APPENDIX 1-3. Master Use Summary Table for Chlorpyrifos

| **Crop/Site** | **Residential** | **Agricultural** | **Forestry** | **Timing;**  **Application Type** | **Method/**  **Equipment** | **Maximum Single Application Rate by Formulation1**  **(lb a.i./A)** | **Maximum Application Rate** | | **Maximum Application Number** | | **PHI (days)3** | **REI (hours)3** | **MRI (days)3** | **Geographic Restrictions** | **Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Per Year**  **lb a.i./A** | **Per CC2**  **lb a.i./A** | **Per Year** | **Per CC2** |
| **AGRICULTURAL FARM PREMISES**  Livestock housing and holding areas (such as hog barns, empty chicken houses, dairy areas, milkrooms, calf hutches, calving pens and parlors). |  | 🗸 |  | Indoor general surface spray | backpack sprayer; high and low sprayer (pressure or volume) | 0.075 lb a.i./ 1000 ft sq  1.2  EC, ME | [14.4]  NS | NA | 12 | NA | NA | NS | NS |  |  |
| **ALFALFA** |  | 🗸 |  | At plant | groundboom | 1.0  G | 1.0 | 1.0 | [1]  NS | 1 | 21 | 24 | [10]  NS | Missouri only | Lower PHI permitted for EC rates 0.33 lb a.i./A (7 d) and 0.67 lb a.i./A (14 d) e.g. Reg. No. 62719-591  Stand is in production 3-5 years. Planted ¼” to ½” deep. |
|  |  | 🗸 |  | Foliar | aerial or ground/ broadcast, chemigation | 1.0  EC | [4.0]  NS | 4.0 | [4]  NS | 4 | 21 | 24 | 10 |  | Lower PHI permitted for EC rates 0.33 lb a.i./A (7 d) and 0.67 lb a.i./A (14 d) *e.g.*, Reg. No. 62719-591  Multiple harvests (or cuttings) per year when used for feed/fodder and 1 harvest per year when grown for seed. Cuttings occur about every 30 days.  Only 1 crop cycle per year but up to 9 cuttings, varies by geography. |
|  |  |  |  | **Total** |  | **1.0** | **5.0** | **5.0** | **[5]**  **NS** | **5** | **21** | **24** | **[10]**  **NS** |  | Represents Missouri scenario otherwise 4.0 lb a.i./A per is max. |
| **ALMOND** |  | 🗸 |  | **dormant/**  **delayed dormant**;  broadcast | aircraft, airblast | 2.0  WDG, WP | 2.0 | NA | 1 | NA | NA | 24 | 10 | Restricted use in California. |  |
|  |  | 🗸 |  | **foliar**;  broadcast | aircraft, airblast | 2.0  WDG,WP | 6.0 | NA | 3 | NA | 14 | 10 |  |  |
|  |  | 🗸 |  | pre-plant, foliar;  **trunk spray/drench or pre-plant dip** | handheld, backpack, drench/dip, handgun, and low pressure hand wand | 2.5  (3.0/100 gal)  WDG | 2.5 | NA | 1 | NA | 14 | NS |  |  |
|  |  | 🗸 |  | Dormant/ delayed dormant; foliar; **orchard floors** broadcast | ground boom, handgun, chemigation | 4.0  EC\* | 4.0 | NA | 2 | NA | 14 | 10 | Restricted use in California. Only one dormant application can be made. |  |
|  |  |  |  | **Total** | **--** | **4.0** | **14.5** | **NA** | **7** | **NA** | **14** |  | **NS** |  | Excludes nursery applications (See general “Fruits” listing) |
| **APPLE** |  | 🗸 |  | **dormant/**  **delayed dormant**;  broadcast | aircraft, airblast | 2.0  EC  2.0  WDG  1.5  WP | 2 | 2.0 | 1 | 1 | NA | 24/ 4 d | 10d |  | Reflects spray drift mitigation measures. |
|  |  | 🗸 |  | pre-plant, foliar;  **trunk spray/drench or pre-plant dip**;  ground | handheld, backpack, drench/dip, handgun, and low pressure hand wand | 1.5  (1.5 lb ai/100 gal)  WDG | 1.5 | NA | 1 | 1 | 28 | 4d | NS | Use permitted in states east of the Rockies except Mississippi. |  |
|  |  |  |  | **Total** |  | **2.0** | **3.5** |  | **2** |  |  |  |  |  |  |
| **ASPARAGUS** |  | 🗸 |  | Foliar, pre-harvest; broadcast | aircraft, ground boom | 1.0  EC, WDG | 1.0 | 1.0 | 1 | 1 | 1 | 24 | 10 |  |  |
|  |  | 🗸 |  | Postharvest, broadcast | aircraft, ground boom | 1.0  EC, WDG | 2.0 | 2.0 | 2 | 1 | 1 | 24 | 10 |  |  |
|  |  |  |  |  | granular soil band treatment ground boom | 1.5  G | 3.0 | 3.0 | 2 | 2 | 180 | 24 | [10]  NS | Permitted in California, the Midwest, and the Pacific Northwest 19713-505, 19713-521, 5481-525, 62719-34, 83222-34 | Do not apply more than 3.0 lb a.i./A between harvests. |
|  |  |  |  | **Total** |  | **1.5**  **G** | **3.0** | **3.0** | 3 | 3 | 1 | 24 | 10 |  |  |
| **BEANS** |  | 🗸 |  | Preplant; Seed treatment | Seed Treatment | *0.016-0.348*  0.000798 lb ai/lb seed  ME  *0.013-0.272*  0.000625 lb ai/lb seed  WP  *0.012-0.253*  0.00058 lb ai/lb seed  EC | NS | [0.348]  NS | NS | [1]  NS | NS | NS | NS | ME is SLN only for ID | Italics highlight the range of application rates depending on the number of seeds per lb and the number of seeds planted per acre. Seeding rate information provide by BEAD.4 |
| **BEEF/RANGE/ FEEDER CATTLE (MEAT)/** **DAIRY CATTLE (NON-LACTATING)** |  |  |  | Summer, late fall, spring; impregnated collar/tag | Animal treatment (ear tag) | 0.0066  lb/animal | [0.0099]  NS | NA | 3 | NA | NS | NS | NS |  | Reg. No. 39039-6  Cattle ear tags are assumed to last 4-6 months Two tags per animal at 0.0033 lb a.i./tag in the summer and one tag per animal at 0.0033 lb a.i./A. |
| **BEETS (UNSPECIFIED; TABLE OR SUGAR)**  “grown for seed” |  | 🗸 |  | At plant, soil band treatment | Ground boom | 1.0  EC | NS | 1 | NS | 1 |  | 24 |  | Allowed in Oregon  Court ordered buffer of 60 ft for ground chlorpyrifos application is required for “affected waterways”. | Minimum Incorporation: 2 inches |
|  |  | 🗸 |  | Preplant, soil incorporated treatment | Broadcast/ ground boom | 1.9  EC | NS  (2.8 ID) | NS | 1 | NS |  |  | Allowed in Oregon and Idaho | OR-09007; 62719-591  ID-090002; 62719-591 |
|  |  |  |  | **Total** |  | **1.9** | **2.8** | **NS** | **2** | **NS** |  | **24** |  |  | One or the other type of application. |
| **SUGAR BEETS** |  | 🗸 |  | Preplant, soil incorporated treatment | Broadcast/ ground boom | 1.0  EC  2.0  G | 3.0 | 2.0 | 1 | 1 | NA | 24 | 10 |  | Minimum Incorporation: 1 inch |
|  |  | 🗸 |  | At plant, soil band treatment | Broadcast/ ground boom | 1.0  EC, WDG  2.0  G | 3.0 | 2.0 | 1 | 1 | 30 | 24 | 10 |  |  |
|  |  | 🗸 |  | Postplant, soil band | Broadcast/ ground boom | 2.0  G | 3.0 | 2.0 | 1 | 1 | 30 | 24 | 10 |  |  |
|  |  | 🗸 |  | Post-emergence  band treatment; broadcast | Broadcast/ ground boom | 1.0  EC, WDG | 3.0 | 1.0 | 3 | 1 | 30 | 24 | 10 |  |  |
|  |  | 🗸 |  | broadcast | Aircraft, ground boom, chemigation | 1.0  EC, WDG | 3.0 | 1.0 | 3 | 1 | 30 | 24 | 10 |  | EC is not for use in MS |
|  |  |  |  | **Total** |  | **1.0**  **EC**  **2.0**  **G** | **4.0** | **[4.0]**  **NS** | **3** | **[3]**  **NS** | **30** | **24** | **10** |  | One granular application at 2.0 a.i./A and two liquid applications at 1.0 a.i./A per year. Also assumed per crop cycle. |
| **CARROT Grown for Seed (INCLUDING TOPS)** |  | 🗸 |  | Foliar pre-bloom broadcast | aircraft, ground boom | 0.94  EC | 0.94 | 1 | 1 | 1 | 7 | 24 | NA | forest | OR090011  SLN Expires: 12/31/2018 WA090011  SNL Expires: 12/31/2016  Carrots take two years to produce seed. All commercial production of the carrot (vegetable) takes place in the first year when the plant is nowhere near blooming. |
| **CHERRIES** |  | 🗸 |  | **dormant/**  **delayed dormant**;  broadcast | aircraft, airblast | 2.0  WDG, EC  1.5  WP | 2.0 | NA | 1 | NA | NS | 24 | 10 |  |  |
|  |  | 🗸 |  | **foliar**;  broadcast | airblast | 4.0  EC | 10.0 | NA | 5 | NA | 14 | 24 | 10 |  | Tart cherry only |
|  |  |  |  | aircraft | 2.0 |  | Reflects spray drift mitigation |
|  |  | 🗸 |  | Foliar, post harvest;  **trunk spray/drench** | handheld, backpack, drench/dip, handgun, and low pressure hand wand | 2.5  (3.0/100 gal)  WDG, EC | 2.5 | NA | 1 | NA | 2 | 24 | [10]  NS |  | Only some labels specify a 10 d MRI. |
|  |  |  |  | **Total** | **--** | **4.0** | **4.5 (sweet)**  **14.5 (tart only)** |  | **6** |  |  |  |  |  | Excludes nursery applications (See general “Fruits” listing)  The foliar applications only apply to tart cherries, thus, sweet cherry scenarios (*e.g.*, Pacific NW) annual application rate would be 4.5 lb total a.i./year. |
| **CHRISTMAS TREE PLANTATIONS** |  | 🗸 |  | **foliar**;  broadcast | helicopter, orchard blast | 1.0  EC, WDG, WP | 3.0 | NA | 3 | NA | [0]  NS | 24 | 7 | Aerial applications via helicopter are only permitted in Washington and Oregon. |  |
|  |  | 🗸 |  | post harvest;  **Stump Treatment** | handheld, backpack, drench/dip, handgun, and low pressure hand wand | 2.5  (3.0/100 gal)  EC, WDG | 2.5 | NA | 1 | NA | NA | 7 |  |  |
|  |  |  |  | **Total** |  | **2.5** | **5.5** |  | **4** |  |  |  |  |  |  |
| **CITRUS** |  | 🗸 |  | **foliar**;  broadcast | airblast, ground boom | 6.0  WP, WSP, EC | 7.5 | NA | 2 | NA | 35 (21 for low rates) | 5d | 30 (10 for low rates) | 6.0 lb a.i. /A is only permitted in California and Arizona.  The max single rate in other states is restricted to 4 lb a.i./A. |  |
|  |  | 🗸 |  |  | aircraft | 2.3  WP, WSP, EC |  |  |  |  | 21 | 5 | 10 | Florida, California, and potentially Texas | Aerial application used to control psyllid, the vector for citrus greening.  Reflects spray drift mitigation |
|  |  | 🗸 |  | foliar; **orchard floors broadcast** | ground boom, chemigation, handheld, backpack, drench/dip, handgun, and low pressure hand wand | 1.0  G\*, WSP, EC | 3.0 | NA | 3 | NA | 28 | 24/ 5 d | 10 |  |  |
|  |  |  |  | **Total** | **--** | **6.0** | **10.5** |  | **5** |  |  |  |  |  | Registered labels permit both foliar and soil applications in the same orchard.  Total excludes nursery applications (See general “Fruits” listing) |
| **CLOVER (GROWN FOR SEED)** |  | 🗸 |  | Preplant | Ground boom | 1.9  EC | 1.9 | 1.9 | 1 | 1 | NS | 24 | NA | Use only permitted in Oregon. | OR-0900100; master label: 62719-591 |
|  |  | 🗸 |  | Post-Plant Foliar | aircraft and ground boom |  |  |  |  |  |  |  |  |  | Either a preplant or post plant application is allowed. |
| **COLE CROPS (EXCLUDES CAULIFLOWER AND** |  | 🗸 |  | Preplant, soil incorporated treatment | Ground boom | 2.0  EC, WDG, G | 4.0 | 2.0 | 2 | 1 | 30 | 24 | 10 |  | Min. incorporation: 2 inches |
| **BRUSSELS SPROUTS)** |  | 🗸 |  | At plant, soil band treatment | Ground boom | 1 |  | One granular application permitted per year. |
|  |  | 🗸 |  | Post plant | Ground boom |  |  |  |  | 1 |  |  |
|  |  | 🗸 |  | Foliar Established Plantings, soil sidedress treatment | Ground boom |  |  |  |  | 1 |  |  |
|  |  | 🗸 |  | Foliar, broadcast | Aircraft, ground boom, chemigation | 1.0  EC, WDG, WP | 4.0 | 3.0 | 4 | 3 | 21 | 10 |  | Multiple crops per year are possible in some locations. |
|  |  |  |  | **Total** |  |  | **8.0** | **5** | **6** | **4** |  |  |  |  | Some labels restrict the yearly application rate to 3 lb a.i./A.  The maximum number of crops per year is 2. |
| **BRUSSELS SPROUTS** |  | 🗸 |  | At plant, soil band treatment | Ground boom | 2.0  EC; G | 2.0 | [2.0]  NS | 2 | 1 | 21 | 24 | 10 |  |  |
|  |  | 🗸 |  | Preplant, soil incorporated treatment | Ground boom |  | Minimum incorporation is 2 inches |
|  |  | 🗸 |  | Postplant, soil application | Ground boom | 2.25 EC, G | 2.25 | [2.25]  NS |  |  |  |  |
|  |  | 🗸 |  | Foliar broadcast | Aircraft, Ground boom | 1.0  EC | [5.3]  NS | 3.0 | NS | 3 |  |  | 10 |  | 83222-20, 84930-7, 86363-3 specify a 7 day MRI. All other labels specify a 10 day MRI.  The PHI stated 84930-7 is conflicting [p. 4 (21 days and p. 19 (30 days)] |
|  |  |  |  | **Total** |  | **2.3** | **5.3** |  | **NS** |  | **21** | **24** | **7** |  | Assume one application of either at plant, preplant, or postplant followed with additional foliar applications. |
| **CAULI-FLOWER** |  | 🗸 |  | At plant, soil band treatment | Ground boom | 2.0  EC  2.3  G | 2.0  EC  2.25  G | NS | [1]  NS | 1 | 21 | 3d | 10 |  | Only one granular application. |
|  |  | 🗸 |  | Preplant, soil incorporated treatment | Ground boom | 2.3  G  2.0  EC | 2.3 | NS | [1]  NS | 1 | 30, EC,  21 G |  |  | Minimum incorporation is 2 inches |
|  |  | 🗸 |  | Postplant, soil application | Ground boom |  |  |  |
|  |  | 🗸 |  | Foliar broadcast | aircraft, ground boom | 1.0  EC | [5.3]  NS | 3.0 | NS | 3 | 21 | 10 |  |  |
|  |  |  |  | **Total** |  | **2.3** | **5.3** | **[5.3]**  **NS** | **NS** | **[4]**  **NS** | **21** | **24** | **10** |  | Assume one application at either plant, preplant, or postplant followed with additional foliar applications. |
| **COMMERCIAL/INSTITUTION-AL/ INDUSTRIAL PREMISES/ EQUIP. (INDOOR)**  Non-food areas of manufacturing, industrial, and food processing plants; warehouses; ship holds; railroad boxcars. |  |  |  | Broadcast | Product Container | 0.4373 lb a.i./100 sq ft  190.5  G | NS | NA | NS | NA | NA | NS | NS |  | For treatment of fire ants |
|  |  |  | Crack and Crevice/Void | Sprayer/ Injection | 0.0625 lb a.i./1000 sq ft  2.7  ME | NS | NA | NS | NA | NA | NS | NS |  | 499-419 |
|  |  |  | Crack and Crevice/Spot | Sprayer/ Injection | 0.0424 lb/gal ME | NS | NA | NS | NA | NA | NS | 7 |  |  |
| **COMMERCIAL/INSTITUTIONAL /INDUSTRIAL PREMISES/EQUIP. (OUTDOOR)** Outdoor commercial use around non-food areas of manufact-uring, industrial, and food processing plants; warehouses; ship holds; railroad boxcars |  |  |  | Soil broadcast | Low and High Pressure, Backpack, Handgun Sprayers | 0.0247 lb a.i./1000 sq ft  1.1  ME | NS  [13.2] | NA | NS  [12] | NA | NA | NS | NS |  |  |
|  |  |  | Directed spray | 0.1132 lb a.i./1000 sq ft  4.9  ME | NS | NA | NS | NA | NA | NS | NS |  | Specific to: Inside and outside dumpsters and other trash holding containers, trash corrals and other trash storage areas. |
|  |  |  | Crack and Crevice/void/general outdoor | 0.0424 lb/gal ME  [1.1] | NS  [13.2] | NA | NS  [12] | NA | NA | NS | 7 |  |  |
| **CONIFERS AND DECIDUOUS TREES;** |  | 🗸 | 🗸 | **foliar**;  broadcast | Ground boom | 1.0  EC | 3.0 | NA | 6 | NA | 7 | 24 | 7 |  |  |
| **PLANTATION, NURSERY** |  | 🗸 | 🗸 | foliar; **stump treatment** | backpack, drencher, low pressure hand wand | 0.3  EC | 0.3 | NA | 1 | NA | 7 | 24 | 7 |  |  |
|  |  |  |  | **Total** |  | **1.0** | **3.0** | **NA** | **6** | **NA** | **7** | **24** | **7** |  | The total number of applications assumed is either 3 foliar applications or 2 foliar applications with one stump treatment. |
| **CORN (ALL)** |  | 🗸 |  | Preplant | ground/ **soil incorporated** conservation tillage, in furrow, broadcast, chemigation, soil band | 3.0  EC  2.0  G | 3.0 | 3.0 | NS | 3 | NA | 24/  5 EC | 10 |  | 19713-520, 19713-599, 33658-26, 34704-857, 72693-11, 83222-20  The minimum incorporation depth is 2 inches. |
|  |  |  |  |  | **soil incorporated**  aerial  conservation tillage | 2.0  EC, G |  |  |
|  |  | 🗸 |  |  | ground/ conservation tillage, in furrow, broadcast, chemigation, soil band | 1.0  EC  2.0  G | 3.0 | 3.0 | NS | 3 | 21 | 10 |  | 19713-520 |
|  |  | 🗸 |  | Storage or preplant seed treatment | Seed treatment | *0.001-0.021*  0.000625 lb a.i./ lb seed  WP  *0.1-1.9*  0.058 lb a.i./ lb seed  FC | [7.6]  NS | [1.9]  NS | [?]  NS | 1 | NS | NS | NS |  | Italics highlight the range of application rates depending on the number of seeds per lb and the number of seeds planted per acre. Seeding rate information provide by BEAD.4 |
|  |  | 🗸 |  | At plant | soil incorporated, conservation tillage | 2.0  G | [8.1]  NS | 3.0 | [?]  NS | 3 | 21 | 24 | 10 |  |  |
|  |  | 🗸 |  | Post emergence | Aerial or ground, broadcast, chemigation | 1.5  EC  1.0  WDG | [8.1]  NS | 3.0 | NS | 3 | 21 | 24/  5d (EC | 10 |  | A brush on max single rate is permitted at 1.0 lb ai/a (72693-11) |
|  |  | 🗸 |  | Foliar | Aerial or ground/ broadcast, granule, seed and chemigation | 1.5  EC | 3.0 | 3.0 | NS | 3 | 21 | 10 |  |  |
|  |  |  |  | **Total** |  | **3.0** | **8.1** | **8.1** | **NS** | **4** | **21** |  | **10** |  | Two granular applications are allowed with a maximum single rate of 1.0 lb a.i./A or one granular application at 2 lb a.i./A.  Total with seed treatment  PHI: 21 d except Delaware and Florida (7 d) |
| **COTTON** |  | 🗸 |  | Storage or preplant seed treatment | Seed treatment | *0.8-2.2*  0.00116 lb/lb seed  EC | [2.2] NS | [2.2] NS | [1]  NS | 1 | NS | NS | NS |  | 264-932  Rates in italics highlight the potential range of application rates depending on the number of seeds per lb and the number of seeds planted per acre. Seeding rate information provide by BEAD.2 |
|  |  | 🗸 |  | Foliar | aerial, chemigation, ground boom | 1.0  EC, WDGP | 3.0 | 3.0 | 3 | 3 | 14 | 24 | 10 |  | Except MS |
|  |  |  |  | **Total** |  | **1.0** | **3.2** | **3.2** | **3** | **3** | **14** | **24** | **10** |  | 1.6 lb a.i./A is max single rate (seed treatment)  **Total with seed treatment**  1 crop cycle per year assumed |
| **CRANBERRY** |  | 🗸 |  | Foliar | aircraft, ground boom/ broadcast and chemigation | 1.5  EC, WDG | 3.0 | NA | 2 | NA | 60 | 24 | 10 | Not for use in Mississippi. | Do not apply to bogs when flooded. |
| **CUCUMBER** |  | 🗸 |  | Storage or preplant seed treatment | Commercial  seed treatment | *0.4*  0.00058 lb/lb seed  EC | NS | 0.1 | 2 | 1 | NS | NS | NS |  | Seeding rate information provide by BEAD.2  264-932, 62719-221, CA040004  Per registrant 2 CCs per year |
| **FIGS** |  | 🗸 |  | **dormant/**  **delayed dormant**; soil application | ground boom | 2.0  WDG, EC | 2.0 | NA | 1 | NA | 217 | 4 d | NS | Use is restricted to California only. | Incorporation to 3 inches is suggested but not required following application. |
| **FILBERTS/ HAZELNUT** |  | 🗸 |  | **dormant/ delayed dormant**;  broadcast | aircraft, airblast | 2.0  WP | 2.0 | NA | 1 | NA | 14 | 24 | 10 |  |  |
|  |  | 🗸 |  | **foliar**;  broadcast | aircraft, airblast | 2.0  WDG, WP, EC | 6.0 | NA | 3 | NA | 14 | 10 |  | Some labels specify a retreatment interval of 10 days. |
|  |  |  |  | **Total** |  | **2.0** | **6.0** | **NS** | **3.0** | **NA** | **14** | **24** | **10** |  | Excludes nursery applications (See general “Fruits” listing) |
| **FOOD PROCESSING PLANT PREMISES (NONFOOD CONTACT)** |  |  |  | When needed, crack and crevice treatment, spot treatment |  | 0.0424 lb/ gal ME | NS | NA | NS | NA | NA | NS | 7 |  | 53883-264, 84575-3  Spot Treatment: Do not exceed two square feet per individual spot. |
| **FOREST PLANTINGS (REFORESTATION PROGRAMS)**  **(TREE FARMS, TREE**  **PLANTATION, ETC.)** |  |  | 🗸 | Foliar,  broadcast | ground boom | 1.0  EC | 6.0 | NA | 6 | NA |  | 24 | 7 |  |  |
|  |  | 🗸 | Foliar, stump treatment | direct spray,  drencher | 0.34  EC | 6.0 | NA | [18]  NS | NA |  | 7 |  |  |
|  |  |  | Total |  |  | 6.0 | NA | [18] | NA |  |  |  |  |
| **FOREST TREES (SOFTWOODS, CONIFERS)** |  |  | 🗸 | Foliar,  broadcast | ground boom, drencher | 0.61  EC | 3.6 | NA | [6]  NS | NA | 24 | 7 |  |  |
|  |  | 🗸 | Foliar, stump treatment | direct spray | [3.6]  2.4 lb a.i./100 gal  EC | 3.6 | NA | [1]  NS | NA |  | 7 |  | Application rate is provided as a dilution factor. |
|  |  |  | Total |  |  | 3.6 | NA | [6] | NA |  |  |  |  |
| **FRUITS & NUTS**  Non-bearing (not to bear fruit within 1 year) fruit trees innurseries (includes: almonds, citrus, filbert, apple, cherry, nectarine, peach, pear, plum, prune). |  | 🗸 |  | Foliar-Non-bearing nursery broadcast | High/low volume spay/ hand held sprayer/power sprayer | 4.0  EC | 4.0 | NA | NS | NA | 14 | NS | 7 |  | For nectarines and peaches, the use is restricted to one application of no more than 3 lb a.i./A per cc. For apples, the max rate is 2 lb a.i./A per crop cycle and the use is restricted to 1 application (either canopy or trunk drench) per year. Example label, 62719-254 |
|  | 🗸 |  | Foliar-Non-bearing nursery trunk drench | drencher, high and low pressure sprayer | 2.0  WDG | 2.0 | NA | NS | 1 | 14 |  | 7 |  |  |
|  |  |  |  | **Total** |  | **4.0** | **6.0** |  |  |  |  |  |  |  | Maximum Single Rates: 3.0 (nectarines and peaches)  2.0 (apples)  Maximum Yearly Rates: 3.0 (nectarines and peaches)  2.0 (apples) |
| **GINSENG (MEDCINAL)** |  | 🗸 |  | Preplant, post-emergence | Ground, soil broadcast | 2.0  G | 2.0 | NA | 1 | NA | 365 | 24 | NA | Permitted in Michigan and Wisconsin | MI110006,WI110003)  Minimum incorporation: 4 inches  Application should be followed by rainfall or overhead watering.  Valid until June 29, 2016. |
| **GOLF COURSE TURF** |  |  |  | When needed, soil broadcast/ spot treatment | Ground, low pressure | 1.0  EC | 2.0 | NA | 2 | NA |  | 24 | NS |  |  |
|  |  |  | Foliar, broadcast, | Ground boom, handgun, low pressure and backpack | 1.0  EC, G, B | 2.0 | NA | 2 | NA |  | NS |  | Chemigation not allowed for the EC formulation. |
|  |  |  |  | Tractor drawn spreader, push type spreader, belly grinder | 1.0  G |  | [24]  NS | 7 |  |
| Mound treatment | Granule applicator | 1.0  G | 2.0 | NS | 2 | NS |  | NS | 7 |  |  |
|  |  |  | **Total** |  | **2.0** | **2.0** | **NA** | **2** | **NA** | **NS** |  | **NS** |  |  |
| **GRAPES** |  | 🗸 |  | Dormant/ Delayed Dormant (pre-bloom) | Ground boom, broadcast, drench  high/low spray volume | 1.0  WDG, EC | 1.0 | 1 | 1 | NA | 35 | 24 | NS | East of the continental divide only. | Do not use in conjunction with soil surface applications for grape borer control. |
|  |  | 🗸 |  | 2.0  EC | 2.0 | 1 | 1 | NA | 35 |  | Permitted in Colorado, Idaho, and Washington | CO080008, ID090004, WA090002  Master label: 62719-591 |
|  |  | 🗸 |  | Foliar | Ground/ broadcast, basal spray and drench (soil treatment) | 2.25  EC | 2.25 | 1 | 1 | NA | 35 | NS | Permitted east of the continental divide. |  |
|  |  | 🗸 |  |  |  | 1.0  EC | 3.0 | 3 | 3 | NA | 35 | NS | California | CA080010 |
|  |  | 🗸 |  | Postharvest, dormant/ delayed dormant | Ground boom, broadca st | 2.0  EC | 2.0 | 1 | 1 | NA | NS | NS | California | CA080009 |
|  |  |  |  | **Total** |  | **2.25** | **2.25** | **1** | **1** | **NA** | **35** | **24** | **NS** | Permitted east of the continental divide. |  |
|  | **2.0** | **5.0** | **4** | **4** | **NA** | **NS** | **NS** | California |  |
| **2.0** | **2.0** | **1** | **1** | **NA** | **NA** | **NS** | Permitted in Colorado, Idaho, and Washington |  |
| **2.25** | **4.25** | **2** | **2** | **NA** | **NS** | **NS** | Permitted in Colorado, Idaho, and Washington |  |
| **GRASS FORAGE/ FODDER/HAY** |  | 🗸 |  | Foliar, broadcast | Aircraft, ground boom, chemigation | 1.0  EC | 3.0 | NA | 3 | NA | NS | 24 |  | Permitted in Nevada, Oregon, Washington, and Idaho | NV080004, NV940002, OR090009, WA090010,  ID090003 |
| **GREENHOUSE** |  | 🗸 |  | early evening, aerosol, fog or fumigation | Total release fogger | 0.029  0.0066 lb a.i./1000 sq. ft  PL | NS | NA | NS | NA | NS | NS | 2 |  |  |
| **HOUSEHOLD/**  **DOMESTIC DWELLINGS INDOOR PREMISES** | 🗸 |  |  | When needed | Bait station | 0.0003 lb/bait station | NS | NA | NS | NA | NA | NS | NS |  | 9688-67 |
| **HYBRID COTTONWOOD/ POPLAR PLANTATIONS** |  | 🗸 |  | Foliar, dormant, delayed dormant; broadcast | High volume (dilute)  Low volume (concentrate) | 1.9  EC | [2.0]  NS | 6.0 | [1]  NS | 3 |  | 24 | 7 | Washington | WA090004  Energy wood plantations may be harvested as often as every 2-3 years; pulpwood 5-10 years; and saw timber 15-20 years. (Arkansas production guide). In Washington the crop takes 2-8 years |
| **LEGUME VEGETABLES** |  | 🗸 |  | Preplant, soil treatment | Ground boom | 1.0  EC, WDG | 1.0 | NA | 1 | NA | NS | 24 | NA |  | No MRI because application only once a year |
|  |  | 🗸 |  | At planting, soil treatment | Ground boom | 1.0  EC, WDG | 1.0 | NA | 1 | NA | NS | NA |  |
|  |  |  |  | **Total** |  | **1.0** | **1.0** | **NA** | **1** | **NA** | **NS** | **24** | **NS** |  | Assumed either a preplant or an at plant treatment. |
| **MINT/ PEPPERMINT/ SPEARMINT** |  | 🗸 |  | Preplant soil incorporated | Aerial or ground/ broadcast | 2.0  EC, WDG | [2.0]  NS | 2.0 | [1]  NS | 1 | 90 | 24 | NA | No use in Mississippi. | 19713-599, 33658-26, 34704-857, 67760-28, 84229-25, 84930-7, OR940027  MRI NA due to once per crop cycle application |
|  |  | 🗸 |  | Post-emergence, Postharvest, Foliar | Chemigation, ground/ airblast | 2.0  EC | 2.0 | 2.0 | [1]  NS | 2 | 90 | NS | No use in Mississippi. | Postharvest application retreatment not specified on some labels. |
|  |  |  |  | **Total** |  | **2.0** | **4.0** | **4.0** | **2.0** | **3** | **90** | **24** | **NS** |  | Labels allow one growing season application including pre-plant and one post-harvest application per season. |
| **MOSQUITO CONTROL; HOUSEHOLD/**  **DOMESTIC DWELLINGS OUTDOOR PREMISES;**  **RECREATIONAL AREAS** | 🗸 |  |  | When needed; broadcast | Ultra low volume air and ground | 0.01  EC | 0.26 | NA | 26 | NS | NA | NS | 24 h | In Florida: Do not apply by aircraft unless approved by the Florida Dept of Ag. | Aerial applications may be made at altitudes ranging from 75-300 ft (see labels for specifics).  For use by federal, state, tribal or local government officials or by persons certified in the appropriate category or authorized by the state or tribal lead regulatory agency. |
| **NECTARINE** |  | 🗸 |  | **dormant/**  **delayed dormant**  broadcast | airblast, handgun | 3.0  WDG, EC | 3.0 | NA | 1 | NA | NS | 24/4d | 10 |  | 83222-20 others at 2 lb a.i./a |
|  | Aircraft | 2.0  WDG, EC | Updated to reflect spray drift mitigation. |
|  |  | 🗸 |  | pre-plant, foliar;  **trunk spray/drench or pre-plant dip** | Handgun, low pressure backpack, dip | 2.5  (3.0/100 gal)  WDG, EC | 2.5 | NA | 1 | NA | 14 | 5 |  | There is no application retreatment interval specified on some of the label. The application rate is provided as a dilution factor. |
|  |  |  |  | **Total** |  | **3.0** | **5.5** | **NA** | **2** | **NA** |  |  |  |  | Some labels limit the amount a.i./A per year. Multiple types of applications can occur such as preplant, trunk drench and dormant, delayed dormant applications.  Excludes nursery applications (See general “Fruits” listing) |
| **NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES**  to and around outside surfaces of nonresidential buildings and structures. Permitted areas of use include fences, pre-construction foundations, refuse dumps, outside of walls, and other areas where pests congregate or have been seen |  |  |  | Outdoor general surface/ Band (may be better if called perimeter) | Ground sprayer/ band sprayer | 1.0  EC | NS | NA | NS | NA | NA | NS | NS |  |  |
| **NURSERY-STOCK:** Ornamental nursery stock annuals, perennials and woody plants being grown in the field, in ball and burlap or in containers outdoor and in greenhouses |  |  |  | Dormant/ Delayed Dormant | high spray | 3.0  EC | 3.0 | NA | 1 | NA |  | 24 | NS |  |  |
|  |  |  |  | Preplant | Ground boom, soil incorporated | 4.0  EC, WP | NS | NA | NS | NA |  |  |  |  |  |
|  |  |  |  | foliar, soil directed | Tractor drawn spreader, push type spreader, belly grinder, gravity fed backpack, spoon | 1.1  G |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **Total** |  | **4.0** | **CBD** |  | **3** |  |  |  |  |  |  |
| **ONIONS** |  | 🗸 |  | Post plant (seeding) Broadcast | Ground boom | 1.0  EC | 1.0 | NS | 2 | NS | 60 | 24 | NS |  |  |
|  |  | 🗸 |  | At plant, soil drench or basal spray | Ground boom | 1.0  EC, WDG, G | 1.0 | 1 |  | Incorporation is not specified on the label. |
|  |  |  |  | Total |  | 2.0 | 2.0 |  | 2 |  | 60 | 24 | NS |  |  |
| **ORNAMENTAL AND/OR SHADE TREES, HERBACEOUS PLANTS** |  | 🗸 |  | Foliar broadcast | Ground boom, air blast, handgun, low and high pressure hand wands | 2.0  EC, WP  1.0  G, B | 2.0 | NA | [2]  NS | NA | NS | 24 | NS |  | Some labels include a MRI of 7 days. |
|  |  | 🗸 |  | Dormant /Delayed Dormant | Handgun, low pressure and backpack | 3.0  EC | 3.0 | NA | 1 | NA | NS | 7 |  | Low volume spray permitted for concentrated solutions and lower rates. |
| **ORNAMENTAL LAWNS AND TURF, SOD FARMS (TURF)** |  | 🗸 |  | When needed, broadcast, soil or spot treatment | ground boom (WP only), high pressure hand wand | 3.76  EC, WP | 7.52 | NA | 2 | NA | NS | 24 | NS |  |  |
|  | 🗸 |  | NS | Tractor drawn spreader, push type spreader, belly grinder | 1.0  B | 2.0 | NA | 2 | NA | NS | 24 | NS |  | Bait is used for fire ant control. |
| **ORNAMENTAL NON- FLOWERING PLANTS** |  | 🗸 |  | Foliar, broadcast, soil drench | Chemigation, ground boom, low and high pressure handwand, handgun, backpack sprayer, sprinkling can | 0.007/gal  ME | NS | NA | 12 | NA | NA | 24 | NS |  | Application rate provided as a dilution factor.  Restricted use—occupational only |
| **ORNAMENTAL WOODY SHRUBS AND VINES** |  |  |  | Foliar broadcast | Ground boom, air blast, handgun, low and high pressure sprayer, backpack | 2.0  EC, WDG  0.01 lb/gal  EC | 2.0  0.01 lb/gal | NA | [1]  NS | NA | NS | 24 | NS |  | Several labels do not restrict the application rate in lb a.i./A. Examples include 16.5 lb/100 gal (228-625) and 1.0 lb/100 gal (829-280). |
|  |  |  |  | Dormant/ delayed dormant |  | 1.0  EC  0.005 lb/gal EC | 1.0 | NA | [1]  NS | NA |  |  |  |  |  |
|  |  |  |  | Preharvest | Tractor drawn spreader, push type spreader, belly grinder | 6.0  G | 6.0 | NA | [1]  NS | NA |  |  |  |  |  |
|  |  |  |  | Preplant, potted, bailed-and burlapped, containerized | groundboom, handgun, low and high pressure sprayer, backpack, drench | 1.0  EC | NS | 1 | NS | 1 |  |  |  |  |  |
|  |  |  |  | Pretransplant | groundboom | 4.0  WP | [48.0]  NS | 4 | 12 | 4 |  |  |  |  |  |
|  |  |  |  | **Total** |  | **6.0**  **G**  **4.0**  **WP** | **CBD** |  | **CBD** |  |  |  |  |  |  |
| **PEACH** |  | 🗸 |  | **dormant/**  **delayed dormant**  broadcast | airblast | 3.0  EC  2.0  WDG | 3.0 | NA | 1 | NA | 10 | 24/4d | NS |  | 83222-20 (all other labels restrict to 2 lb ai/a) |
|  | aircraft, | 2.0  EC  2.0  WDG | NS |  | Updated to reflect spray drift mitigation. |
|  |  | 🗸 |  | **Post-harvest**  broadcast | airblast | 2.5  (3.0/100 gal)  EC | 2.5 | NA | 1 | NA | NA | NS | Permitted in Georgia and South Carolina | GA0400001, SC040001  SLN Expires: |
|  | aircraft | 2.0  (3.0/100 gal)  EC | 2.0 | GA0400001, SC040001  SLN Expires:  Updated to reflect spray drift mitigation |
|  |  | 🗸 |  | pre-plant, foliar;  **trunk spray/drench or pre-plant dip**;  ground | handheld, backpack, drench/dip, handgun, and low pressure hand wand | 2.5  (3.0/100 gal)  WDG | 2.5 | NA | 1 | NA | 14 | 5 | NS |  | Some labels do not specify minimum retreatment interval. |
|  |  |  |  | **Total** |  | **3.0** | **5.5** | **NA** | **3** | **NA** | **NA** | **24** | **NS** |  | It is possible that multiple types of applications can occur such as soil, foliar and/or post-harvest and dormant/ delayed dormant applications.  Excludes nursery applications (See general “Fruits” listing) |
|  | **3.0** | **8.0** | **NA** | **3** | **NA** | **NA** | **24** | **NS** | Permitted in Georgia and South Carolina |
| **PEANUT** |  | 🗸 |  | Preplant | Aerial or ground/ broadcast | 2.0  EC, WDG | [4.0]  NS | 4.0 | [2]  NS | 2 | NA | 24 | 10 | Do not apply aerial in Mississippi | Assumes one crop cycle per year. |
|  |  | 🗸 |  | At plant, postplant | 4.0  G | [4.0]  NS | 4.0 | 2 | 2 | 21 | 24 | 10 |  |
|  |  | 🗸 |  | At pegging | 2.0  G  EC, WDG | [4.0]  NS | 4.0 | 2 | [2]  NS | 21 | 24 | 10 |  |
|  |  |  |  | **Total** |  | **4.0**  **G**  **2.0**  **EC, WDG** | **4.0** | **4.0** | **2** | **2** | **10** | **24** | **10** |  |  |
| **PEAR** |  | 🗸 |  | **dormant/**  **delayed dormant**  broadcast | aircraft, airblast | 2.0  WDG, EC | 2.0 | NA | 1 | NA | NA | 24 | NA | Restricted use in California. | 83222-20 allows 3.0 lb a.i./ A; however, this does not match the 2001 RED. |
|  |  | 🗸 |  | **Post-harvest**  broadcast | aircraft, airblast | 2.0  WDG, EC | 2.0 | NA | 1 | NA | NA | 24 | NS | Permitted in California, Oregon and Washington. |  |
|  |  |  |  | **Total** |  | **2.0**  **WDG, EC** | **4.0** | **NA** | **2** | **NA** | **NA** | **24** | **NS** |  | Multiple types of applications may occur in within a year in California, Oregon and Washington such as a post-harvest application and a dormant, delayed dormant.  Excludes nursery applications (See general “Fruits” listing) |
| **PEAS** |  | 🗸 |  | Preplant Seed treatment | Seed Treatment | 0.30  0.000625 lb/lb seed  WP  0.28  0.00058 lb/lb seed  EC | NS | NS | NS | NS | NS | NS | NS |  | There is a range of potential application rates depending on the number of seeds per lb and the number of seeds planted per acre. Seeding information provide by BEAD.2 |
| **PECANS** |  | 🗸 |  | **dormant/**  **delayed dormant**  broadcast | aircraft, airblast | 2.0  EC, WDG | 2.0 | NA | 1 | NA | 14 | 24 | 10 |  | 66222-19 and 66222-233 |
|  |  | 🗸 |  | **foliar**;  broadcast | airblast | 4.3  EC, WDG | 6.3 | NA | 3 | NA | 14 | 10 |  | Some labels require a 28 d PHI |
|  | aircraft | 2.0  EC, WDG |  | Updated to reflect spray drift mitigation. |
|  |  | 🗸 |  | foliar; **orchard floors broadcast** | Ground boom, chemigation | 4.3  EC, WDG | 4.3 | NA | 2 | NA | 14 | 10 |  |  |
|  |  |  |  | **Total** |  | **4.3** | **12.6** | **NA** | **6** | **NA** | **14** | **24** | **10** |  | Considers multiple type of applications (*e.g.*, dormant, foliar broadcast, and orchard floor) but excluding nursery  For nursery applications (See general “Fruits” listing) |
| **PEPPER** |  | 🗸 |  | Foliar | Ground broadcast | 1.0  WDG | [8]  NS | 8.0 | [8]  NS | 8 | 7 | 24 | 10 | Permitted in Florida | FL040005; 1 crop cycle per year. |
| **PINEAPPLE** |  | 🗸 |  | Postplant | Ground boom, broadcast | 2.0  EC | 6.0 | 6.0 | 3 | NA | 365 | 24 | 30 | Permitted in Hawaii | HI090001  SNL Expires: March 29, 2014.  Do not make applications beyond three months after planting. |
| **PLUM/**  **PRUNE** |  | 🗸 |  | **dormant/ delayed dormant**;  broadcast | Aircraft, airblast | 2.0  EC, WDG | 2.0 | NA | 1 | NA | NA | 24/4d | 10 |  |  |
|  |  | 🗸 |  | foliar;  **trunk spray/drench** | handheld, backpack, drench/dip, handgun, and low pressure hand wand | 2.5  3.0/100 gal  WDG | 2.5 | NA | 1 | NA | NA | 10 |  |  |
|  |  |  |  | **Total** |  | **2.5** | **4.5** | NA | 2 | NA |  |  |  |  | Excludes nursery applications (See general “Fruits” listing) |
| **POULTRY LITTER** |  | 🗸 |  | When needed,  animal bedding/litter treatment. | Sprayer | 0.07126 a.i./1000 sq ft  3.1  ME | NS | NA | NS | NA | NA |  | NS |  | 53883-264, 84575-3 |
| **PUMPKIN** |  | 🗸 |  | Preplant Seed treatment | Seed treatment | 0.3  0.00058 lb /lb seed  WP | [0.3]  NS | [1]  NS | [1]  NS | 1 | NS | NS | NS | California maximum single rate 0.000625 lb a.i./lb. | There is a range of potential application rates depending on the number of seeds per lb and the number of seeds planted per acre. Seeding information provide by BEAD.4 |
| **RADISH** |  | 🗸 |  | Foliar | Broadcast ground | 1.0  EC | NS | 1 | NS | 1 | NS | 24 | NS | permitted in Oregon | OR090012 on radish grown for seed.  Label valid until December 31, 2012. (per registrant SLN still valid) |
|  |  | 🗸 |  | Preplant | Soil incorporation ground | 3.0  EC | 12.0 | 3.0 | 4 | 1 | NS | NS | 10 |  |  |
|  |  | 🗸 |  | At plant/post-plant | In furrow drench/ treatment | 3.0  EC  2.8  G | [12.0]  NS | 3.0 | [4]  NS | 1 | 30, EC,  7, G | 24 | 10 |  | Only one granular application permitted. |
|  |  |  |  | **Total** |  | **3.0** | **[12.0]**  **NS** | **2** | **[5]**  **NS** |  |  |  |  |  | Only one at plant or in furrow application is assumed. |
| **RIGHTS OF WAY, ROAD MEDIANS** |  |  |  | When needed, soil broadcast | Granular or low pressure wand | 1.0  EC, G, Bait | [2.0]  NS | NA | 2 | NA | NA | NS | 7 |  | Apply when needed |
| **RUTABAGA** |  | 🗸 |  | Preplant | Chemigation, Groundboom | 2.4  EC, WDG | [4.8]  NS | 2.4 | [2]  NS | 1 | 30 | 24 | 10 |  |  |
| Aerial | 2.0  EC, WDG | 2.0 | Updated to reflect spray drift mitigation. |
|  | 🗸 |  | At plant/post-plant | In furrow drench/ treatment | 2.4  EC, G WDG | 4.8 | 2.4 | [2]  NS | 1 | 7 | 24 | 10 | Disallowed in California and Arizona. | Two crop cycles per year |
|  |  |  |  | **Total** |  | **2.4** | **[9.6]**  **NS** | **4.8** | **[4]**  **NS** | **2** |  | **24** | **10** |  |  |
| **SEWER Manhole covers and walls** |  |  |  | When needed | Low pressure | 0.31 lb/manhole RTU | NS | NA | NS | NA | NA | NA | NS |  | 3 pints product/ manhole |
| **SEED ORCHARD TREES** |  | 🗸 |  | **foliar**;  broadcast | Ground boom | 1.0  EC | 3.0 | 3.0 | NS | NA | 30 | 24 | 7 |  | 62719-575, 62719-615 |
|  |  | 🗸 |  |  | High volume sprayer | 2.5  0.01  a.i./tree  0.02 EC | 2.5 | NS | [1]  NS | NA | 30 | 24 | 7 |  | Cone worm treatment (62719-575 and 62719-615)  Treatment of 1000 trees per acre would results in an single application rate of 10 lb a.i./a.  DAS: 1000 is a bit high, typically for orchards 312 trees per acre |
|  |  | 🗸 |  | foliar; **stump treatment** | backpack, drencher, low pressure hand wand, | 0.3  EC | 0.3 | 1.0 | NS | NA | 30 | 24 | 7 |  | 62719-575, 62719-615 |
|  |  |  |  | **Total** |  | **1.0** | **5.8** | **3** | **NS** | **NA** | **30** | **24** | **7** |  | The total number of applications assumed is either three foliar applications or two foliar applications with one stump treatment. |
| **SORGHUM GRAIN** |  | 🗸 |  | Seed Treatment | Seed treatment | [0.0009]  0.01-  0.0024 lb ai/ 100 lbs seed EC | 0.01 | 0.01 | [1]  NS | 1 | NA | NS | NS |  | 264-932 |
|  |  | 🗸 |  | Preplant Soil Directed | Ground Spreader/T Band | 1.5  G | 1.5 | 1.5 | [1]  NS | 1 | 60 | 24 | 10 |  |  |
|  |  | 🗸 |  | Foliar/Post emergent | Ground, Aerial, Chemigation | 1.0  EC, WDG | 1.5 | [1.5]  NS | [1]  NS | 3 | 30 | 24 | 10 |  | PHI varies across labels |
|  |  |  |  | **Total** |  | **3.3**  **G**  **1.0**  **EC, WDG** | **3.01** | **3.01** | **[3]**  **CBD** | **3** | 30 | 24 | 10 |  | One crop cycle per year. |
| **SOYBEAN** |  | 🗸 |  | foliar , post-emergence  soil broadcast | broadcast ground, aerial, chemigation | 1.0  EC, WDG | 3.0 | 3.0 | 3 | 3 | 28 | 24 | 14 |  | One crop cycle per year. |
|  |  | 🗸 |  | At plant/post plant treatment;  soil band | ground boom | 2.2  G  1.0 EC | 3.0 | 3.0 | 1 (G), 3 (EC) | 1 (G), 3 (EC) | 28 | 24 | 10 |  |  |
|  |  |  |  | **Total** |  | **1.0**  **EC, WDG**  **2.2**  **G** | **3.0** | **3.0** | **3** | **3** |  |  |  |  | One crop cycle per year. |
| **STRAW-BERRIES** |  | 🗸 |  | Pre-plant | Aerial or ground/ broadcast | 2.0  EC | 2.0 | **NS** | 1 | NS | NA | 24 | 10 | No use in Mississippi | 33658-26 |
|  |  | 🗸 |  | Foliar | Aerial or ground/  broadcast, foliar spray | 1.0  EC, WDG | 2.0 | **NS** | 2 | **NS** | 21 | 24 | 10 |  | Two applications (2 lb ai) for all products per cc. |
|  |  | 🗸 |  | Post harvest | Ground directed spray | 1.0  EC, WDG | 2.0 | **NS** | 2 | **NS** | 21 | 14 |  |  |
|  |  |  |  | **Total** |  | **2.0** | **4.0** |  | **3** |  |  |  |  |  | One preplant application and two foliar and/or postharvest application permitted per year. |
| **SUNFLOWER** |  | 🗸 |  | At plant | Aerial/ground | 2.0  G | 3.0 | 3.0 | [1]  NS | 1 | 42 | 24 | 10 |  | Per registrant 1 cc per year |
|  |  | 🗸 |  | Preplant | 2.0  EC, WDG | 3.0 | 3.0 | [1]  NS | 1 | 42 | 10 |  | 2 inches min incorporation |
|  |  | 🗸 |  | Post emergent or foliar | 1.5  EC, WDG | 3.0 | 3.0 | [2]  NS | 2 | 42 | 10 |  |  |
|  |  |  |  | **Total** |  | **2.0** | **5.0** | **5.0** | **3** | **3** |  |  |  |  | Assumed either an at plant or preplant application followed with two foliar applications.  One crop cycle per year |
| **SWEET POTATO** |  | 🗸 |  | Preplant, soil broadcast | ~~Aircraft~~, ground boom | 2.1  G, EC, WDG | 2.1 | NS | 1 | 1 | 125 | 24 |  | LA090002,MS080007, NC090001 permits 60 PHI |  |
| Aircraft | 2.0  G, EC, WDG | Updated to reflect spray drift mitigation. |
| **TOBACCO** |  | 🗸 |  | Preplant | Aircraft, ground boom | 2.0  EC, G, WDG | 2.0 | NS | 1 | 1 | 7 | 24 | NA |  |  |
| **TRITICALE** |  | 🗸 |  | Storage Commercial Slurry Seed Treatment | Seed treatment | 0.003  0.0024 lb ai/ 100 lbs seed EC | [0.003]  NS | [1]  NS | [1]  NS | [1]  NS | NA | [10]  NS | [10]  NS |  | 264-932  Seeding information provide by BEAD.4  One crop cycle per year. |
| **TURNIP** |  | 🗸 |  | Preplant | soil incorporation/ ground boom, handgun | 2.3  G, WDG | [4.6]  NS | 2.3 | [2]  NS | 1 | 30 | 24 | 10 |  | Minimum incorporation: 2 inches. |
|  |  | 🗸 |  | Postplant | Soil incorporation/ ground boom, handgun | 2.3  G, WDGP | [4.6]  NS | 2.3 | [2]  NS | 1 | 30 | 24 | 10 |  | Minimum incorporation: 2 inches. |
|  |  |  |  | **Total** |  | **2.3** | **4.6** | **2.3** | **2** | **1** | **30** | **24** | **10** |  | Assumed either a preplant or postplant application.  Two crop cycles per year |
| **UTILITIES**  For use in and around telecommunications, power, utilities and railroad systems equipment: Buried cables, cable television pedestals, cables, pad-mounted electric power transformers, telephone cables, underground vaults, telecommunications equipment, power and utilities equipment |  |  |  | When needed, broadcast | Product container | 1  G  0.44 lba.i./100 sq ft  (see comments) | 1 | NS | [1]  NS | NS | NS | NS | NS |  | Applications permitted as needed. Reg. Nos. 13283-14, 13283-17  Broadcast product onto the ground covering the area of the pad location, plus a two foot perimeter around the outside of the pad location. |
| **WALNUTS** |  | 🗸 |  | **dormant/**  **delayed dormant**;  broadcast | Aircraft, airblast | 2.0  EC, WDG | 2.0 | NA | 1 | NA | 14 | 24 | 10 |  | 62719-301 (12 lb a.i./A) |
|  |  | 🗸 |  | **foliar**;  broadcast | aircraft, airblast, chemigation | 2.0  EC, WDG | 4.0 | NA | 2 | NA | 14 | 10 |  | Some labels do not specify retreatment interval. |
|  |  | 🗸 |  | foliar; **orchard floors broadcast** | Ground boom, chemigation | 4.0  EC, WDG | 4.0 | NA | 1 | NA | 14 | 10 |  |  |
|  |  |  |  | **Total** |  | **4.0** | **10.0** |  | **4** |  |  |  |  |  | Excluding nursery applications; includes dormant, foliar broadcast, and orchard floor.  For nursery applications (See general “Fruits” listing) |
| **WIDE AREA/ GENERAL OUTDOOR TREATMENT**  For ants and other misc. pests. | 🗸 | 🗸 |  | when needed, Broadcast | Ground sprayer | 0.5084 lb ai/100 gal  EC | [1.02]  NS | NA | 2 | NA | NA | NS | NS |  | 66222-19 |
| when needed, Drench | Drench | 1.0 | NS | NA | NS | NA | NA | NS |  | 228-624 |
| [1.0]  8.2 lb a.i/100 gal EC | NS | NA | NS | NA | NA | NS |  | 228-625 |
|  |  |  | **Total** |  | [1.0] | [12.0]  NS | NA | NS | NA | NA |  |  |  |  |
| **WHEAT** |  | 🗸 |  | Slurry Seed Treatment | Seed treatment | 0.003  0.0024 lb ai/ 100 lbs seed EC | [0.006]  NS | 1 | [2]  NS | 1 | NA | NA | NA | Only for use in AZ, CA, CO, ID, KS, MN, MO, NE, NM, NV, ND, OK, OR, SD, TX, UT, WA and WY | Seeding information provide by BEAD.4 |
|  |  | 🗸 |  | Foliar, soil treatment | Ground, broadcast | 0.5  EC | [8.0]  NS | 4.0 | [2]  NS | 1 | 14/28 | 24 | 14 | PHI: 14 forage or hay, 28 grain or straw |
|  |  | 🗸 |  | Post-emergence foliar | Ground, Aerial, Chemigation | 1.0  EC | [4.0]  NS | 2.0 | [4]  NS | 2 | 14/28 | NS | Label states 1.0 lb ai/A for cereal leaf beetles and then state max rate 0.5 lb ai/A in restriction). Some labels restrict no more than 2 applications per crop/season  PHI 14 forage or hay, 28 grain or straw |
|  |  |  |  | **Total** |  | **[1]**  **4.0**  **EC** | [12.006] | **[6.003]**  **5.0** | [8]  NS | [4]  2 |  |  |  | MO otherwise 2.0 plus seed treatment |
| **WOOD PROTECTION TREATMENT TO BUILDINGS/**  **PRODUCTS OUTDOOR** |  |  |  | When needed, Wood surface treatment | Low pressure handwand, backback sprayer, paintbrush | 16.65 lb/10,000 sq ft  0.17 lb a.i./gal  EC | NS | NA | NS | NA | NS | NS | NS |  |  |
|  |  |  |  |  |  | 0.08 lb ai/gal  EC, RTU EC, ME | NS | NA | NS | NA | NS | NS | NS |  | Apply 1 gal per 100 sq ft of wood |
| 1. EC - emulsifiable concentrate; WDG – water dispersible granular in water soluble packet; WP – wettable power in water soluble packet; B – bait (granular), G – granular; ME – microencapsulated; RTU – ready to use. 2. Reported as per crop cycle or per season 3. PHI – Preharvest interval; REI – reentry interval; MRI – Minimum retreatment interval 4. Becker, J.; Ratnayake, S. Acres Planted per Day and Seeding Rates of Crops Grown in the United States, U.S. EPA OPP/BEAD, 2011; example calculations provided below:   Beans: 0.00058 lb a.i./lb seed / 960 seeds/lb seed x 418,176 seeds/A [pgs. 19, 81 (beans, succulent)]  Corn: 0.000625 lb a.i./lb seed / 1,800 seeds/lb seed x 59,739 seeds/A [pgs. 24, 81 (corn, sweet)]  Cotton: 0.00116 lb a.i./lb seed / 4,500 seeds/lb seed x 85,00 seeds/A [pgs. 13, 81]  Cucumber: 0.00058 lb a.i./lb seed / 12,000 seeds/lb seed x 80,418 seeds/A [pgs. 25, 81]  Peas: 0.000625 lb a.i./lb seed / 1,361 seeds/lb seed x 653,400 seeds/A [pgs. 34, 82]  Pumpkin: 0.00058 lb a.i./lb seed / 1,600 seeds/lb seed x 7,260 seeds/A [pgs. 37, 82]  Sorghum: 0.001 lb a.i./lb seed / 11,000 seeds/lb seed x 100,000 seeds/A [pgs. 16, 39]  Triticale: 0.003 lb a.i./100 lb seed / 109 lb seed/A [pg.16]  Wheat: 0.003 lb a.i./100 lb seed /116 lb seed/A [pg. 16]  [ ] indicate assumptions that are made when the information is not specified but can be inferred | | | | | | | | | | | | | | | |