Table 15. Efficacy of fungicides for strawberry disease management.

Fungicide[a]	Gray mold	Leather rot	Leaf spot	Powdery mildew	Anthracnose	Red Stele
Alone						
Aliette[b]	-	+++	-	-	-	++
Cabrio	++	?	+++	+++	++++	?
Captan	+++	+	+++	-	+++	-
Elevate[c]	++++	-	-	-	-	-
Quadris[d]	+	+	+++	+++	++++	-
Ridomil Gold	-	+++	-	-	-	++++
Sulfur	-	-	-	+++	-	-
Switch[e]	++++	-	-	-	++	-
Thiram	+++	+	++	-	+++	-
Topsin-M[c]	+++	-	+++	++	+	-
In Combination						
Topsin-M plus captan	+++	+	+++	+++	+++	-
Topsin- M plus thiram	+++	+	+++	+++	++	-
Elevate plus captan	+++	+	++	-	++	-
Elevate plus thiram	+++	+	++	-	+	-

Efficacy rating system: ++++= excellent; +++=good; ++=moderate; +=poor; - =not effective or not labeled for this use; ?+ unknown.

[a] *This is not a complete listing of the fungicides used for strawberry disease management.*

[b] *Limited efficacy data available for Aliette.*

[c] *___Fungicide that is prone to develop resistant strains of fungi For resistance management, Topsin-M, and Elevate are recommended only in combination with an unrelated fungicide such as; captan or thiram.*

[d] *This material is extremely phytotoxic to McIntosh and some other apple varieties and should not be used near apples or in a sprayer also used on apples.*

[e] *Note restrictive plant back regulations ont his product.*

of favoring Black Root Rot rather than controlling it. Moving to a planting site which has not grown strawberries recently, and is well-drained is the best method of managing this disease.

Virus Diseases

Viruses are disease-causing organisms so small they cannot be seen with an ordinary microscope. Several viruses infect strawberries in the Northeast, and it is not uncommon for two or more viruses to be found within the same plant. Viruses in a plant may not show obvious symptoms. However, their presence does weaken the plant.

Loss of vigor and yield caused by viruses are more likely to show up when growing conditions are unfavorable and plants are stressed. Virus symptoms on strawberries, include chlorotic (yellow) spots or irregular patches on leaves. Leaves may crinkle, or otherwise be malformed. Herbicide injury and virus symptoms may be similar.

Management: Once strawberry plants are infected with a virus, they cannot be cured. The infection is passed on to all daughter plants via runners. Most viruses are spread from plant to plant via aphids. Chemical insecticides will not kill aphids before they are able to transmit viruses and may even stimulate aphids to feed. Planting virus-free material will decrease overall damage from virus diseases.

Insects

Fruit Damaging Insects

Tarnished Plant Bug (*Lygus lineolaris*): The tarnished plant bug (TPB) is a small (1/4") bronze-colored insect with a triangular marking on its back. The immature stage, or nymph, is smaller and bright green, resembling an aphid, but much more active. Both adults and nymphs feed on the developing flowers and fruit, sucking out plant juices with straw-like mouth-parts. This results in deformed fruit: typically “cat-faced” berries, also called nubbins or button berries. Such fruit are generally unmarketable.

Management: Controlling weeds in and around the planting may reduce populations of this insect, but insecticide sprays may be necessary. If mowing around fields, do so after insecticides have been applied (to control migrating insects). Avoid planting strawberries near alfalfa which attracts high populations of TPB. White sticky traps are available for