) |
| **Diazinon**  | 72 ± 6.7 | 92 ± 8.5 | 92 ± 15 | 85 | 10.7 | 92 ± 3.2 | 97 ± 1.3 | 86 ± 3.5 | 92 | 2.8 | 9.52 | 305.1 | 35 | 97 (42) | 169.1 (31) |
| **Dichlofenthion**  | 70 ± 3.1 | 83 ± 10.1 | 90 ± 15.1 | 81 | 10.6 | 97 ± 3.6 | 101 ± 3.6 | 88 ± 3.7 | 96 | 3.6 | 11.6 | 315.1 | 42 | 259.1 (23) | 287 (17) |
| **Dichlofluanid**  | 71 ± 19.6 | 70 ± 13.4 | 81 ± 20.2 | 73 | 17.7 | 72 ± 20.1 | 100 ± 20 | 116 ± 14.4 | 96 | 18.1 | 8.12 | 350.1 | 50 | 224 (22) | 123 (39) |
| **Dichlorvos**  | 73 ± 8.9 | 89 ± 11 | 82 ± 16.5 | 82 | 12.5 | 92 ± 2.4 | 100 ± 1.7 | 92 ± 3 | 95 | 2.4 | 3.31 | 223 | 91 | 109 (23) | 109 (23) |
| **Diethofencarb**  | 74 ± 8 | 91 ± 9.4 | 86 ± 16.4 | 84 | 11.9 | 90 ± 3 | 94 ± 3.3 | 84 ± 4.9 | 90 | 3.8 | 6.73 | 268.3 | 72 | 226.1 (13) | 124 (43) |
| **Difenoconazole**  | 71 ± 6.6 | 87 ± 11.3 | 86 ± 15.8 | 81 | 11.8 | 90 ± 3.8 | 99 ± 2.6 | 88 ± 2.8 | 92 | 3.1 | 10.3 | 406 | 120 | 251 (50) | 337.1 (31) |
| **Diflufenican**  | 70 ± 4.8 | 95 ± 10.1 | 94 ± 15.4 | 86 | 11.0 | 89 ± 3.4 | 98 ± 3 | 86 ± 2.8 | 91 | 3.1 | 10.6 | 395.1 | 120 | 246 (50) | 266 (35) |
| **Dimethachlor**  | 72 ± 2.3 | 89 ± 10.4 | 88 ± 18.8 | 83 | 12.5 | 92 ± 3.2 | 99 ± 2.3 | 90 ± 4.8 | 94 | 3.6 | 5.9 | 256 | 37 | 148 (39) | 224 (21) |
| **Dimethenamid**  | 73 ± 3.1 | 96 ± 7.5 | 93 ± 16.7 | 87 | 10.7 | 89 ± 3.2 | 96 ± 2.6 | 85 ± 5.7 | 90 | 4.0 | 6.95 | 276.1 | 47 | 168.2 (33) | 244.1 (13) |
| **Dimethoate \*** | 67 ± 4.06 | 101 ± 10.5 | 90 ± 19.3 | 86 | 13.2 | 85 ± 2.3 | 94 ± 0.6 | 82 ± 4.1 | 87 | 2.7 | 1.57 | 230 | 30 | 199 (16) | 171 (14) |
| **Dimethomorph**  | 77 ± 8.5 | 97 ± 9.5 | 88 ± 14.2 | 88 | 11.0 | 96 ± 5.4 | 105 ± 2.7 | 90 ± 1.8 | 97 | 3.6 | 7.5 | 388.2 | 86 | 301.1 (25) | 165.2 (45) |
| **Diniconazole**  | 70 ± 10 | 86 ± 10.9 | 77 ± 15.9 | 78 | 12.5 | 84 ± 4.6 | 99 ± 1.9 | 92 ± 4.9 | 91 | 4.0 | 10.1 | 326 | 76 | 70.1 (47) | 159 (43) |
| **Disulfoton Sulfone**  | 76 ± 5.9 | 103 ± 10.1 | 105 ± 15.1 | 95 | 11.0 | 88 ± 2.9 | 97 ± 1.9 | 84 ± 3.8 | 90 | 3.0 | 5.06 | 307 | 47 | 96.9 (43) | 153 (21) |
| **Disulfoton sulfoxide**  | 72 ± 6.5 | 95 ± 12.5 | 88 ± 19 | 85 | 13.6 | 89 ± 3.9 | 98 ± 2.8 | 88 ± 3.5 | 91 | 3.4 | 4.81 | 291 | 27 | 185 (11) | 213.1 (13) |
| **Diuron**  | 80 ± 3.4 | 100 ± 10.1 | 98 ± 17.8 | 93 | 12.0 | 90 ± 4.2 | 94 ± 1.3 | 82 ± 4.9 | 89 | 3.8 | 5.48 | 233 | 76 | 72 (33) | 72.1 (21) |
| **DMF**  | 76 ± 4.1 | 95 ± 10.8 | 93 ± 16.3 | 88 | 11.6 | 85 ± 5.5 | 85 ± 1.8 | 94 ± 19 | 88 | 11.5 | 2.83 | 150 | 86 | 107 (31) | 106 (43) |
| **Dodemorph**  | 71 ± 5.2 | 93 ± 9.2 | 88 ± 14.2 | 84 | 10.2 | 89 ± 3.6 | 100 ± 2.6 | 89 ± 6.5 | 93 | 4.5 | 6.54 | 282 | 86 | 116 (31) | 98 (37) |
| **Edifenphos**  | 70 ± 3.7 | 80 ± 9.8 | 80 ± 20.3 | 76 | 13.2 | 90 ± 2.8 | 94 ± 1.9 | 83 ± 4.4 | 89 | 3.2 | 9.29 | 311 | 97 | 109 (43) | 283 (19) |
| **Emamectin**  | 71 ± 9 | 89 ± 11.6 | 80 ± 15.1 | 80 | 12.1 | 84 ± 5.3 | 99 ± 3.1 | 90 ± 4.1 | 91 | 4.3 | 11.7 | 886.5 | 142 | 158.1 (49) | 82 (125) |
| **EPN**  | 70 ± 5.1 | 88 ± 14 | 98 ± 15.2 | 85 | 12.3 | 87 ± 6.5 | 96 ± 3.3 | 81 ± 3 | 88 | 4.6 | 10.4 | 324 | 82 | 296 (21) | 156.9 (29) |
| **Epoxiconazole**  | 71 ± 2.9 | 98 ± 10.3 | 97 ± 16.3 | 89 | 11.3 | 90 ± 3.3 | 96 ± 2.5 | 83 ± 5.8 | 90 | 4.1 | 8.44 | 330 | 66 | 121 (29) | 101.1 (63) |
| **Ethiofencarb**  | 72 ± 6.5 | 99 ± 8.9 | 94 ± 20.4 | 88 | 17.6 | 90 ± 5.4 | 91 ± 3.4 | 92 ± 8.3 | 91 | 6.0 | 1.22 | 258.1 | 92 | 107.2 (19) | 200.9 (11) |
| **Ethiofencarb Sulfone**  | 72 ± 4.4 | 103 ± 11.5 | 91 ± 22.1 | 89 | 14.6 | 94 ± 3.8 | 96 ± 1.2 | 91 ± 6.6 | 94 | 4.4 | 1.28 | 242.1 | 27 | 107 (29) | 185.1 (13) |
| **Ethion**  | 74 ± 10.1 | 99 ± 13.1 | 86 ± 17.4 | 87 | 13.8 | 88 ± 4.7 | 96 ± 4.4 | 82 ± 6 | 89 | 5.1 | 11.6 | 385 | 55 | 143 (35) | 199.1 (13) |
| **Ethirimol**  | 73 ± 2.6 | 94 ± 11.1 | 90 ± 17 | 86 | 11.8 | 86 ± 3.5 | 91 ± 1.2 | 85 ± 5.9 | 87 | 4.0 | 4.63 | 210.2 | 86 | 98.1 (37) | 140 (31) |
| **Ethofumesate**  | 74 ± 6.2 | 93 ± 11.8 | 98 ± 16.4 | 88 | 12.2 | 89 ± 1.9 | 100 ± 1.9 | 84 ± 4.4 | 91 | 3.0 | 6.79 | 287.1 | 76 | 259.1 (15) | 121.1 (23) |
| **Ethoprophos**  | 74 ± 9.4 | 94 ± 10 | 99 ± 16.6 | 89 | 12.4 | 90 ± 3.1 | 96 ± 1 | 82 ± 4 | 89 | 3.0 | 8.32 | 243.1 | 45 | 97 (35) | 131 (29) |
| **Etoxazole**  | 70 ± 4.59 | 86 ± 9.5 | 87 ± 15.4 | 80 | 10.8 | 88 ± 2.8 | 94 ± 1.7 | 87 ± 3 | 89 | 2.6 | 12.2 | 360 | 130 | 113 (45) | 141 (30) |
| **Etrimfos**  | 75 ± 4.6 | 92 ± 8.1 | 96 ± 16 | 88 | 10.7 | 89 ± 2 | 100 ± 1.2 | 82 ± 2.4 | 90 | 1.9 | 9.26 | 293 | 61 | 265 (21) | 125 (33) |
| **Famoxadone**  | 95± 29.42 | 80 ± 10 | 109 ± 17 | 84 | 14.4 | 94 ± 9.6 | 123 ± 15 | 113 ± 15.4 | 110 | 13.6 | 9.69 | 392 | 50 | 331 (20) | 238 (20) |
| **Fenamidone**  | 75 ± 6.6 | 88 ± 9.1 | 82 ± 16.2 | 82 | 11.4 | 94 ± 2.2 | 99 ± 2.3 | 91 ± 3.1 | 94 | 2.6 | 7.04 | 312 | 42 | 236 (29) | 92 (73) |
| **Fenamiphos**  | 76 ± 5.7 | 94 ± 10.1 | 106 ± 15.3 | 92 | 11.1 | 89 ± 2.9 | 99 ± 2.4 | 81 ± 2.9 | 90 | 2.7 | 8.82 | 304.1 | 110 | 217 (35) | 202.1 (47) |
| **Fenamiphos sulfone**  | 75 ± 5.3 | 100 ± 12.2 | 100 ± 14.7 | 92 | 11.5 | 93 ± 2.9 | 96 ± 1.4 | 85 ± 2.9 | 91 | 2.5 | 4 | 336 | 106 | 266 (31) | 188 (37) |
| **Fenamiphos Sulfoxide**  | 75 ± 2.1 | 107 ± 10.4 | 101 ± 13.9 | 95 | 10.1 | 89 ± 3.4 | 98 ± 2 | 86 ± 2.6 | 91 | 2.7 | 3.67 | 320 | 101 | 233 (33) | 171 (29) |
| **Fenarimol**  | 70 ± 9.7 | 92 ± 9.5 | 91 ± 14.2 | 84 | 11.3 | 93 ± 3.7 | 100 ± 3.7 | 89 ± 3.2 | 94 | 3.5 | 8.19 | 331 | 86 | 268 (31) | 189 (50) |
| **Fenbuconazole**  | 72 ± 6.3 | 86 ± 13.7 | 88 ± 17.3 | 82 | 13.2 | 88 ± 3 | 97 ± 3.2 | 86 ± 3.3 | 91 | 3.1 | 8.67 | 337.3 | 102 | 125 (39) | 70 (35) |
| **Fenfuram**  | 70 ± 3.7 | 93 ± 10.9 | 85 ± 18.3 | 83 | 12.5 | 90 ± 2.2 | 94 ± 1.7 | 86 ± 3.4 | 90 | 2.5 | 4.11 | 202 | 57 | 109 (35) | 120 (23) |
| **Fenhexamid**  | 70 ± 20.01 | 93 ± 11.3 | 98 ± 16.7 | 86 | 12.5 | 89 ± 2.8 | 106 ± 1.7 | 91 ± 2.4 | 95 | 2.4 | 8.21 | 302 | 120 | 97 (35) | 143 (50) |
| **Fenitrothion \*** | 76 ± 20.2 | 95 ± 13 | 94 ± 22 | 89 | 18.8 | 91 ± 8 | 77 ± 24.2 | 76 ± 25.8 | 81 | 20.9 | 7.66 | 278.1 | 81 | 125 (29) | 109 (25) |
| **Fenoxaprop P ethyl**  | 71 ± 4.1 | 99 ± 9.6 | 100 ± 15 | 90 | 10.5 | 91 ± 4.1 | 99 ± 3.7 | 82 ± 2.6 | 91 | 3.5 | 11 | 362.1 | 71 | 288.1 (23) | 244.2 (35) |
| **Fenoxycarb**  | 72 ± 4.05 | 98 ± 12.4 | 102 ± 16 | 89 | 12.5 | 93 ± 2.9 | 97 ± 3.4 | 82 ± 2.8 | 90 | 3.0 | 8.92 | 302.3 | 52 | 116.1 (17) | 88 (29) |
| **Fenpropathrin**  | 71 ± 4.40 | 82 ± 12.3 | 78 ± 14 | 76 | 11.3 | 92 ± 4.1 | 98 ± 2 | 90 ± 3.5 | 93 | 3.3 | 11.8 | 350.2 | 81 | 125.1 (19) | 97 (43) |
| **Fenpropidin**  | 72 ± 6.4 | 94 ± 8.7 | 92 ± 15.1 | 86 | 10.7 | 88 ± 6 | 102 ± 2.3 | 93 ± 4.2 | 94 | 4.4 | 6.36 | 274.2 | 71 | 147.1 (37) | 117 (65) |
| **Fenpropimorph**  | 73 ± 4.8 | 89 ± 11.1 | 87 ± 15.3 | 83 | 11.3 | 91 ± 3.2 | 98 ± 1.3 | 88 ± 3.4 | 92 | 2.8 | 8.47 | 304.3 | 74 | 147.1 (39) | 117 (71) |
| **Fenpyrazamine**  | 84 ± 3.1 | 113 ± 2.5 | 136 ± 13.3 | 111 | 8.0 | 87 ± 3.5 | 111 ± 2.1 | 82 ± 2.5 | 93 | 2.7 | 7.8 | 332 | 282 | 230 (27) | 189 (37) |
| **Fenpyroximate**  | 74 ± 4.2 | 93 ± 10 | 96 ± 14.1 | 88 | 10.3 | 86 ± 5.8 | 98 ± 2.1 | 83 ± 2.9 | 89 | 3.9 | 12.4 | 422.1 | 76 | 366.2 (23) | 215.1 (35) |
| **Fenthion**  | 70 ± 6.5 | 99 ± 10.9 | 97 ± 17.2 | 89 | 12.3 | 90 ± 3 | 95 ± 1.8 | 81 ± 1.6 | 89 | 2.3 | 9.27 | 278.9 | 76 | 246.9 (19) | 169 (23) |
| **Fenthion Sulfone**  | 77 ± 5.9 | 88 ± 11.3 | 92 ± 15.2 | 86 | 11.5 | 94 ± 3.5 | 99 ± 2.6 | 87 ± 3.1 | 93 | 3.1 | 4.31 | 311 | 116 | 279 (29) | 125 (25) |
| **Fenthion sulfoxide**  | 77 ± 4.3 | 92 ± 11.8 | 96 ± 16.6 | 88 | 12.0 | 90 ± 3.4 | 95 ± 2 | 85 ± 3.7 | 90 | 3.1 | 3.84 | 295 | 106 | 109 (39) | 79 (67) |
| **Fenvalerate \*** | 116 ± 26.6 | 137 ± 22.8 | 88 ± 18.7 | 114 | 22.9 | 91 ± 22.9 | 89 ± 5.6 | 74 ± 6.6 | 85 | 14.2 | 13 | 437.1 | 76 | 167 (23) | 125 (59) |
| **Fipronil**  | 72 ± 8.8 | 92 ± 5.6 | 105 ± 13.2 | 90 | 9.7 | 93 ± 3.3 | 102 ± 1.7 | 83 ± 4.6 | 92 | 3.4 | 8.95 | 438.8 | 101 | 369.9 (25) | 367.8 (25) |
| **Flamprop**  | 71 ± 16.8 | 100 ± 6.5 | 101 ± 20.5 | 91 | 16.6 | 88 ± 12.5 | 104 ± 4.5 | 89 ± 4.9 | 94 | 8.2 | 9.5 | 322 | 61 | 77 (71) | 172 (18) |
| **Flonicamid \*** | 65 ± 8.5 | 95 ± 10.8 | 90 ± 29.6 | 83 | 18.9 | 90 ± 2 | 93 ± 4.5 | 80 ± 5.5 | 88 | 4.3 | 1.13 | 230 | 76 | 203.2 (25) | 98 (47) |
| **Fluazifop p butyl**  | 73 ± 1.5 | 96 ± 10.9 | 98 ± 15.6 | 89 | 11.0 | 90 ± 9.9 | 97 ± 4 | 82 ± 2.8 | 90 | 6.4 | 11.2 | 384.1 | 120 | 282.1 (35) | 328 (20) |
| **Flufenacet**  | 76 ± 4.3 | 94 ± 10 | 93 ± 18.4 | 88 | 12.4 | 91 ± 3.7 | 99 ± 2.1 | 82 ± 3.4 | 91 | 3.1 | 8.34 | 364.1 | 47 | 194.1 (17) | 152 (31) |
| **Flufenoxuron**  | 70 ± 3.83 | 86 ± 10.3 | 88 ± 15 | 80 | 10.9 | 95 ± 5 | 99 ± 3.7 | 90 ± 4.5 | 95 | 4.4 | 12.2 | 489.1 | 81 | 158.2 (25) | 141.2 (65) |
| **Flumetsulam**  | 72 ± 6.3 | 102 ± 7.6 | 106 ± 5.6 | 93 | 6.6 | 91 ± 3.6 | 95 ± 3.4 | 84 ± 4 | 90 | 3.7 | 1.27 | 326.2 | 82 | 129 (35) | 109.2 (79) |
| **Fluometuron**  | 72 ± 6.1 | 98 ± 13.4 | 102 ± 18.8 | 91 | 13.8 | 88 ± 2.9 | 98 ± 2.1 | 84 ± 4.6 | 90 | 3.4 | 4.62 | 233 | 76 | 72 (37) | 145.2 (47) |
| **Fluopicolide**  | 73 ± 12.7 | 89 ± 9.7 | 88 ± 20.1 | 83 | 14.8 | 94 ± 8.8 | 102 ± 3.8 | 88 ± 3.9 | 95 | 6.0 | 7.52 | 383 | 77 | 145 (73) | 173 (31) |
| **Flupyram**  | 73 ± 5.2 | 97 ± 9.9 | 96 ± 19.4 | 89 | 13.0 | 89 ± 4.3 | 101 ± 2.5 | 83 ± 2.9 | 91 | 3.3 | 8.13 | 397 | 40 | 208 (35) | 173 (42) |
| **Fluquinconazole**  | 73 ± 3.9 | 96 ± 10.2 | 94 ± 18.4 | 88 | 12.4 | 87 ± 5.4 | 98 ± 2.8 | 84 ± 1.8 | 90 | 3.6 | 8.04 | 376 | 94 | 307.1 (33) | 349 (25) |
| **Flusilazole**  | 72 ± 5.8 | 87 ± 8.1 | 87 ± 15.4 | 82 | 10.6 | 90 ± 2.2 | 97 ± 1.8 | 86 ± 3.2 | 91 | 2.5 | 8.85 | 316 | 76 | 247.1 (23) | 165.1 (39) |
| **Flutolanil**  | 79 ± 6.5 | 100 ± 8.4 | 106 ± 15.8 | 95 | 11.0 | 91 ± 5 | 100 ± 1.9 | 83 ± 2.6 | 91 | 3.4 | 7.48 | 324 | 76 | 242.2 (31) | 262.2 (23) |
| **Flutriafol**  | 75 ± 9.1 | 93 ± 10.1 | 93 ± 16.1 | 87 | 12.1 | 93 ± 2.9 | 97 ± 2.8 | 88 ± 4.5 | 92 | 3.5 | 5.28 | 302.1 | 84 | 122.9 (39) | 109 (39) |
| **Foramsulfuron**  | 77 ± 8.5 | 95 ± 10.6 | 92 ± 12.5 | 88 | 10.6 | 84 ± 3.7 | 90 ± 3.2 | 84 ± 3 | 86 | 3.3 | 4.15 | 453.1 | 71 | 182.2 (27) | 139 (63) |
| **Forasulam**  | 92 ± 18.57 | 96 ± 11.8 | 88 ± 10.8 | 84 | 9.9 | 93 ± 6.2 | 101 ± 3.6 | 87 ± 6.3 | 93 | 5.5 | 1.91 | 360 | 106 | 129 (29) | 192 (29) |
| **Formetanate**  | 74 ± 4.6 | 97 ± 10.1 | 90 ± 18.2 | 87 | 12.3 | 90 ± 3 | 97 ± 1.9 | 88 ± 4.9 | 92 | 3.5 | 4.98 | 222.1 | 42 | 165.1 (25) | 165.1 (49) |
| **Formothion**  | 79 ± 3.7 | 101 ± 9.7 | 103 ± 15.4 | 94 | 10.7 | 93 ± 3 | 97 ± 1.4 | 79 ± 2.3 | 90 | 2.3 | 0 | 258 | 151 | 125 (31) | 199 (15) |
| **Fosthiazate**  | 73 ± 5.7 | 95 ± 11.3 | 89 ± 18 | 85 | 12.7 | 91 ± 2.7 | 98 ± 1.3 | 89 ± 3.7 | 93 | 2.8 | 4.63 | 284.2 | 62 | 228 (15) | 104 (29) |
| **Fuberidazole**  | 70 ± 3.8 | 93 ± 10.6 | 88 ± 15.5 | 84 | 11.1 | 84 ± 3.3 | 89 ± 1.8 | 87 ± 7 | 87 | 4.6 | 2.42 | 185.1 | 132 | 157.2 (35) | 65 (69) |
| **Furathiocarb**  | 75 ± 4.40 | 86 ± 10.5 | 82 ± 16.6 | 78 | 11.7 | 91 ± 4.5 | 97 ± 2.2 | 88 ± 2.2 | 92 | 3.2 | 11.2 | 383.2 | 72 | 252.2 (17) | 195 (23) |
| **Halosulfuron methyl**  | 75 ± 9.1 | 97 ± 10.9 | 90 ± 16.2 | 87 | 12.4 | 83 ± 6.6 | 97 ± 3.9 | 87 ± 4 | 89 | 5.0 | 6.33 | 434.9 | 61 | 182 (29) | 182 (27) |
| **Haloxyfop Ethyl**  | 73 ± 3.68 | 98 ± 12.8 | 96 ± 15.2 | 88 | 12.0 | 91 ± 9.2 | 99 ± 3 | 83 ± 3.8 | 91 | 6.0 | 11.1 | 434 | 92 | 288 (49) | 316.1 (33) |
| **Heptenophos**  | 71 ± 6.9 | 81 ± 10.7 | 83 ± 19.4 | 79 | 13.4 | 91 ± 2.7 | 95 ± 1.9 | 89 ± 4.3 | 92 | 3.1 | 5.71 | 251 | 62 | 127 (31) | 109 (45) |
| **Hexaconazole**  | 75 ± 9.4 | 82 ± 13.6 | 80 ± 15.9 | 79 | 13.2 | 92 ± 3.8 | 98 ± 3.3 | 91 ± 2 | 94 | 3.1 | 9.71 | 314 | 120 | 70 (50) | 159 (50) |
| **Hexazinone**  | 74 ± 4.5 | 103 ± 9.6 | 95 ± 16.1 | 91 | 11.1 | 88 ± 2.6 | 97 ± 3.3 | 86 ± 2.3 | 90 | 2.8 | 3.5 | 253.2 | 56 | 171.1 (21) | 71.1 (43) |
| **Hexythiazox**  | 70 ± 3.38 | 85 ± 10.7 | 84 ± 16.7 | 78 | 11.9 | 85 ± 5.1 | 99 ± 1.2 | 90 ± 2.8 | 92 | 3.4 | 11.8 | 353 | 76 | 228 (19) | 168.1 (37) |
| **Imazalil**  | 76 ± 5.8 | 93 ± 11.8 | 89 ± 16 | 86 | 11.9 | 87 ± 4.2 | 92 ± 1.9 | 85 ± 5.3 | 88 | 4.0 | 6.03 | 297 | 71 | 159.1 (31) | 201 (25) |
| **Imazamethabenz methyl**  | 77 ± 3 | 99 ± 10.7 | 94 ± 16.8 | 90 | 11.6 | 91 ± 4.6 | 94 ± 1.5 | 86 ± 4.4 | 90 | 3.8 | 3.78 | 289 | 117 | 161 (37) | 144 (45) |
| **Imazamethpyr**  | 74 ± 4.9 | 99 ± 8.9 | 97 ± 12.2 | 90 | 9.2 | 88 ± 2.5 | 97 ± 1 | 88 ± 3.6 | 91 | 2.6 | 1.64 | 290 | 81 | 177 (41) | 245 (27) |
| **Imibenconazole**  | 74 ± 5.8 | 96 ± 9.9 | 93 ± 14.8 | 87 | 10.8 | 82 ± 5.4 | 101 ± 2.5 | 87 ± 3.1 | 90 | 3.9 | 11.5 | 411 | 94 | 125.1 (39) | 171 (25) |
| **Imidacloprid**  | 79 ± 7.9 | 103 ± 13.1 | 111 ± 6.6 | 98 | 9.7 | 87 ± 4.4 | 95 ± 1.6 | 84 ± 3.5 | 89 | 3.4 | 1.27 | 256.2 | 71 | 175.2 (23) | 209 (23) |
| **Indoxacarb**  | 71 ± 7.3 | 89 ± 9.6 | 93 ± 18.7 | 84 | 12.8 | 91 ± 5.5 | 97 ± 3.2 | 87 ± 2.8 | 92 | 4.0 | 10.6 | 528 | 71 | 249.1 (23) | 203 (51) |
| **Iodosulfuron-Me** | 78 ± 4.2 | 83 ± 7.2 | 94 ± 15.6 | 85 | 10.2 | 79 ± 7.5 | 94 ± 3.3 | 81 ± 4.3 | 85 | 5.4 | 4.8 | 508 | 68.93 | 167.1 (23.54) | 141.1 (28.69) |
| **Iprobenfos**  | 87 ± 8.4 | 91 ± 13.9 | 74 ± 14.4 | 84 | 12.6 | 85 ± 3.6 | 92 ± 4.4 | 82 ± 4 | 86 | 4.0 | 9.07 | 289 | 42 | 247.1 (13) | 205.2 (17) |
| **Iprodione**  | 74 ± 5.2 | 92 ± 11.5 | 95 ± 16.4 | 87 | 11.9 | 91 ± 2.4 | 100 ± 1.8 | 87 ± 3.8 | 92 | 2.8 | 0 | 330 | 91 | 101 (49) | 143 (21) |
| **Isofenphos oxon**  | 78 ± 5.3 | 97 ± 9.8 | 94 ± 20.8 | 90 | 13.6 | 90 ± 4.1 | 97 ± 2.3 | 80 ± 4.1 | 89 | 3.6 | 8.03 | 330.1 | 47 | 229 (19) | 200.9 (37) |
| **Isoprothiolane**  | 76 ± 7.5 | 101 ± 10.4 | 95 ± 19 | 91 | 13.2 | 91 ± 5.8 | 95 ± 3.2 | 83 ± 4.7 | 89 | 4.7 | 7.42 | 291 | 50 | 231 (30) | 189 (30) |
| **Isoproturon**  | 71 ± 5.4 | 94 ± 9.2 | 90 ± 19.2 | 85 | 12.7 | 90 ± 2.9 | 97 ± 3.4 | 88 ± 3.5 | 92 | 3.3 | 5.39 | 207.3 | 87 | 72 (33) | 165.2 (19) |
| **Isoxaben**  | 73 ± 6 | 93 ± 9.5 | 103 ± 14.7 | 90 | 10.7 | 84 ± 5.6 | 98 ± 2.7 | 82 ± 3.6 | 88 | 4.1 | 7.41 | 333 | 51 | 107 (85) | 165.1 (25) |
| **Karbutilate**  | 73 ± 4.1 | 99 ± 10.2 | 90 ± 16.7 | 87 | 11.6 | 87 ± 1.8 | 95 ± 2.6 | 89 ± 2.5 | 91 | 2.3 | 3.44 | 280.4 | 82 | 181.1 (17) | 72.1 (55) |
| **Lenacil**  | 75 ± 4.8 | 94 ± 11.6 | 92 ± 16.9 | 87 | 12.1 | 91 ± 3.4 | 96 ± 3.1 | 87 ± 5.4 | 91 | 4.1 | 5.18 | 235.3 | 61 | 153.2 (23) | 136.2 (43) |
| **Linuron**  | 72 ± 6.6 | 93 ± 10 | 94 ± 17.2 | 87 | 12.1 | 86 ± 4.2 | 97 ± 1.1 | 85 ± 2.9 | 89 | 3.0 | 6.58 | 249.1 | 55 | 182.1 (20) | 160 (20) |
| **Lufenuron**  | 86 ± 10.8 | 90 ± 12.8 | 90 ± 13.7 | 89 | 12.5 | 91 ± 7.8 | 96 ± 5.1 | 78 ± 5.7 | 88 | 6.3 | 11.6 | 511.1 | 81 | 158.1 (27) | 141.2 (67) |
| **Malaoxon**  | 78 ± 4.4 | 102 ± 11.8 | 95 ± 16.8 | 92 | 12.1 | 93 ± 3.2 | 99 ± 2.4 | 87 ± 2.1 | 93 | 2.6 | 3.64 | 315 | 71 | 127.1 (17) | 99 (35) |
| **Malathion**  | 71 ± 7.5 | 105 ± 11.1 | 113 ± 18.9 | 96 | 13.4 | 94 ± 5.8 | 101 ± 3.7 | 79 ± 5.4 | 92 | 5.1 | 7.47 | 331 | 61 | 127.1 (17) | 285 (11) |
| **Mandipropamid**  | 73 ± 3.2 | 100 ± 10.1 | 103 ± 17.9 | 92 | 12.0 | 91 ± 3.3 | 105 ± 2.1 | 90 ± 2.4 | 96 | 2.6 | 7.44 | 412.3 | 82 | 356.1 (15) | 328.1 (19) |
| **Mecarbam**  | 71 ± 9.9 | 98 ± 11 | 93 ± 16.7 | 87 | 12.9 | 92 ± 3.1 | 99 ± 5.6 | 87 ± 1.7 | 93 | 3.8 | 8.24 | 330.2 | 27 | 227.1 (13) | 96.9 (55) |
| **Mefenacet**  | 77 ± 5.7 | 98 ± 8.5 | 109 ± 18 | 95 | 12.0 | 91 ± 4.3 | 97 ± 4.4 | 77 ± 2.3 | 88 | 3.8 | 7.8 | 299.2 | 62 | 148.1 (21) | 120.1 (35) |
| **Mefenpyr diethyl**  | 72 ± 7.7 | 88 ± 7.6 | 93 ± 18.7 | 84 | 12.5 | 90 ± 4.6 | 96 ± 1.7 | 81 ± 3.7 | 89 | 3.6 | 9.71 | 373 | 92 | 160 (59) | 327 (23) |
| **Mepanipyrim**  | 72 ± 7.3 | 94 ± 9.1 | 97 ± 18.6 | 88 | 12.7 | 88 ± 3.9 | 99 ± 1.3 | 85 ± 3.2 | 91 | 3.0 | 7.94 | 224 | 61 | 106 (35) | 77.1 (59) |
| **Mepronil**  | 78 ± 5.4 | 102 ± 7.9 | 101 ± 16.8 | 94 | 11.2 | 92 ± 3.6 | 103 ± 1.9 | 86 ± 3.1 | 94 | 3.0 | 7.49 | 270.3 | 67 | 119.1 (33) | 91.1 (61) |
| **Mesosulfuron-Me** | 87 ± 8 | 86 ± 5.9 | 89 ± 15.1 | 88 | 10.4 | 75 ± 5.6 | 92 ± 3.3 | 82 ± 2.4 | 83 | 4.0 | 5.2 | 504.1 | 74.89 | 182.1 (29.95) | 306.2 (30.25) |
| **Metaflumizone**  | 75 ± 8.1 | 90 ± 11.4 | 93 ± 15.1 | 86 | 11.9 | 89 ± 3.7 | 99 ± 1.5 | 83 ± 5.2 | 90 | 3.8 | 11.5 | 507 | 141 | 286.9 (35) | 178 (33) |
| **Metalaxyl**  | 95 ± 3 | 96 ± 5.5 | 97 ± 16.7 | 96 | 10.3 | 89 ± 3.7 | 95 ± 2 | 83 ± 4.2 | 89 | 3.4 | 5.5 | 280 | 71 | 160 (31) | 220.2 (20) |
| **Metalaxyl-M-1** | 88 ± 5.7 | 98 ± 6.2 | 93 ± 18 | 93 | 11.5 | 87 ± 2.5 | 99 ± 2.9 | 85 ± 2.2 | 90 | 2.5 | 5.6 | 280 | 72 | 248.2 (14.32) | 220.1 (18.92) |
| **Metamitron**  | 74 ± 10.3 | 88 ± 10.6 | 84 ± 14.7 | 82 | 12.0 | 86 ± 2.9 | 92 ± 3.4 | 88 ± 3.8 | 89 | 3.4 | 1.61 | 203 | 86 | 104 (33) | 175.1 (23) |
| **Metazachlor**  | 70 ± 4.9 | 91 ± 9.5 | 87 ± 18.2 | 83 | 12.2 | 90 ± 1.8 | 97 ± 1.3 | 89 ± 4 | 92 | 2.6 | 5.27 | 278.3 | 22 | 134 (29) | 210 (15) |
| **Metconazole**  | 76 ± 9.7 | 95 ± 12.7 | 99 ± 16.9 | 90 | 13.4 | 85 ± 5.9 | 100 ± 4.4 | 83 ± 2.4 | 89 | 4.5 | 9.8 | 320 | 142 | 125 (61) | 70.1 (45) |
| **Methabenzthiazuron**  | 74 ± 2.6 | 98 ± 10.7 | 97 ± 17.8 | 89 | 12.1 | 89 ± 2.6 | 98 ± 2.3 | 87 ± 4.5 | 91 | 3.3 | 4.97 | 222.1 | 71 | 165.2 (21) | 150.3 (41) |
| **Methacrifos**  | 77 ± 5.3 | 93 ± 12 | 88 ± 17.9 | 86 | 12.8 | 88 ± 4.1 | 101 ± 1.6 | 89 ± 3.6 | 92 | 3.3 | 6 | 241 | 57 | 125 (33) | 209.1 (13) |
| **Methiocarb**  | 77 ± 4.6 | 95 ± 9.6 | 93 ± 15.9 | 88 | 11.0 | 91 ± 3 | 97 ± 1.3 | 85 ± 3.8 | 91 | 2.9 | 6.87 | 226.1 | 61 | 169.2 (13) | 121.1 (23) |
| **Methiocarb sulfone**  | 76 ± 5.3 | 106 ± 11.3 | 107 ± 18.9 | 96 | 13.1 | 90 ± 2.8 | 98 ± 1.9 | 84 ± 2.8 | 91 | 2.6 | 1.49 | 258.1 | 68 | 122.1 (25) | 201.2 (13) |
| **Methomyl**  | 90 ± 5.9 | 106 ± 10.9 | 92 ± 20.4 | 96 | 12.4 | 108 ± 3.1 | 100 ± 2.3 | 86 ± 6.8 | 98 | 4.5 | 1.1 | 163.2 | 42 | 106 (15) | 88.1 (13) |
| **Methoprotryne**  | 80 ± 4.4 | 98 ± 8.5 | 92 ± 14.5 | 90 | 10.0 | 90 ± 5.4 | 97 ± 3.3 | 86 ± 3.5 | 91 | 4.2 | 6.52 | 272 | 20 | 240 (25) | 170 (37) |
| **Metobromuron**  | 75 ± 5.3 | 93 ± 10.6 | 94 ± 17.3 | 87 | 12.1 | 88 ± 3.7 | 96 ± 1.9 | 85 ± 3.6 | 90 | 3.2 | 4.87 | 259.2 | 52 | 170.2 (25) | 148.1 (21) |
| **Metolachlor**  | 83 ± 6.4 | 100 ± 10.6 | 111 ± 14.7 | 98 | 11.1 | 89 ± 1.9 | 97 ± 2.1 | 76 ± 2.2 | 87 | 2.1 | 8.48 | 284.2 | 76 | 252.2 (21) | 176 (33) |
| **Metosulam**  | 73 ± 7.2 | 95 ± 11.5 | 93 ± 12.9 | 87 | 10.8 | 89 ± 4.5 | 93 ± 2.2 | 83 ± 2.3 | 88 | 3.2 | 3.69 | 418 | 100 | 175 (50) | 140 (69) |
| **Metoxuron**  | 72 ± 4.3 | 99 ± 11.8 | 97 ± 17.3 | 89 | 12.4 | 85 ± 2.6 | 93 ± 1.8 | 81 ± 3 | 86 | 2.5 | 2.24 | 229 | 76 | 156.1 (29) | 72 (37) |
| **Metribuzin**  | 74 ± 6.4 | 95 ± 10.4 | 94 ± 17.4 | 88 | 12.3 | 90 ± 2.1 | 95 ± 1.5 | 85 ± 4 | 90 | 2.7 | 0 | 215.1 | 81 | 187.2 (21) | 126.1 (23) |
| **Metsulfuron methyl**  | 71 ± 7.6 | 95 ± 10.8 | 93 ± 14.2 | 86 | 11.2 | 90 ± 6 | 99 ± 2.3 | 90 ± 3.8 | 93 | 4.3 | 2.65 | 382 | 76 | 167 (21) | 199 (31) |
| **Mevinphos**  | 75 ± 4.9 | 96 ± 11.9 | 94 ± 17 | 88 | 12.3 | 92 ± 2.2 | 96 ± 1.5 | 85 ± 3.5 | 91 | 2.6 | 1.89 | 225.2 | 52 | 127.1 (21) | 193 (11) |
| **Monocrotophos \***  | 68 ± 2.3 | 93 ± 9.7 | 88 ± 35.1 | 83 | 21.1 | 88 ± 4.3 | 88 ± 2.3 | 83 ± 7.6 | 86 | 5.2 | 1.1 | 224 | 60 | 127 (20) | 98 (20) |
| **Monolinuron**  | 72 ± 4.2 | 90 ± 11.2 | 87 ± 17.1 | 83 | 12.0 | 90 ± 4.1 | 98 ± 2 | 89 ± 2.8 | 92 | 3.1 | 4.31 | 215.2 | 42 | 126 (25) | 148.1 (21) |
| **Monuron**  | 75 ± 4.2 | 93 ± 10.8 | 92 ± 18.5 | 87 | 12.6 | 89 ± 3.4 | 92 ± 2.5 | 87 ± 6.1 | 89 | 4.3 | 3.08 | 199 | 37 | 72 (29) | 125.9 (33) |
| **Myclobutanil**  | 71 ± 8.7 | 87 ± 9.7 | 90 ± 17 | 83 | 12.3 | 91 ± 5.8 | 102 ± 3.5 | 89 ± 4.6 | 94 | 4.7 | 7.73 | 289.1 | 71 | 125.2 (39) | 69.9 (33) |
| **Napropamide**  | 73 ± 3.6 | 92 ± 10.2 | 89 ± 16.2 | 85 | 11.2 | 93 ± 2.3 | 96 ± 2.2 | 85 ± 2.7 | 91 | 2.4 | 8.34 | 272.1 | 71 | 129.3 (21) | 171 (23) |
| **Neburon**  | 71 ± 2.8 | 98 ± 12.7 | 102 ± 14.5 | 90 | 11.2 | 88 ± 3.8 | 95 ± 2.9 | 78 ± 2.3 | 87 | 3.1 | 8.92 | 275 | 81 | 88.1 (21) | 114.1 (19) |
| **Nicosulfuron**  | 70 ± 3.1 | 95 ± 7.8 | 97 ± 15.1 | 87 | 10.0 | 87 ± 5.9 | 98 ± 3 | 88 ± 3.7 | 91 | 4.4 | 6.3 | 411 | 62 | 182 (31) | 213 (23) |
| **Novaluron**  | 72 ± 2.29 | 91 ± 12.8 | 87 ± 14.9 | 82 | 12.2 | 96 ± 3 | 101 ± 4.1 | 84 ± 5.6 | 93 | 4.4 | 10.9 | 493.1 | 162 | 141.1 (65) | 158 (29) |
| **Nuarimol**  | 75 ± 7.5 | 97 ± 9.4 | 86 ± 12.9 | 86 | 10.1 | 85 ± 4.5 | 101 ± 2.7 | 89 ± 5.2 | 92 | 4.3 | 6.81 | 315 | 86 | 252.1 (31) | 207.1 (65) |
| **Ofurace**  | 77 ± 4.1 | 104 ± 8.5 | 100 ± 17 | 94 | 11.2 | 89 ± 2.8 | 97 ± 2.7 | 84 ± 2.9 | 90 | 2.8 | 3.52 | 282.1 | 84 | 254 (17) | 160 (29) |
| **Omethoate \*** | 66 ± 3.6 | 75 ± 8.8 | 67 ± 37.9 | 69 | 22.5 | 85 ± 5.8 | 82 ± 3 | 72 ± 6.7 | 80 | 5.4 | 0.94 | 214 | 50 | 125 (29) | 109 (41) |
| **Oxadiargyl**  | 77 ± 15.2 | 104 ± 9.5 | 111 ± 14.7 | 97 | 13.4 | 84 ± 8.7 | 102 ± 5.6 | 81 ± 4.6 | 89 | 6.5 | 9.82 | 340.8 | 172 | 151 (33) | 223.1 (21) |
| **Oxadiazon**  | 77 ± 4.2 | 102 ± 11.1 | 111 ± 13.5 | 97 | 10.4 | 93 ± 4.7 | 102 ± 4.8 | 81 ± 4.6 | 92 | 4.7 | 11.5 | 345.3 | 172 | 303 (17) | 220 (29) |
| **Oxamyl**  | 79 ± 6.94 | 71 ± 11.7 | 70 ± 19.2 | 73 | 13.6 | 100 ± 10.6 | 86 ± 15.4 | 75 ± 16.2 | 87 | 14.3 | 0.98 | 237.1 | 63 | 90.1 (11) | 72 (21) |
| **Oxasulfuron**  | 80 ± 6.1 | 102 ± 11.2 | 105 ± 14.5 | 96 | 11.1 | 82 ± 4.6 | 87 ± 1.2 | 86 ± 10.6 | 85 | 6.7 | 2.69 | 407 | 77 | 150 (39) | 107 (83) |
| **Oxycarboxin**  | 73 ± 4.7 | 108 ± 10.3 | 106 ± 12.8 | 96 | 9.9 | 90 ± 2.5 | 100 ± 2.4 | 85 ± 2.8 | 92 | 2.6 | 1.77 | 268 | 60 | 175 (20) | 147 (35) |
| **Oxydemeton methyl \*** | 66 ± 3.41 | 91 ± 10.4 | 82 ± 37.5 | 79 | 22.6 | 87 ± 5.3 | 86 ± 1.5 | 79 ± 5.7 | 84 | 4.6 | 1.01 | 247 | 62 | 169 (21) | 108.9 (37) |
| **Paclobutrazol**  | 72 ± 9.1 | 101 ± 10.9 | 104 ± 14.1 | 92 | 11.6 | 91 ± 8.8 | 96 ± 1.9 | 83 ± 5.8 | 90 | 6.2 | 7.4 | 294 | 76 | 70 (69) | 125 (55) |
| **Paraoxon ethyl**  | 72 ± 3.7 | 106 ± 8.4 | 104 ± 15.3 | 94 | 10.3 | 90 ± 2.7 | 97 ± 1.2 | 83 ± 3.2 | 90 | 2.5 | 5.05 | 276.2 | 72 | 219.9 (23) | 94 (53) |
| **Paraoxon methyl**  | 70 ± 4.2 | 96 ± 12.1 | 96 ± 17.6 | 87 | 12.5 | 91 ± 3.7 | 98 ± 2.3 | 85 ± 1.7 | 91 | 2.7 | 2.42 | 248 | 112 | 202.2 (27) | 90 (37) |
| **Parathion ethyl**  | 70 ± 9.4 | 87 ± 17 | 108 ± 16 | 88 | 14.5 | 116 ± 4.7 | 95 ± 6.3 | 73 ± 13.6 | 95 | 9.1 | 8.94 | 292 | 89 | 236.1 (21) | 263.9 (15) |
| **Parathion methyl \*** | 123 ± 20.6 | 87 ± 12 | 115 ± 15.7 | 108 | 16.5 | 85 ± 11.7 | 126 ± 18.1 | 96 ± 19.1 | 102 | 16.6 | 6.64 | 263.9 | 81 | 232.1 (23) | 125 (25) |
| **Penconazole**  | 71 ± 11.6 | 90 ± 11.9 | 91 ± 16.8 | 83 | 12.8 | 90 ± 3.6 | 96 ± 2.5 | 83 ± 1.8 | 90 | 2.8 | 9.17 | 284 | 55 | 159 (35) | 70 (31) |
| **Permethrin**  | 70 ± 10.6 | 79 ± 13 | 83 ± 17.4 | 77 | 13.9 | 92 ± 8.3 | 98 ± 3.9 | 89 ± 4.4 | 93 | 5.9 | 10.3 | 408 | 81 | 153 (63) | 183 (43) |
| **Phenmedipham**  | 73 ± 4.6 | 88 ± 12.7 | 94 ± 18.1 | 85 | 13.0 | 89 ± 2.9 | 96 ± 2.4 | 87 ± 7 | 91 | 4.6 | 6.19 | 301.3 | 102 | 136 (27) | 168.1 (13) |
| **Phenthoate**  | 76 ± 8 | 95 ± 9.7 | 107 ± 17.1 | 93 | 12.2 | 96 ± 2.2 | 100 ± 2.5 | 82 ± 3.6 | 93 | 2.8 | 9.02 | 321 | 60 | 247.2 (20) | 79 (50) |
| **Phorate**  | 96 ± 18.5 | 78 ± 18.7 | 81 ± 20.6 | 85 | 20.0 | 85 ± 8 | 104 ± 4.8 | 93 ± 9 | 94 | 7.5 | 9.82 | 261.2 | 32 | 199 (11) | 75 (15) |
| **Phorate sulfone**  | 74 ± 4.8 | 94 ± 12.2 | 104 ± 17.3 | 91 | 12.5 | 82 ± 5.3 | 93 ± 4.7 | 81 ± 5.7 | 85 | 5.2 | 5.06 | 293.1 | 62 | 170.9 (17) | 96.9 (43) |
| **Phorate sulfoxide**  | 74 ± 4.1 | 93 ± 10.7 | 94 ± 19 | 87 | 12.8 | 92 ± 2.4 | 96 ± 1.4 | 84 ± 3.8 | 91 | 2.7 | 4.81 | 277.1 | 27 | 97 (45) | 199 (15) |
| **Phosalone**  | 70 ± 6.9 | 100 ± 9.7 | 103 ± 14.7 | 91 | 10.9 | 91 ± 3.5 | 99 ± 1.1 | 80 ± 4.8 | 90 | 3.5 | 9.89 | 367.9 | 71 | 182 (21) | 111 (50) |
| **Phosphamidon**  | 70 ± 4.6 | 101 ± 11.8 | 94 ± 15.4 | 88 | 11.5 | 91 ± 2.9 | 99 ± 1.6 | 92 ± 3.8 | 94 | 2.9 | 2.49 | 300 | 74 | 127.1 (27) | 174 (19) |
| **Phoxim**  | 70 ± 7 | 83 ± 10.6 | 92 ± 19.2 | 81 | 13.3 | 89 ± 4.6 | 97 ± 1.8 | 84 ± 2.3 | 90 | 3.2 | 9.75 | 299 | 52 | 153 (13) | 129 (17) |
| **Picolinafen**  | 70 ± 4.8 | 93 ± 10.7 | 95 ± 13.2 | 86 | 10.2 | 88 ± 6 | 93 ± 2.1 | 80 ± 2.8 | 87 | 4.0 | 11.3 | 377.1 | 76 | 145 (69) | 238 (63) |
| **Pinoxaden-1** | 80 ± 5.4 | 81 ± 8 | 110 ± 15.5 | 90 | 10.5 | 74 ± 2.8 | 97 ± 1.6 | 72 ± 2.7 | 81 | 2.5 | 10.1 | 401.1 | 66.17 | 317.2 (28.35) | 289.2 (50.87) |
| **Piperonyl butoxide**  | 82 ± 9.3 | 95 ± 5.3 | 90 ± 18.1 | 89 | 12.1 | 90 ± 9.6 | 88 ± 13.9 | 79 ± 7.1 | 86 | 10.6 | 11.5 | 356.2 | 56 | 177.2 (19) | 119 (45) |
| **Pirimicarb**  | 74 ± 4.8 | 99 ± 11.8 | 93 ± 17.9 | 89 | 12.7 | 91 ± 3.2 | 97 ± 2.5 | 90 ± 2.4 | 92 | 2.7 | 4.54 | 239.1 | 56 | 72.1 (31) | 182.3 (20) |
| **Pirimicarb desmethyl**  | 72 ± 2.9 | 100 ± 9.7 | 89 ± 14.4 | 87 | 10.2 | 89 ± 1.8 | 95 ± 1.7 | 87 ± 3.7 | 90 | 2.6 | 2.07 | 225.1 | 52 | 168.2 (21) | 72.1 (31) |
| **Pirimiphos ethyl**  | 76 ± 5.2 | 96 ± 9.7 | 113 ± 13.9 | 95 | 10.2 | 82 ± 3.9 | 97 ± 1.2 | 76 ± 2.3 | 85 | 2.7 | 11.4 | 334.1 | 61 | 198.1 (29) | 182.3 (35) |
| **Pirimiphos methyl**  | 73 ± 5.3 | 97 ± 8.7 | 94 ± 14 | 88 | 10.0 | 90 ± 4.3 | 97 ± 3.7 | 85 ± 2.7 | 91 | 3.6 | 9.93 | 306.1 | 64 | 164.1 (29) | 108 (43) |
| **Prochloraz**  | 76 ± 7.4 | 97 ± 10.6 | 111 ± 15.1 | 95 | 11.5 | 90 ± 4.2 | 95 ± 3.7 | 81 ± 2.3 | 89 | 3.5 | 9.84 | 376 | 56 | 308.1 (17) | 266.1 (21) |
| **Profenofos**  | 70 ± 4.7 | 96 ± 9.4 | 96 ± 15 | 87 | 10.6 | 91 ± 3 | 97 ± 1.2 | 86 ± 3.4 | 91 | 2.7 | 11 | 372.9 | 86 | 302.9 (25) | 144.1 (50) |
| **Profluralin \*** | 77 ± 27.4 | 84 ± 26.7 | 90 ± 28.3 | 84 | 27.5 | 122 ± 30.2 | 98 ± 12.8 | 91 ± 14 | 104 | 20.6 | 12.31 | 348.1 | 47 | 276.1 (13) | 55.1 (31) |
| **Profoxydim Li**  | 74 ± 3.7 | 92 ± 8.6 | 87 ± 14.2 | 84 | 9.8 | 92 ± 3.7 | 105 ± 1.4 | 100 ± 4.4 | 99 | 3.4 | 12.7 | 466 | 101 | 280 (21) | 180 (31) |
| **Promecarb**  | 71 ± 4.2 | 95 ± 11.4 | 91 ± 17.5 | 86 | 12.3 | 91 ± 3.8 | 98 ± 2.7 | 87 ± 3.3 | 92 | 3.3 | 7.26 | 208.2 | 61 | 151.1 (13) | 109.1 (20) |
| **Prometon**  | 77 ± 4.5 | 94 ± 10.5 | 89 ± 16.3 | 87 | 11.5 | 92 ± 2.9 | 95 ± 3.4 | 87 ± 5.3 | 92 | 4.0 | 6.1 | 226.1 | 96 | 142.1 (33) | 184.2 (23) |
| **Prometryn**  | 75 ± 4.4 | 100 ± 9.2 | 95 ± 18 | 90 | 12.0 | 88 ± 4.4 | 98 ± 1.9 | 84 ± 2.2 | 90 | 3.0 | 7.96 | 242 | 90 | 158 (35) | 200 (35) |
| **Propachlor**  | 77 ± 5 | 94 ± 10.8 | 92 ± 17.4 | 88 | 12.2 | 92 ± 2.9 | 97 ± 1 | 87 ± 3.8 | 92 | 2.8 | 5.34 | 212.1 | 52 | 169.9 (25) | 94.1 (35) |
| **Propamocarb HCl**  | 74 ± 3.8 | 77 ± 11.2 | 73 ± 16.9 | 75 | 11.9 | 76 ± 3.8 | 75 ± 2.5 | 70 ± 5.7 | 74 | 4.2 | 1.04 | 189.2 | 56 | 102 (23) | 144.1 (20) |
| **Propanil**  | 77 ± 3.7 | 100 ± 8.9 | 99 ± 16.2 | 92 | 10.9 | 91 ± 4.1 | 98 ± 2.7 | 85 ± 3.3 | 91 | 3.4 | 6.66 | 218.1 | 62 | 162.1 (23) | 127.1 (37) |
| **Propaquizafop**  | 72 ± 4.9 | 94 ± 11.7 | 90 ± 15.1 | 86 | 11.4 | 91 ± 10.3 | 99 ± 2 | 85 ± 3.2 | 91 | 6.3 | 11.3 | 444.1 | 122 | 100.1 (31) | 299.1 (31) |
| **Propargite**  | 70 ± 16.2 | 73 ± 22.5 | 91 ± 14.4 | 78 | 18.0 | 96 ± 9.8 | 81 ± 10.6 | 72 ± 7.1 | 83 | 9.3 | 12.2 | 368.2 | 56 | 231.2 (15) | 175.1 (21) |
| **Propazine**  | 77 ± 7.1 | 98 ± 7.6 | 92 ± 18.1 | 89 | 12.0 | 93 ± 4.1 | 99 ± 1.9 | 87 ± 4.3 | 93 | 3.6 | 6.66 | 230 | 96 | 188 (25) | 146 (29) |
| **Propazine 2 hydroxy**  | 72 ± 2.88 | 88 ± 10.7 | 84 ± 12.1 | 80 | 10.0 | 79 ± 1.7 | 86 ± 3.5 | 78 ± 2 | 81 | 2.6 | 2.12 | 212 | 87 | 128 (39) | 170 (29) |
| **Propetamphos**  | 82 ± 12.5 | 107 ± 21.3 | 92 ± 23.9 | 94 | 19.8 | 89 ± 15 | 107 ± 14.6 | 91 ± 14.6 | 95 | 14.7 | 7.79 | 282 | 42 | 138 (27) | 156 (13) |
| **Propiconazol**  | 75 ± 8.9 | 92 ± 9.7 | 95 ± 16.5 | 87 | 12.2 | 89 ± 3.2 | 98 ± 2.4 | 85 ± 3.3 | 91 | 3.0 | 9.5 | 342.1 | 120 | 159 (35) | 69 (35) |
| **Propoxur**  | 75 ± 5.6 | 96 ± 12 | 96 ± 18.9 | 89 | 13.3 | 89 ± 3.7 | 97 ± 1.8 | 86 ± 3.1 | 91 | 3.0 | 3.4 | 210.1 | 35 | 111.1 (20) | 168.1 (11) |
| **Propyzamide**  | 70 ± 4.1 | 95 ± 9.5 | 95 ± 16.5 | 87 | 11.2 | 87 ± 3.3 | 97 ± 2 | 84 ± 2.7 | 89 | 2.7 | 7.37 | 256.2 | 57 | 190.1 (19) | 173 (31) |
| **Prosulfocarb**  | 73 ± 4.04 | 88 ± 10.8 | 83 ± 16 | 80 | 11.7 | 88 ± 2.2 | 97 ± 1.9 | 88 ± 3.7 | 91 | 2.7 | 10.8 | 252.3 | 71 | 128.1 (17) | 91.1 (35) |
| **Prothioconazole**  | 70 ± 14.2 | 88 ± 9.5 | 81 ± 17.6 | 80 | 14.1 | 88 ± 3.8 | 95 ± 4.8 | 88 ± 5.5 | 91 | 4.7 | 9.59 | 344 | 66 | 189 (29) | 125 (63) |
| **Prothioconazole Desthio**  | 92 ± 21.3 | 93 ± 10.9 | 97 ± 15.5 | 94 | 16.5 | 95 ± 9.4 | 97 ± 3.6 | 82 ± 3.3 | 91 | 6.1 | 9.85 | 312 | 96 | 70 (55) | 125 (61) |
| **Pymetrozine \*** | 54 ± 2.4 | 69 ± 15.9 | 67 ± 9 | 63 | 10.6 | 59 ± 4.3 | 60 ± 2.9 | 56 ± 6.2 | 58 | 4.7 | 0.99 | 218.2 | 65 | 105.1 (35) | 78.1 (53) |
| **Pyraclostrobin**  | 71 ± 5.7 | 96 ± 9.5 | 90 ± 15.5 | 86 | 11.0 | 90 ± 3.4 | 97 ± 2.1 | 83 ± 2.1 | 90 | 2.6 | 9.79 | 388 | 57 | 163 (33) | 194 (19) |
| **Pyraflufen Et**  | 73 ± 5.9 | 104 ± 9.9 | 109 ± 15.9 | 96 | 11.3 | 95 ± 4 | 100 ± 1.6 | 81 ± 2.3 | 92 | 2.8 | 9.51 | 413 | 142 | 339 (31) | 253 (47) |
| **Pyrazofos**  | 70 ± 2.63 | 90 ± 13.5 | 88 ± 16.2 | 82 | 12.6 | 95 ± 4.8 | 103 ± 3.1 | 87 ± 2.3 | 95 | 3.5 | 9.92 | 374 | 120 | 222 (35) | 194.2 (50) |
| **Pyrazosulfuron ethyl**  | 73 ± 10.1 | 106 ± 11.5 | 99 ± 14.3 | 93 | 12.1 | 90 ± 3.7 | 98 ± 2.4 | 88 ± 3.3 | 92 | 3.2 | 7.49 | 415 | 96 | 182 (25) | 139 (61) |
| **Pyrethrins**  | 85 ± 10 | 78 ± 11.9 | 87 ± 14.6 | 83 | 12.3 | 84 ± 8.6 | 103 ± 7.2 | 96 ± 8.2 | 94 | 8.0 | 12.4 | 329 | 111 | 161 (13) | 133 (29) |
| **Pyridaben**  | 74 ± 14.2 | 108 ± 11.1 | 93 ± 14.4 | 92 | 13.3 | 85 ± 7.5 | 95 ± 5.8 | 87 ± 6.9 | 89 | 6.8 | 12.9 | 365.1 | 64 | 309.1 (19) | 147 (31) |
| **Pyridaphenthion**  | 75 ± 6.2 | 93 ± 6.3 | 102 ± 17.1 | 90 | 11.1 | 95 ± 5.4 | 100 ± 3.2 | 83 ± 3.4 | 93 | 4.1 | 7.8 | 341 | 80 | 205 (35) | 189.3 (31) |
| **Pyrifenox**  | 74 ± 7 | 101 ± 9.1 | 101 ± 20 | 92 | 13.3 | 89 ± 2.5 | 104 ± 0.9 | 88 ± 3.6 | 94 | 2.6 | 8.01 | 297 | 81 | 93 (27) | 93.1 (31) |
| **Pyrimethanil**  | 71 ± 3.7 | 88 ± 8.8 | 89 ± 15.7 | 83 | 10.6 | 91 ± 3.7 | 101 ± 2.5 | 90 ± 3.7 | 94 | 3.4 | 6.63 | 200 | 125 | 107 (33) | 82 (33) |
| **Pyriproxyfen**  | 74 ± 4 | 93 ± 9.9 | 104 ± 15.5 | 90 | 10.9 | 86 ± 5.6 | 96 ± 2.2 | 80 ± 2.9 | 87 | 3.9 | 11.6 | 322.2 | 50 | 96 (20) | 227.3 (20) |
| **Pyroxsulam**  | 73 ± 7.9 | 87 ± 11 | 87 ± 13.5 | 82 | 11.0 | 88 ± 7.6 | 95 ± 3.5 | 85 ± 4.1 | 90 | 5.4 | 3.15 | 435 | 96 | 124 (65) | 195 (39) |
| **Quinalphos**  | 72 ± 2.8 | 82 ± 10.2 | 81 ± 17.8 | 78 | 12.0 | 88 ± 4.6 | 101 ± 2.2 | 88 ± 4.2 | 92 | 3.8 | 8.94 | 299.2 | 67 | 96.9 (43) | 163 (33) |
| **Quinclorac-methyl-ester** | 79 ± 7.9 | 80 ± 19.9 | 97 ± 20.7 | 85 | 18.8 | 89 ± 5.7 | 96 ± 2.5 | 83 ± 3.8 | 89 | 4.2 | 6.6 | 256.1 | 80 | 224 (19.29) | 196 (41.27) |
| **Quizalofop ethyl**  | 71 ± 5.9 | 98 ± 9.7 | 95 ± 13.6 | 88 | 10.2 | 93 ± 2.6 | 101 ± 0.9 | 87 ± 2.6 | 93 | 2.2 | 11 | 373 | 120 | 299 (20) | 255 (50) |
| **Rimsulfuron**  | 81 ± 4.3 | 107 ± 8.8 | 106 ± 15 | 98 | 10.3 | 92 ± 3.9 | 93 ± 2.4 | 84 ± 3.8 | 90 | 3.4 | 3.84 | 432 | 91 | 182 (31) | 325 (19) |
| **Rotenone**  | 70 ± 3.93 | 92 ± 10.6 | 87 ± 16 | 83 | 11.2 | 96 ± 3.7 | 98 ± 2.1 | 80 ± 3.8 | 91 | 3.3 | 8.74 | 395.1 | 96 | 192.1 (31) | 213.2 (29) |
| **Sebuthylazine**  | 73 ± 7 | 93 ± 8.1 | 94 ± 18.1 | 87 | 12.1 | 90 ± 4.1 | 97 ± 2.5 | 85 ± 4.4 | 91 | 3.8 | 6.96 | 230.1 | 66 | 174.2 (25) | 104.1 (41) |
| **Sebuthylazine desethyl**  | 72 ± 4.8 | 98 ± 10.1 | 95 ± 17.4 | 88 | 11.9 | 87 ± 4.5 | 90 ± 1.8 | 90 ± 10.1 | 89 | 6.5 | 3.05 | 202.1 | 71 | 145.9 (25) | 79.1 (37) |
| **Simazine**  | 73 ± 6.1 | 98 ± 10.3 | 98 ± 18.6 | 90 | 12.8 | 91 ± 3.3 | 95 ± 1.6 | 84 ± 3.3 | 90 | 2.8 | 3.41 | 202.2 | 77 | 131.9 (27) | 124.3 (25) |
| **Simetryn**  | 73 ± 6 | 92 ± 10 | 93 ± 16.9 | 86 | 11.9 | 89 ± 3.2 | 94 ± 3.4 | 84 ± 5.1 | 89 | 4.0 | 4.89 | 214 | 87 | 144 (33) | 124.2 (27) |
| **Spinetoram**  | 79 ± 20.4 | 98 ± 9 | 77 ± 15.4 | 85 | 17.0 | 92 ± 11.1 | 104 ± 2.2 | 103 ± 8.6 | 99 | 8.2 | 11.1 | 748 | 31 | 98 (89) | 142 (39) |
| **Spinosad A** | 71 ± 10.1 | 83 ± 11.8 | 79 ± 15.7 | 78 | 12.8 | 89 ± 6.4 | 101 ± 1.8 | 93 ± 2.8 | 95 | 4.1 | 11 | 746.4 | 86 | 142.2 (41) | 98.2 (105) |
| **Spinosad D** | 74 ± 5.3 | 84 ± 9.9 | 82 ± 16 | 80 | 11.3 | 84 ± 4.1 | 100 ± 1.4 | 93 ± 4.1 | 92 | 3.5 | 10.3 | 732.4 | 86 | 98.2 (93) | 142.2 (41) |
| **Spiroxamine**  | 71 ± 5.3 | 88 ± 12 | 88 ± 14.3 | 83 | 11.2 | 85 ± 4.4 | 100 ± 1.9 | 91 ± 2.5 | 92 | 3.1 | 7.3 | 298.4 | 81 | 144.2 (27) | 100.2 (43) |
| **Sulfotep**  | 70 ± 5.28 | 87 ± 9.6 | 86 ± 15.3 | 80 | 11.1 | 92 ± 3.2 | 100 ± 1.8 | 86 ± 2.7 | 93 | 2.6 | 9.22 | 323 | 71 | 171.1 (21) | 115 (39) |
| **Tebuconazole**  | 70 ± 8.5 | 89 ± 10.5 | 98 ± 17.6 | 85 | 12.8 | 93 ± 4.4 | 98 ± 3.4 | 81 ± 5 | 91 | 4.3 | 9.33 | 308 | 120 | 70.1 (35) | 125 (51) |
| **Tebufenozide \*** | 111 ± 22.9 | 67 ± 23.6 | 84 ± 29.5 | 88 | 25.5 | 72 ± 27.5 | 152 ± 14.2 | 104 ± 17.3 | 109 | 20.5 | 8.93 | 353.2 | 61 | 133.2 (23) | 297.2 (15) |
| **Tebufenpyrad**  | 70 ± 9 | 86 ± 12.3 | 88 ± 14.4 | 81 | 12.1 | 86 ± 8.9 | 98 ± 1.7 | 87 ± 2.8 | 91 | 5.5 | 11.3 | 334.2 | 71 | 117 (47) | 145 (37) |
| **Tebutam**  | 70 ± 5.6 | 91 ± 11.2 | 91 ± 16 | 84 | 11.7 | 96 ± 4.2 | 98 ± 1.6 | 85 ± 3.4 | 93 | 3.2 | 8.49 | 234 | 61 | 192 (19) | 91 (29) |
| **Tebuthiuron**  | 79 ± 4.9 | 102 ± 9.5 | 98 ± 16.3 | 93 | 11.3 | 89 ± 3.5 | 92 ± 3.5 | 83 ± 2.9 | 88 | 3.3 | 3.74 | 229.3 | 62 | 172.1 (25) | 116.2 (37) |
| **Terbumeton**  | 78 ± 4.5 | 92 ± 6.8 | 92 ± 16.3 | 88 | 10.5 | 88 ± 3 | 99 ± 3.5 | 87 ± 5.1 | 91 | 3.9 | 6.46 | 226 | 67 | 114 (41) | 170.2 (23) |
| **Terbutryn**  | 71 ± 7.1 | 91 ± 8.9 | 87 ± 17.2 | 83 | 11.9 | 88 ± 3.5 | 98 ± 3.5 | 87 ± 3.1 | 91 | 3.4 | 8.18 | 242.2 | 67 | 96 (47) | 186.1 (23) |
| **Tetrachlorvinphos**  | 71 ± 6.1 | 100 ± 7 | 103 ± 15.2 | 91 | 10.3 | 89 ± 3.3 | 97 ± 1.3 | 81 ± 3 | 89 | 2.7 | 8.98 | 366.9 | 86 | 127.1 (21) | 241 (31) |
| **Tetraconazole**  | 72 ± 10.6 | 93 ± 18.6 | 92 ± 19.4 | 86 | 16.7 | 106 ± 6.9 | 94 ± 1.6 | 84 ± 4.3 | 95 | 4.8 | 8.4 | 372 | 110 | 70 (35) | 159 (35) |
| **Tetramethrin NH4**  | 82 ± 11.4 | 110 ± 12.8 | 124 ± 13.8 | 105 | 12.7 | 87 ± 7.2 | 94 ± 2.7 | 74 ± 4.4 | 85 | 5.1 | 11.2 | 332.2 | 161 | 164.1 (31) | 135 (25) |
| **Thiabendazole**  | 70 ± 3.05 | 97 ± 10.6 | 86 ± 13.8 | 84 | 10.1 | 81 ± 1.9 | 84 ± 2.4 | 84 ± 4.9 | 83 | 3.4 | 2.17 | 202.1 | 90 | 175 (35) | 131 (50) |
| **Thiacloprid**  | 72 ± 4.1 | 106 ± 11.2 | 104 ± 15.8 | 94 | 11.4 | 88 ± 3.6 | 95 ± 2.3 | 83 ± 3.4 | 89 | 3.2 | 1.71 | 253.2 | 50 | 126 (20) | 186 (20) |
| **Thiamethoxam**  | 72 ± 4.09 | 101 ± 7.4 | 99 ± 18.1 | 90 | 9.8 | 86 ± 4.1 | 90 ± 2.6 | 83 ± 6.8 | 86 | 4.8 | 1.09 | 292 | 35 | 211 (20) | 181.2 (35) |
| **Thifensulfuron methyl**  | 75 ± 9.2 | 96 ± 13.4 | 92 ± 12.7 | 88 | 11.9 | 89 ± 5.5 | 98 ± 2.6 | 89 ± 3.8 | 92 | 4.2 | 2.49 | 388 | 101 | 167 (23) | 205 (39) |
| **Thiobencarb**  | 70 ± 7.3 | 88 ± 11.9 | 84 ± 15.7 | 80 | 12.1 | 89 ± 5.6 | 96 ± 2.6 | 86 ± 3.4 | 90 | 4.1 | 9.97 | 258.3 | 72 | 125 (25) | 89 (69) |
| **Thiocyclam \***  | 123 ± 26.9 | 74 ± 12.4 | 64 ± 11.2 | 87 | 18.3 | 72 ± 15.1 | 72 ± 2.2 | 66 ± 5.1 | 70 | 9.3 | 1.07 | 182 | 60 | 137 (25) | 73 (31) |
| **Thiophanate methyl**  | 75 ± 6 | 96 ± 9.7 | 87 ± 19.9 | 86 | 14.2 | 80 ± 3.1 | 87 ± 2.4 | 83 ± 6 | 84 | 4.2 | 3.23 | 343 | 72 | 151 (27) | 192 (27) |
| **Tolclofos methyl**  | 70 ± 9.36 | 90 ± 11.4 | 91 ± 14.4 | 83 | 11.4 | 88 ± 5 | 100 ± 2.4 | 84 ± 3.3 | 91 | 3.7 | 9.84 | 301 | 101 | 175 (35) | 269 (27) |
| **Tolfenpyrad**  | 76 ± 8.5 | 93 ± 11.4 | 86 ± 15.4 | 85 | 12.1 | 93 ± 4.5 | 96 ± 1.8 | 85 ± 2.8 | 91 | 3.3 | 11.4 | 384.2 | 121 | 145 (39) | 154 (59) |
| **Tralkoxydim**  | 75 ± 5.2 | 96 ± 9.2 | 93 ± 15 | 88 | 10.6 | 90 ± 3.6 | 102 ± 2.1 | 88 ± 3.3 | 93 | 3.1 | 11.7 | 330.3 | 112 | 138.1 (29) | 284.2 (17) |
| **Tri allate**  | 76 ± 4.7 | 76 ± 11.6 | 79 ± 16.6 | 77 | 12.0 | 92 ± 4.7 | 99 ± 2.1 | 92 ± 3.3 | 94 | 3.5 | 11.9 | 304 | 61 | 143 (45) | 145 (45) |
| **Triadimefon**  | 77 ± 9.8 | 99 ± 6.9 | 87 ± 15.2 | 88 | 11.2 | 89 ± 5.4 | 97 ± 3.4 | 91 ± 4.4 | 92 | 4.5 | 7.65 | 294.1 | 70 | 225 (20) | 197 (20) |
| **Triadimenol**  | 80 ± 12.8 | 91 ± 7.7 | 82 ± 19.6 | 84 | 14.2 | 91 ± 9.2 | 103 ± 4.3 | 93 ± 2.8 | 96 | 6.1 | 7.65 | 296 | 41 | 227 (15) | 70.1 (19) |
| **Triasulfuron**  | 73 ± 7.2 | 93 ± 12 | 91 ± 14.7 | 86 | 11.7 | 88 ± 4.6 | 95 ± 1.5 | 94 ± 6.1 | 92 | 4.5 | 2.87 | 402.1 | 84 | 167.1 (25) | 141 (39) |
| **Triazophos**  | 84 ± 5.1 | 99 ± 9.9 | 113 ± 19.4 | 98 | 12.9 | 92 ± 3.6 | 97 ± 3 | 77 ± 3.2 | 89 | 3.3 | 7.9 | 314.2 | 60 | 162 (20) | 119 (50) |
| **Triazoxide**  | 71 ± 8.5 | 92 ± 7.9 | 92 ± 20.3 | 85 | 13.5 | 89 ± 4.5 | 91 ± 2.3 | 85 ± 7.2 | 88 | 5.1 | 5.01 | 248 | 116 | 124 (41) | 150 (51) |
| **Tribenuron-Me** | 85 ± 4.8 | 82 ± 5 | 92 ± 18.1 | 86 | 11.2 | 82 ± 5.4 | 96 ± 1.6 | 80 ± 3.7 | 86 | 3.9 | 5.1 | 396.1 | 72.95 | 364 (15.91) | 199 (24.76) |
| **Trichlorfon**  | 77 ± 7.5 | 105 ± 11.4 | 106 ± 13.3 | 96 | 11.0 | 87 ± 3.6 | 97 ± 1.3 | 81 ± 2 | 89 | 2.5 | 1.62 | 257.2 | 87 | 109.1 (25) | 220.9 (17) |
| **Triclopyr 2 butotyl**  | 70 ± 7.1 | 96 ± 11 | 100 ± 14.8 | 89 | 11.4 | 92 ± 5.9 | 97 ± 2.4 | 80 ± 2.1 | 90 | 3.9 | 11.4 | 356.2 | 122 | 237.7 (15) | 281.9 (17) |
| **Tricyclazole**  | 72 ± 4.4 | 100 ± 9.4 | 93 ± 15.7 | 88 | 10.8 | 88 ± 2.3 | 92 ± 3.1 | 83 ± 4.3 | 88 | 3.4 | 2.01 | 190 | 89 | 163.1 (31) | 136 (37) |
| **Trietazine**  | 70 ± 5.17 | 94 ± 10 | 98 ± 20.6 | 87 | 13.6 | 89 ± 2.7 | 98 ± 1.4 | 82 ± 3.2 | 90 | 2.5 | 8.03 | 230.1 | 66 | 99.1 (33) | 132 (37) |
| **Trifloxystrobin**  | 71 ± 4.9 | 94 ± 9.7 | 92 ± 18.9 | 86 | 12.6 | 88 ± 4.3 | 99 ± 2.6 | 81 ± 3.5 | 89 | 3.5 | 10.6 | 409 | 60 | 186 (20) | 206.2 (20) |
| **Triflumizole**  | 71± 14.44 | 102 ± 15.5 | 82 ± 15.4 | 84 | 14.5 | 98 ± 6.3 | 91 ± 6.6 | 81 ± 6.5 | 90 | 6.5 | 10.7 | 346.1 | 56 | 72.9 (23) | 278.1 (15) |
| **Triflumuron**  | 70± 11.1 | 98 ± 13.1 | 106 ± 11.9 | 91 | 12.0 | 90 ± 6.3 | 99 ± 2.8 | 78 ± 2.1 | 89 | 4.2 | 9.9 | 360.9 | 136 | 158 (23) | 156 (23) |
| **Triticonazole** | 70± 4.81 | 92 ± 14.2 | 90 ± 12.6 | 81 | 18.3 | 86 ± 4.9 | 92 ± 5.3 | 79 ± 6.8 | 86 | 5.7 | 8.31 | 318.062 | 66 | 124.9 (49) | 70 (65) |
| **Vamidothion**  | 72 ± 5.9 | 104 ± 10.3 | 92 ± 16.6 | 89 | 11.8 | 90 ± 1.1 | 94 ± 4 | 89 ± 4.5 | 91 | 3.5 | 1.4 | 288 | 56 | 145.9 (17) | 118 (35) |
| **Zoxamide**  | 72 ± 6.5 | 88 ± 10.1 | 93 ± 16.9 | 84 | 12.0 | 91 ± 3.5 | 104 ± 2.3 | 88 ± 3.2 | 94 | 3.0 | 9.48 | 336 | 102 | 159.1 (63) | 187 (47) |
| **τ Fluvalinate \***  | 109 ± 18.6 | 99 ± 24.8 | 85 ± 23 | 98 | 22.3 | 88 ± 12.1 | 85 ± 15.2 | 86 ± 16.3 | 86 | 14.6 | 13.2 | 503.3 | 150 | 181.1 (47) | 208.1 (47) |

**Figure 1S.** Schematic illustration of sampling and including five markets sites; Cairo region which include two cities (Cairo and Giza),Alexandria, Damietta and benisuef.