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For Immediate Release

Wheat Stem Sawfly RF Meyer

Wheat stem sawfly is a native insect that feeds on grasses in Colorado. The insect was first identified by entomologists in Colorado around the late 1800's and primarily fed on range grasses. However, wheat stem sawfly emerged as a Colorado wheat pest in 2010 and damage from this insect has been expanding and increasing since. Today, this pest is estimated to cause \$30 million in damage, according to Brad Erker, Executive Director of the Colorado Wheat Research Foundation. As a result, Colorado State University (CSU) is focused on addressing cropping strategies to ease pest losses to this insect. Research is focused on cropping rotations and developing wheat varieties that discourage wheat stem sawfly from reproducing and damaging plants.

CSU and others have found that wheat stems that are more solid than the traditional hollow stemmed varieties have shown merit in reducing the pest's damage. Typically, adult wheat stem sawfly lay eggs in the stem during the growing season. The developing larvae feed and move downward in the plant and eventually cut the plant's stem off near the soil surface. The wheat plant with seed in heads fall to the ground and are un-

harvestable. Thus, not only is yield impacted negatively, but straw residue is also now laying flat on the ground. The larvae survive in the remaining stem near the soil surface.

Cropping strategies include shallow tillage that lifts wheat crowns and loosens soil. This activity exposes larvae to winter weather and increases mortality during some winters. However, tillage interferes with biological control insects (insects that feed on sawfly) and may increase soil erosion. Keep in mind that the advantages of controlling sawfly with tillage must be compared to the benefits of leaving residue on tops of fields.

Planting trap crops along field edges has shown promise in research trials. Wheat stem sawfly will deposit eggs in oats, barley, and rye and developing larvae will not survive in these crops. Trap crop strategy works best with low to moderate wheat stem sawfly populations. If populations are heavy, adults will continue to fly past the trap crop and into wheat fields. Also, avoid planting new wheat next to a previous field that contained wheat with sawfly populations. Adults emerge from the old wheat stubble in the spring and move into actively growing wheat. Adult wheat stem sawfly are not strong flyers and do not move long distances.

Applying insecticides has not been an effective strategy for this pest. Adults have an extended flight time during the growing season and repeated insecticidal applications in trials have not been cost effective for control.

One of the most effective strategies for reducing wheat stem sawfly damage is planting solid or semi-solid stemmed wheat varieties. Larvae trying to feed and develop in solid stemmed wheat varieties have higher mortality rates. CSU is currently incorporating solid-stem characteristics into existing wheat varieties and has released Fortify SF and Amplify SF, which are both semi-solid stemmed varieties. Other wheat stem sawfly varieties include AP Solid, Spur, WB4483, WB 4418, WB4595, and WB4792. For more information regarding local wheat variety availability, contact your local wheat seed dealer.