Grass Seed Insect Pests of Economic Importance

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Grass Seed Facts

- Grass seed crops are grown on nearly 500,000 acres in Oregon with a farm gate value of over $275 million dollars.
- Approximately 95% of grass seed is produced in the Willamette valley; 5% in the remainder of the state.
- Changes in production practices and the cancellation of key pesticides have significantly increased losses from insects, mites and slugs.
- Cultural, biological and other non-chemical measures are important, but they must be supplemented annually with an appropriate pesticide.

Pest that use to be control by field burning (list by Glenn Fisher, OSU)

- Winter grain mite
- Aphids (BYDV)
- Plant bugs
- Spittle bugs
- Saw flies
- Thrips

Tillage prior to planting reduces many pests of grass seed

- Wireworms
- Symphylans
- Slugs
- Black cutworm
- Saw flies
- Hessian fly
- True armyworm
- Sod webworm

Direct seeding and straw load has increased pest problems

- Straw on soil surface increases the amount and duration of surface moisture longer into the season. This attracts slugs, flies, pill bugs
- Harvest residues adsorb and bind insecticides, reducing amount of available active ingredient
- Residue clumps cause differential and slow emergence, thus enhance insect damage
- Cultivation was the most effective control for slugs, symphylas and wireworms

Since 1985 new pest introductions in grass seed crops requiring control

- Crane Flies

Rondon 2007
Emerging Insects problem that may be important in grass seed crops in eastern Oregon

Traditional insect pests in eastern Oregon include cutworms, sod webworms, grass gelechiidae, winter grain mites, and other grass seed moths. In recent years, other insects have emerged as pests of economic importance including 3 species of billbugs and the Banks grass mite. Overall, the grass seed industry in Oregon is facing increased loss from insects and mites in response to changing production practices such as the increased adoption of no-till/direct seeding production systems, reduced acreage of open field burned (burning of all post harvest residues), and increased adoption of the bale plus propane flame technique (NE Oregon). Some emerging concerns are: