

Fall Armyworm in Pasture and Hayfields 2021

We have had numerous reports of fall armyworm egg masses in pastures and hayfields in Kentucky and Ohio in mid-August and now significant damage is occurring from the caterpillars across the state. Therefore, keep a close watch on your pastures/hayfields for these armyworms over the next few weeks. If you have 2-3 caterpillars per square foot or more, then you should consider spraying. In other words, these numbers will likely mean you will have considerable damage to late summer/fall growth in your pastures and hayfields.



One of the most effective insecticides, especially on worms larger than ¾ inch, is Besiege from Syngenta. This insecticide has dual modes of action and is systemic resulting in a higher chemical cost per acre (\$25 per acre). A considerably less expensive option (\$5 per acre) that can be effective on smaller armyworms (less than ¾ inches) are pyrethroids. When using pyrethroids for larger larvae, higher labeled rates are recommended. Besiege has a 0-day or 1-day (alfalfa) grazing restriction and a 7-day harvest restriction for alfalfas and grass hay. At bottom is the full list from University of Kentucky publication ENT-17.

Note: Fall armyworms are easiest to kill when small and pyrethroid (pyrethrin) insecticides are effective at this stage and considerably less expensive. Larger larvae are more difficult to control with pyrethroids.

An alternative to insecticide application for hay crops near harvest stage, is to mow the crop **IMMEDIATELY**. Unfortunately, waiting 2 or 3 days for good curing conditions is not an option since armyworm defoliation is so rapid. Once cut, the conditions in the mowed forage become less conducive for the armyworm. However, live armyworms are being found at baling under windrows. This indicates that regrowth should be closely monitored and insecticides applied once economic thresholds have been reached.

Please see recent articles in the [Kentucky Pest News](#) from our entomologists in Lexington (Ric Bessin and Jonathan Larson) and in Princeton (Raul T. Villanueva and Zenaida Viloria) for more information on fall armyworm:

- [Scouting and control-Ric Bessin and Jonathan Larson](#)
- [Trap counts, egg masses and potential for persistence -Raul Villanueva and Zenaida Viloria](#)

Fall Armyworm Control for Alfalfa and Pastures

Insecticides	MOA Group	Graze/harvest – days Interval (PHI)
<i>carbaryl</i> - Sevin XLR, Sevin 4F, etc.	1A	7 for alfalfa (May temporarily bleach tender foliage) 14 days for pasture and grasses for hay
<i>malathion</i> – Malathion 5EC	1B	For grasshoppers, 0 days
<i>b-cyfluthrin</i> - Baythroid XL (1 st and 2 nd instars only)	3A	1 day forage 7 days for hay (alfalfa) 0 day forage, 7 days for hay (pasture grass)

<i>g</i> -cyhalothrin – Proaxis EC	3A	1 day forage 7 days for hay (alfalfa)
<i>l</i> -cyhalothrin – Warrior II	3A	1 day forage 7 days for hay (alfalfa) 0 day forage, 7 days for hay (pasture grass)
<i>a</i> -cypermethrin – Fastac EC	3A	3 days for cutting or grazing (alfalfa)
<i>z</i> -cypermethrin – Mustang Maxx	3A	3 days for cutting or grazing (alfalfa) 0 days for cutting or grazing (grass forage and hay)
<i>methomyl</i> - Lannate	1A	7 days for grazing or hay (alfalfa)
<i>methoxyfenozide</i> – Intrepid 2 F	18	0 day forage, 3 days for hay (alfalfa) 0 day forage, 7 days for hay (Grass forage, fodder and hay)
<i>permethrin</i> – Ambush, Permethin 3.2 AG	3A	0 or 14 days depending on rate used (alfalfa only)
<i>pyrethrins</i> - PyGanic	3A	0 day forage/harvest
Bt products - Agree WG, Biobit HP, DipelDF, Javelin	11	0 days

- Products in Bold are Restricted Use Pesticides.

Other Notes:

1. We are observing plenty of egg laying from the current crop of armyworms. This is a good indication that they will be a persistent problem until frost.
2. Alfalfa seems to be their preferred crop. There are infestations in other crops, but hayfields and pastures seem to be worse at this point in time.
3. We had initially thought that harvesting forage stands that were almost ready to cut would cause army worms to move on to other vegetation. This has not been completely true. Even at baling, significant numbers of living worms have been present under the windrows. This indicates that it is going to be critical to scout regrowth closely and frequently and control when economic thresholds have been reached (2-3 armyworms per square foot).
4. Even if you are not planning on cutting again, controlling re-infestations in alfalfa is critical as we move into fall. As you know, allowing alfalfa to replenish carbohydrate reserves in the taproot prior to fall dormancy is important for persistence and growth in the spring. So, scouting and insecticide application when the economic threshold has been reached is critical to the long-term health of alfalfa stands.
5. **If you are establishing new forage stands this fall, it is critical that they are closely monitored, and insecticides are applied as soon as the economic thresholds have been reached. New seedlings will be extremely susceptible to fall armyworm damage since they do not have an established root system.**
6. **If you are stockpiling cool-season grasses for winter grazing, it will be important to closely monitor growth for armyworms and apply insecticide once the economic thresholds have been reached.**
7. **This information is also important for wildlife enthusiasts that have established food plots. In most cases, food plots consist of annual grasses, legumes, and forbs, all of which are succulent and very susceptible to fall armyworm damage.**



FALL ARMYWORM LIFE CYCLE (IN LATIN AMERICA)

The Fall Armyworm (*Spodoptera frugiperda*) is an insect pest that can feed on more than 80 crop species and may cause significant yield reduction on major cultivated cereals such as maize, rice, sorghum, and also to legumes, vegetable crops and cotton, if not managed.

It is native to the tropical and subtropical regions of the Americas and has become established in many countries across Africa since it has been first detected in early 2016.



PUPAL STAGE

8-30 days



Adult female lives an average of 10 days (up to 21 days).



EGGS

Eggs are laid in masses of 50-200 eggs.



Eggs hatch in 2-3 days

LARVAL STAGE

(6 instars): 14-22 days



The female moth of the fall armyworm can lay up to a total of 1 000 eggs in her lifetime. It can have several generations per year (depending on the temperature).

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