| Post-harvest              |  |  |  |  |  |
|---------------------------|--|--|--|--|--|
| Pest                      | Spray Material, Rate/A<br>(pre-harvest interval)   | Cultural Practices<br>and Scouting Notes   | Comments   |  |  |
| Sharp-nosed<br>leafhopper | *Lannate LV, 1.5 pt (3)<br>Asana XL, 4.8-9.6 oz (14)<br>Malathion 57 EC, 2.8-3.2 pt (1)<br>Sevin 50W, 2-4 lb (0) | Rogue out plants affected<br>with blueberry stunt.<br>Monitor insects with yellow<br>sticky traps and control when<br>found. | Each of these sprays will control sharp-<br>nosed leafhopper, the only known carrier<br>of the blueberry stunt mycoplasma.   |  |  |
| Blueberry bud mite        | Thiodan 3EC, 2 qt (**)<br>Phaser 3EC, 2 qt (**)  |  | Apply immediately after harvest is<br>complete and repeat according to label<br>instructions.<br>** Do not apply <b>Thiodan</b> or <b>Phaser</b><br>after buds are well formed; do not apply<br>more than 2 times per year; do not<br>exceed 3.0 lbs active ingredient per acre<br>per year. |  |  |
| Phomopsis twig blight     | Lime Sulfur, 5 gal (0)   |  | Apply in late October or when 2/3 of leaves drop on Weymouth and Berkeley.   |  |  |

<sup>†</sup>Where brand names for chemicals are used, it is for the reader's information. No endorsement is implied, nor is discrimination intended against products with similar ingredients. Please consult pesticide product labels for rates, application instructions and safety precautions. Users of these products assume all associated risks.

\* Restricted use material; pesticide applicator license required.

## Weed Management

The primary goal of weed management is to optimize yields by minimizing competition between the weeds and the crop. Weeds reduce yields by competing with the crop for water, light, and nutrients. Weeds also harbor insects and diseases and encourage vertebrate pests. Timely cultivation, wise use of herbicides, and never permitting weeds to go to seed are integral parts of a good weed management system. Many of the weeds found in these fields are difficult-to-control perennial weeds that are not common in annual crop culture. New plantings usually have fewer perennial weed problems than older plantings. Annual and biennial weeds can also exist in these fields. Fields should be scouted at least twice a year (spring and fall) to determine specific weed problems. The selection of a weed management tool should be based on specific weeds present in each field. Several herbicides are labeled for use in this crop. A list of herbicides and their recommended uses is presented in Table 31 below.

Herbicides can be broadcast or applied as a directed spray to the base of the crop. With a band

treatment, only 1 to 2 feet on either side of the row is treated. The areas between the crop row is usually maintained with a mowed cover of sod, clover, weeds, or a combination of these. This cover is used primarily for erosion control and to improve trafficability in the field. With banding, less herbicide is needed in each acre. For example, a 3 foot band (1.5 feet on either side of the row) where rows are spaced 9 feet apart will require only on third the amount of herbicide normally required for a broadcast treatment.

Cultivation and mulching are sometimes used as weed management tools. All cultivations should be timely and shallow to minimize crop root injury, to minimize loss of soil moisture, and to avoid repositioning new weed seeds to the soil surface. Mulches that are free of weed seeds and placed thickly enough can be very effective at reducing or eliminating most annual weeds from the crop row. They are seldom effective on perennial weeds. If mulches are used in combination with herbicides, use the lowest recommended herbicide rate to avoid crop injury.

| TRANSPLANT YEAR  |  |                            |  |  |  |  |  |
|--|--|----------------------------|--|--|--|--|--|
| Weed Problem   | Herbicide                                  | Rate/Acre                  | Comments and Limitations   |  |  |  |  |
| PREEMERGENCE WEED CONTRO                                 | L  |                            |  |  |  |  |  |
| Annual grasses and small seeded broadleaf weeds          | (napropamide)<br>Devrinol 50 DF            | 8 lb                       | Apply after transplanting to weed-free soil. Devrinol<br>must be activated within 24 hrs by cultivation or<br>enough water by irrigation or rainfall to wet the soil to<br>a depth of 2 to 4 inches. The full rate may not be<br>necessary at transplanting.   |  |  |  |  |
|  | (oryzalin)<br>Surflan 4AS                  | 2 to 4 qt                  | Do not apply until soil has settled around the plants<br>and no cracks are present. Irrigation or 1 inch of rain is<br>needed within 21 days of application. Shallow<br>cultivation will improve control. May injure newly<br>planted tissue culture plants.   |  |  |  |  |
| Broadleaf weeds and some grasses                         | (simazine)<br>Princep 4L<br>Caliber 90     | 1 to 2 qt<br>1.1 to 2.2 lb | Use to improve the broadleaf weed activity of<br>Devrinol or Surflan. Consider applying half the<br>maximum rate after planting and half in the fall before<br>winter annuals emerge. Do not use on newly trans-<br>planted tissue culture plants.   |  |  |  |  |
| POSTEMERGENCE WEED CONTR                                 | OL   |                            |  |  |  |  |  |
| Emerged annual and most<br>perennial grasses             | (fluazifop)<br>Fusilade DX                 | 16 to 24 oz                | See label for best times to treat specific weeds. Will<br>not control broadleaf weeds or sedges. Do not apply to<br>crops to be harvested within 1 year of application. Do<br>not apply if rainfall is expected within 1 hour or if<br>grasses are under drought stress. Must be used with a<br>crop oil concentrate or non-ionic surfactant.  |  |  |  |  |
|  | (sethoxydim)<br>Poast                      | 1 to 2.5 pt                | See label for best times to treat specific weeds. Will<br>not control broadleaf weeds or sedges. Do not apply to<br>grasses under stress (e.g. drought). Crop oil concen-<br>trate must be added to the spray tank. Do not cultivate<br>5 days before or 7 days after application. Do not apply<br>more than 5 pints per acre per season.  |  |  |  |  |
| Emerged annual weeds and suppression of perennial weeds. | (pelargonic acid)<br>Scythe 3-10% solution |                            | Contact material for burn down only. See<br>Scythe comments in Strawberry section. See label for<br>complete instructions.   |  |  |  |  |
| Emerged annual and perennial weeds                       | (sulfosate)<br>Touchdown                   | 1 to 5 pt                  | NON-BEARING USE ONLY. Apply to actively<br>growing weeds during site preparation prior to<br>planting and no later than 1 year before harvest. Apply<br>with a wiper or a shielded/directed spray. Do not allow<br>the spray, spray drift, or mist to contact green foliage<br>or green bark on the trunk, suckers, open wound, or<br>other green parts of the bush. Consult the label for<br>rates for specific weeds and other precautions. Use<br>with a surfactant or wetting agent. |  |  |  |  |

Table 31. Weed management for highbush blueberries in the transplant year and in established plantings.

| ESTABLISHED | PLANTINGS |
|-------------|-----------|
|-------------|-----------|

| Weed Problem   | Herbicide   | Rate/Acre                                | Comments and Limitations   |
|--|---|--|--|
| PREEMERGENCE WEED CONTROL  |   |  |  |
| Annual grasses and small seeded broadleaf weeds  | (napropamide)<br>Devrinol 50 DF   | 8 lb                                     | Apply in the early spring before seedling weeds<br>emerge. Devrinol must be activated within 24 hours<br>by shallow cultivation or with enough rainfall or<br>irrigation to wet the soil to a depth of 2 to 4 inches.  |
|  | (oryzalin)<br>Surflan 4AS   | 2 to 4 qt                                | Apply to weed-free soil in the spring. Irrigation or 1 inch or rainfall is needed within 21 days of application.   |
|  | (norflurazon)<br>Solicam 80DF   | 2.5 to 5 lb                              | Apply in early spring when crop is dormant to clean<br>and weed-free soil. May result in temporary bleaching<br>or chlorosis of leaves from which the plant will<br>recover. Do not use on nursery stock.  |
| NOTE: For broad spectrum preemrgen<br>oryzalin, or norflurazon) in addition to           | ce weed control, control one of the followin  | nsider applying or<br>g "broadleaf" herl | ne of the above three "grass" herbicides (napropamide, bicides (simazine, terbacil, or dichlobenil).   |
| Broadleaf weeds, some grasses, and<br>suppression of some perennial weeds                | (simazine)<br>Princep 4 L<br>Caliber 90   | 2 to 4 qt<br>2.2 to 4.4 lb               | Apply in the spring before bud break and before<br>weeds emerge, or in the fall. Do not apply when fruit<br>is present. For improved control as well as quackgrass<br>suppression apply half in the spring and half after<br>harvest.  |
|  | (terbacil)<br>Sinbar 80WP   | 0.5 to 2 lb                              | Apply in the early spring or in the fall as a directed<br>spray to the base of the plants. Will also control small<br>emerged weeds. Do not contact new shoots and avoid<br>contact with foliage. Spring application must be made<br>before fruit set. Avoid application on plantings low in<br>vigor. Planting must be at least 1 year old before<br>application. Do not apply within 70 days before harvest. |
|  | (dichlobenil)<br>Casoron 50 WP<br>Casoron 4G  | 100 lb<br>100 lb                         | Apply at temperatures below 40½F, preferably just<br>before rain or snow. Soil must be settled around<br>established plants. Uniform application is essential.<br>Do not apply during new shoot emergence. The 4G<br>formulation is effective on many perennial weed<br>species. May reduce plant growth in plantings that are<br>young or lacking vigor. High leaching risk.                                  |
| POSTEMERGENCE WEED CONTROL   | OL  |  |  |
| Emerged annual grasses and<br>broadleaf weeds. Suppression of<br>emerged perennial weeds | ed annual grasses and (paraquat)<br>eaf weeds. Suppression of *Gramoxone Max 1.3 to 2.7 p |  | Contact herbicide. Use with a non-ionic surfactant.<br>Apply as a coarse directed spray to wet the weeds.<br>Apply before emergence of new canes or shoots to<br>avoid injury. Use of a shield is highly recommended.  |
| Emerged annual and most<br>perennial grasses   | (sethoxydim)<br>Poast   | 1 to 2.5 pt                              | Effective on actively growing grasses. Do not apply to grasses under stress (e.g., drought). Crop oil concentrate must be added to spray tank. Do not cultivate 5 days before or 7 days after application. Do not apply within 30 days before harvest in blueberries. Do not exceed 5 pints per acre per year.   |
| Emerged annual weeds and suppression of perennial weeds.                                 | (pelargonic acid)<br>Scythe 3   | -10% solution                            | Contact material for burn down only. See Scythe comments in Strawberry section. See label for complete instructions.   |
| Emerged annual and perennial weeds   | (glyphosate)<br>Roundup Ultra   | 1 to 5 qt                                | Apply to actively growing weeds. Apply with a wiper<br>or a shielded/directed spray to the base of the plants.<br>Do not permit herbicide solution to contact desirable<br>vegetation, including green shoots, canes, or foliage.<br>Do not cultivate within 7 days after application.   |

<sup>†</sup>Where brand names for chemicals are used, it is for the reader's information. No endorsement is implied, nor is discrimination intended against products with similar ingredients. Please consult pesticide product labels for rates, application instructions and safety precautions. Users of these products assume all associated risks. **\*Restricted use pesticide; pesticide applicators license required.** 73