

Fumigants & Pheromones

Insects Limited, Inc.



Ethan Estabrook, BCE

Mealy Moth, Meal Moth, Indian Meal Moth – What is it really?

The terms “Mealy moth”, “Meal Moth” and “Indian Meal Moth” get thrown around by people talking to each other and on the internet frequently, but what really is a “Meal moth”? What we have here are actually two separate species. The “Indian meal moth” or sometimes called simply a “Mealy moth” is the species *Plodia interpunctella*. The [Indian meal moth](#) is the number one pest of grains and dried food goods and considered to be the top pantry pest in the world. This moth got its common name when it was found infesting the ground meal made from Indian corn a very long time ago. This major economic pest should not be confused with The Meal Moth, *Pyralis farinalis*. Although both species have similar names, similar coloration, and feed on some of the same types of food products. It is important to distinguish between the two species because they require different monitoring techniques.

[Indian meal moths](#) can be identified by their distinct bi-coloration on their wings. Their wings are a lighter cream to yellow at the base and a darker reddish brown at the tips. Adult moths are about 6 to 7 millimeters long. Indian meal moths are one of the most common insect pests found on dried stored products like pet food, grains, seeds, and cereals. More information about the Indian meal moth can be found on our YouTube channel here - https://www.youtube.com/watch?v=atc02E0Ws_c.



Top view of an Indian meal moth (*Plodia interpunctella*) - #1 Pest of stored grains

Meal moths, on the other hand, have a wavy pattern of dark reddish brown at the wing base and tips with a tan center bordered by a light white line. Adult moths are much larger than the Indian meal moth at a body length of 7.5 to 15 millimeters (Twice as long). Meal moths feed on similar food material as the Indian meal moth and can be found on dried stored products like pet food, grains, seeds, and cereals but typically in areas that are lacking in sanitation.



Top view of a Meal Moth (*Pyralis farinalis*), twice as long as an Indian Meal Moth

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[Indian meal moths](#) can be easily monitored with sex pheromones. The Indian meal moth pheromone is very effective at attracting male Indian meal moths and can also attract other moth species like the almond moth (*Cadra cautella*), Mediterranean flour moth (*Ephestia kuehniella*), raisin moth (*Cadra figulilella*), tobacco moth (*Ephestia elutella*), and beet armyworm (*Spodoptera exigua*). The Indian meal moth pheromone is widely available and cost-effective.

The meal moth, *Pyralis farinalis* does not have a commercially available sex pheromone and are they are not attracted to the Indian meal moth pheromone. Attractants like food material can be used to detect and trap the meal moth, but do not expect the same type of capture rates compared to the Indian meal moth pheromone. Food attractants as an insect monitoring tool have much more competition when other food scents are present and this can reduce the overall effectiveness of a lure attractant. Cleaning up spilled food material and placing dried food products into airtight plastic containers will help remove other food scents and help make food attractant lure more effective. Sanitation and exclusion are the first steps to a comprehensive integrated pest management program.

Learn more about Food
Industry Pests

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Tom Mueller

Stored Product Insect Virtual Seminar – Season 2 Recap

Professionals are starved for information. At first, that sentence read “PEOPLE are starved for information,” but there is a difference between people and professionals. This was discovered during our June series of the [Insects Limited](#) hosted virtual webinars on stored product insects. People who look to improve their situations to better their company, as well as their customers, are professionals.

After interacting with individuals who attended the virtual seminars, I discovered they all had one similar mindset, and that was **“never miss an opportunity to learn.”** That phrase was spoken to me by Mark Sheppard, Director at Pest Australia Pty Ltd. Our seminars were conducted live at 2:00 pm EST which were recorded each time, but Mark took the opportunity to listen to the series live. When it is 2:00 pm in Indianapolis, Indiana, USA, it is 2:00 am in Western Australia. Some would say he is crazy.

Mark is not alone; I was joined by individuals from 19 different countries all coming together to listen to a wide range of topics within the stored product industry. After learning this, a certain pressure started building. If these professionals are going to sacrifice personal time to learn, then I must share information they do not already know and can use throughout their days.

We started by sending a survey to find out the exact information was most sought after, and the topics ended up being

- *General and Facility Specific IPM*
- *The Pros and Cons of New Monitoring Technology*
- *A Deep Dive into the Indian Meal Moth*
- *A Deep Dive into the Warehouse Beetle*
- *Mating Disruption.*

Each episode took 3.5 days to prepare only leaving me about 1.5 days to catch up on my other job responsibilities.

Throughout this series, we had roughly 650 registrants with a 60% attendance rate. The reason we started these virtual seminars was due to canceled or postponed conferences most of us were affected by throughout the last few months. As the world started to open back up, we saw a slight decrease in attendance, but constantly received requests for the individual episode recordings which we are happy to provide at www.insectslimited.com/conferences.

I am proud to have pulled together the information so that we **“never miss an opportunity to learn.”** As for the future, there will be more episodes so stay tuned.

