



Witchgrass Control in Wild Blueberries

Witchgrass (*Panicum capillare* L.) is a weed commonly found in New Brunswick but which has recently begun appearing in higher densities within some blueberry fields. This weed is an annual grass with very hairy stem and leaves (Figure 1) that reproduces from seed. It grows either along the ground or upright and can be 5-120 cm (2-48 inches) in length. Witchgrass can quickly outgrow blueberry plants and form dense stands of grass. It produces a very fine, bushy seed-head. This seed-head can break off in the fall and move with the wind, dropping seed with every bounce (Figure 2) making control difficult, as new seed can move into fields every year if nearby populations are not controlled. Witchgrass tends to prefer warmer temperatures and germinates later in the season. It can set seed quickly if it establishes late in the season. Late emergence may help this grass avoid typical control measures. This weed can also interfere with the blueberry crop harvest by becoming tangled in harvesting equipment.



Figure 1. Witchgrass, note hairy leaves and stem.



Figure 2. Witchgrass infestation in New Brunswick with the plants on the right hand side of the road and seed-head movement to the left hand side of the road.

Cultural Control

Certain cultural control methods can reduce the impact of witchgrass on the blueberry crop. Since this annual species is well suited to take advantage of any excess nutrients in the soil, over-fertilization of blueberry fields should be avoided. Reduced fertilizer use in heavily infested areas will also be beneficial. Because this weed also tends to establish in bare areas within the field, any practice to improve plant density would reduce



Figure 3. Movement of seed-heads across a blueberry field.

the number of potential locations where witchgrass can establish. On the field scale, windbreaks could help decrease the spread of weed seed heads (Figure 3) and act as seed-head collection areas. Cleaning equipment after use in weedy areas could limit seed movement into additional field areas.

Mechanical Control

The use of a burn for pruning after harvest would be another control option for severely infested areas. The action would be two-fold. It would help to reduce the number of plants already present and would help to destroy the majority of the seed that dropped to the soil surface. Mowing would remove the plants growing on the soil, but would have a minimal effect on the seed present on the ground.

Herbicide Control

Fortunately, there are herbicides registered for witchgrass control, however proper application timing is needed (Figure 4). The most common control is the use of a Group 1 herbicide in the sprout or crop year. One option is Venture L (fluazifop-p-butyl), applied at the 2-5 grass leaf stage. The 1 L/ha application rate should be adequate for witchgrass control (increase to 2 L/ha if quackgrass, poverty oatgrass or other perennial grasses are present). Poast Ultra (sethoxydim) is another option registered for control at the 1-6 grass leaf stage. The 0.47 L/ha rate, along with a recommended surfactant (Merge or Assist) is needed for adequate control of most annual grasses, while 1.1 L/ha is needed for perennial grass control. Venture L and Poast Ultra do not provide any residual control and will only control those grasses that have emerged and are at the correct growth stage when applied. Late applications can be less effective, especially when made to large, mature plants.



Figure 4. Witchgrass seedling

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Other herbicides may be used for witchgrass control. Option 2.25 OD (foramsulfuron) can be applied in the sprout year when the grass has 2-4 leaves. Apply Option at a rate of 1.56 L/ha with 2.5 L/ha UAN. Ultim (nicosulfuron/rimsulfuron) can also control witchgrass in the sprout year, but the late application timing may increase the risk of blueberry injury from this herbicide. Sinbar 80 WDG (terbacil) should also provide witchgrass control. One application per year is the registered rate for this herbicide, applied either early in the spring of the sprout year (after pruning but before new blueberry growth emerges) or else in the late fall, when the crop is dormant. Sinbar will provide the benefit of residual control, although the level of control is dependent on soil and environmental factors and may not control late emerging weeds. Control from Velpar 75 DF (hexazinone) can be quite variable. No consistent control of this weed from Callisto 480 SC (mesotrione) is expected.

Conclusion

In order to limit the spread of this weed both early detection and prevention of plant establishment are critical. Proper field scouting throughout the year is required as this plant has variable germination and herbicide application to the appropriate plant stage is needed. Monitoring for seed-head movement in the fall can also be an indication of potential seedling development the next spring. If there are a large number of seed-heads moving across the land in the fall, there is a good potential for seed drop and witchgrass could become a problem the next season. The evaluation of information from scouting in the next spring will indicate if there is a requirement for control measures.