



Witchgrass Control in Wild Blueberries

Description

Witchgrass (*Panicum capillare* L.) is a weed common in New Brunswick but has recently begun appearing in higher densities within some blueberry fields (Figure 1). This weed is an annual grass that reproduces from seed with very hairy leaves. It grows from 5-120 cm (2-48 inches) tall either along the ground or upright. 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). This action makes control difficult, as new seed can move into fields every year if nearby populations are not controlled. Witchgrass tends to prefer warmer temperatures, so it germinates later in the season and can set seed quickly if it establishes late in the season. This weed can also interfere with blueberry crop harvest.



Figure 1. 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

There are cultural control methods that can reduce the impact of witchgrass. This annual species is well suited to take advantage of any excess nutrients in the soil, so over-fertilization of blueberry fields should be avoided. Reduced fertilizer use in heavily infested areas will also be beneficial. This weed also tends to establish in bare areas within the field, so any practice to improve plant density would reduce the potential starting locations for witchgrass. On the field scale, windbreaks could help decrease the spread of weed seed heads and can act as a seed-head collection area. Cleaning equipment after use in weedy areas can limit seed movement into additional field areas.

Mechanical Control

Another control option for severely infested areas would be to use a burn for pruning after harvest. This action would be two-fold, helping to reduce the plants that are 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.



Figure 2. Movement of seed-heads across a blueberry field.

Herbicide Control

Fortunately, there are some herbicides registered for its control. One option is Venture L (fluzifop-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 grasses. Venture L and Poast Ultra do not provide any residual control and will only control those grasses that have emerged and are at the proper growth stage when applied. Sinbar 80 WP (terbacil) should also provide witchgrass control. One application per year is registered, either early in the spring of the sprout year (after pruning but before new blueberry growth emerges) or else in the late fall for select blueberry clones, 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 season weeds. Control from Velpar 75 DF (hexazinone) can be quite variable. No control of this weed from Callisto 480 SC (mesotrione) is expected.

Conclusion

Prevention and early detection are keys to limiting the spread of this weed. 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 seedling potential in the next spring. If there are a large number of seed-heads moving across the land in the fall, there would be a good potential for seed drop and witchgrass could be a problem the next season. Control measures in this area should be evaluated by scouting in the next spring.