

Potential Pest Species: found in alfalfa and hay fields in Wyoming

Identification characteristics, history, and damage pests may cause

Russian Wheat Aphid (RWA)

Identification/history: Small, light green aphid with an elongated, soft spindle shaped body of about 1/6 inch. It has short-antennae and may be distinguished by the absence of cornicles and has a double or forked tail. Aphids reproduce either by laying eggs or by giving live birth to several young each day. The aphid can overwinter as an immature or as an adult in many different grasses. Winged forms occur when the host plant condition declines. Winged forms also occur when RWA are migrating which may occur from early spring to late summer. When wheat and barley crops mature, RWA will move to later maturing oats and grasses.

Damage: RWA inject toxic saliva into the plant and then will suck plant sap. Most feeding occurs on new growth of the leaf, causing the edges to curl inward. The first sign of damage is a discolored plant with tightly curled leaves and long, white streaks. Tillers may have a purplish or reddish color. Heavily infested plants can become prostrate or flattened. Damage after heading will appear as twisted or distorted heads caused by the head being trapped in the tightly curled leaf.

Blue alfalfa aphid

Identification/ history: It has a waxy covering, is darker green color, and no larger than 1/6 inch long. The antennae must be closely examined, the blue alfalfa aphid has uniformly brown antenna. It prefers cool, dry conditions favor this aphid's development, and populations decrease

quickly when temperatures reach 85°F. There may be many generations per year. The blue alfalfa aphid has not been detected in Montana.

Damage: injects a highly concentrated a toxin that retards growth, reduces yield, and may even kill plants. Damage can also reduce alfalfa, hay, or forages feed value, quantity and quality. A black fungus, sooty mold, grows on the honeydew excreted by the aphid and reduces palatability to livestock. Damage is more severe on short hay than on taller alfalfa.

Grasshoppers

Identification/ history: In general they have large hind legs for hopping and can be red, black or green in color. Their antenna is short too long. They are generally a larger pest species and all species are easily identifiable. They can be black, beige, and green, and yellow and are found in most states. In general most species overwinter in the egg stage as egg pods in the soil. Eggs hatch into nymphs and nymphs develop into adults. Most species have one generation per year.

Damage: Grasshoppers relish small grains and injury usually consists of defoliation or destruction of the plant. This may involve feeding on leaves or biting through the stems of small grains, severing the heads, feeding on ripening kernels and thereby causing extensive shattering. There are many natural enemies such as robber flies, wasps, spiders, rodents, birds, tachinid flies,

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flesh flies, bee flies, blister beetles, and ground beetles.

Spotted alfalfa aphid:

Identification/ history: smaller 1/10 inch long. It is pale very light yellow with four to six rows of darker spots on the upper abdomen that can be seen only on close inspection with a hand lens. This species is so small and light colored that care must be taken when checking the sweep net for its presence. It can be easily overlooked.

Development of spotted alfalfa aphid is optimal when temperatures are warm and humidity is low, with peak populations tending to develop late in the summer, although populations have been observed in the spring in dry land alfalfa. Dry weather, with mild temperatures, increases the chances for damaging infestations of the spotted alfalfa aphid.

Damage: Besides drawing photosynthetic material from the plant, this species injects a toxic substance into the plant, causing veins to yellow. This species feeds preferentially on older leaves lower on the plant, moving up as leaves die.

Pea Aphids

Identification/ history: Small green, long-legged, either winged or wingless soft bodied insects no larger than 1/6 inch long. Antenna is, by the naked eye, nearly uniformly green. Overwinter as eggs or female adults on alfalfa or clovers. In spring migrants spread to peas and other plants as well. Winged females give birth to active young nymphs. May be many generations

per year. In fall, males and females appear. Mating and egg laying takes place. Most of them overwinter as eggs.

Damage: Suck the sap and can also poison the plant. Can cause plant to wither and/or shrivel-up, which will lead to a reduction of quantity and quality of hay. This may occur on either first or second cutting of alfalfa, hay, or forages.

Lygus Bugs

Identification/ history: Adults about 1/4 inch long, have four wings that lie more or less flat over the back, and are marked by a distinct "V" on the back just in front of the wings. Color may be light green, various shades of brown, or almost black.

Nymphs have black spots of various sizes and numbers on their backs. Eggs, nymphs and adults. Overwinter as hibernating adults; mate in spring; females lay eggs in alfalfa stems. Two to five generations a year.

Damage: Forage production and quality of hay are affected. Most serious damage is in seed production. Cause buds to die, flowers to drop, immature seeds to shrivel, become discolored and fail to germinate when planted. When spraying for the Lygus bug there is major concerns for the non-target organisms. These include parasitic wasps and flies, predators such as lady bird beetles, lacewings, damsel buds, big-eyed bugs and pirate bugs as well as pollinators such as alkali bee, leafcutter bees, bumble bees, and honey bees.