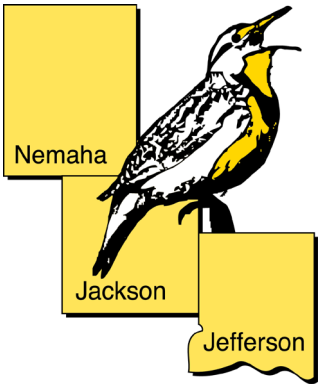
Armyworms in Bromegrass



Armyworm infestations in brome stands are a possibility *every* year. Because they are a migratory pest, however, they aren't always a problem in the same fields. When they do occur, damage can occur rapidly and with great visibility. This is especially true if infestations are high or post-harvest stand recovery is less than vigorous (late haying, hot/dry weather, etc…).

Early feeding signs from small worms include windowpane feeding in which leaf material is scraped off in irregular patches. Armyworm larvae may be too small to be easily observed when they first emerge hiding in or around the base of seedlings and are best found in the cooler parts of the day. Within a few days the larvae are large enough to destroy entire leaves. Fields with 25 to 30 percent of plants with windowpane injury should be re-examined daily and treated immediately if stand establishment appears threatened. As larvae increase in size, so do food requirements. Later instars do the most damage, sometimes destroying entire stands, and are the least susceptible to insecticides.

Damage Assessment:

1. *Make an appropriate identification.* Fall armyworms (image at right courtesy of K-State Research & Extension) do the most significant damage. Other species may have little or no effect on forages, while fall armyworm can do considerable damage in a short period.
2. *Estimate the degree of infestation.* As their name implies, larvae typically move across stands in a group. All areas of the field may not be affected equally. Areas where feeding has occurred may appear brown or drought stressed. Look for areas where birds are congregating feeding on the larvae.
3. *Determine larvae size.* Armyworm larvae will grow to a mature size of about 1.25 - 1.50" long. From hatching to larval maturity takes just over two weeks when temperatures are warm (cooler temperatures can slow growth and feeding rate). Larger larvae are likely about to pupate and will feed for only a short time longer. Additional generations are a possibility as we move further in to fall, though adults may move to other fields as well. They do not overwinter here.
4. *Determine the damage level.* In most years, by the time we notice damage, larvae are nearly grown and little is gained by the expense and time associated with an insecticide application. If there are still young larvae, and damage is severe (more than 4-5 half grown healthy worms per square foot), control may well be warranted. Look for worm carcasses, as well. Various flies and wasps are natural predators and may be doing a good job of controlling on their own. ***NOTE: in many cases, forage stands in good health can recover fully from damage with ample recovery time before frost and favorable temperatures/moisture conditions.***
5. If an insecticide is needed because larvae are young and causing considerable damage, make sure the chosen product is labeled for the forage in question AND armyworm. Numerous products are available. Always read and follow label directions.

What Next?
Keep monitoring. There is potential for another generation or maybe two this fall, though maybe not in the same fields you are seeing them in now.

Forages use leaf area to feed roots and root mass to put out new leaves when top growth is removed. This 'balance' becomes increasingly important as we move in to the fall, when we'd like to maintain a minimum of three to four inches of grass height in the month prior to fall dormancy. If stands defoliated now have the opportunity to recover this fall, the damage should be minimal. If stands cannot recover (drought/heat stress, low fertility, thin stands, etc…) and regrowth is minimal, stand reductions can occur Make sure the grass stand is in good health and that proper fertility levels are maintained to give the forage the best chance of survival.

Stands not showing ample recovery after feeding may be candidates for overseeding. The optimum fall window for brome planting occurs from mid-August through the third week of September. Monitor stands to make seeding decisions accordingly. If seeding cannot occur in a timely manner this fall, dormant season overseeding is possible in winter as well. Spring seeding can occur from mid-February through mid-March. Seeding rate should be a minimum 15 pounds of pure live seed per acre if the entire stand has been reduced.

Other Useful Links:
- https://blogs.k-state.edu/kansasbugs/tag/fall-armyworms/
- http://www.ento.okstate.edu/ddd/insects/fallarmyworm.htm
- https://extension.missouri.edu/news/scout-pastures-and-hayfields-now-for-fall-armyworms-5281
- This factsheet is located under the Crops & Soils link at: https://www.meadowlark.k-state.edu/

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