

NEWS RELEASE

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Agriculture - Livestock

EXTERNAL PESTS IN BOVINE

Spring and summer are prime times for the emergence of external pests. Our livestock are the victims of these pests from mid-May to August. To avoid economic loss, we should use integrated pest management practices to manage and control pests during this period. To give you a better understanding of external pest management, we will cover pest identification and biology, management practices of each, and safe use of pesticides on livestock.

PESTS:

External pests can range from insects to predators, to rodents. Each pest has a different effect on different livestock. If not managed properly, each pest can cause detrimental effects that can lead to a loss in animal productivity. These pests directly affect animal productivity by spreading disease and parasitic worms, causing blood loss, and more.

PEST IDENTIFICATION:

In order to properly manage the pests that are affecting your bovine, you must first identify the pest so you can use the proper management practices. The most common external pests of bovine fall into two classes, the Insecta and Arachnida. Pests that fall into the Insecta class are flies and lice. Pests such as mites, ticks, and spiders fall into the Arachnida class. The life cycle of these pests includes three distinct stages – egg, larva or nymph, and adult. Sometimes a fourth stage, the pupa stage, is included in some Insecta species. It is important to be able to identify the lifecycle of specific pests. It will allow you to take preventative measures and have knowledge of when to apply insecticides. Also, it will help you prevent the lifecycle of the pests from completing. These preventative measures include properly disposing of manure, and keeping pastures and feed areas clean and dry.

COMMON PESTS IN BOVINE:

FACE FLY (*Musca autumnalis*)

The Face fly is a non-biting fly that annoys livestock by gathering around the eyes, nose, mouth, and open sores or wounds. This fly is the carrier and transmitter of the organism that causes pinkeye and a parasite called the Eye Worm (*Thelazia lacrymalis*). Adult flies emerge, in early spring, from overwintering in buildings and other sheltered areas. The flies prefer bright and sunny areas to shaded or dark areas. Adult females lay their eggs in manure.

HOUSE FLY (*Musca domestica*)

The House fly is one of several flies that fall under the name Filth flies. This is because the House fly feeds and thrives in areas where manure or other decaying material such as hay, straw, or feed is present. House Flies are the most important of the Filth flies because, not only are they a nuisance to bovine and humans; they are responsible for carrying some disease organisms such as cholera, salmonella, mastitis, and pinkeye. If not managed, House flies can also lead to community nuisance complaints.

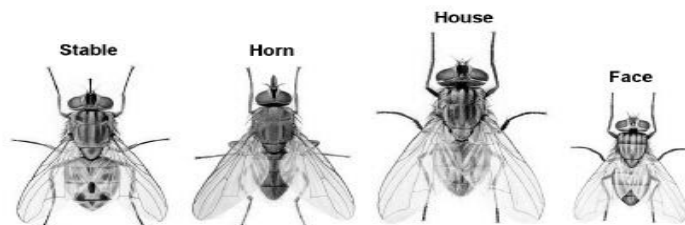
STABLE FLY (*Stomoxys calcitrans*)

The Stable fly is similar to the House fly but feeds on the blood of cattle. This fly is more aggressive and has a painful bite. It usually feeds on the legs of cattle, making them annoyed, biting, and throwing their heads instead of grazing. Stable flies tend to follow their hosts for long periods, causing animals to become irritated. It starts its life cycle by laying eggs in moist organic material such as compost piles, old hay, old grass clippings, etc.

HORN FLY (*Haematobia irritans*)

The Horn fly is a continuous, blood-sucking pest. The flies feed on their host (cattle) 7 to 12 times daily. The flies

often congregate on cattle in areas that the animal cannot reach to disturb their feeding. These areas include the back, base of the horns, neck, and belly of the animal.



PESTICIDE USE:

The method of application of pesticides is essential to the success of the pesticide. All pesticide labels should be read, but there are several actions you can take to aid in the success. Self-application devices such as back rubs and bullets should be charged once weekly with pesticide along with being charged with a sticking agent such as mineral oil or diesel fuel. Please read your pesticide instructions to make sure that your sticking agent will not react with the pesticide.

It is best to hang the self-application devices in areas that cattle are made to go through or are often using. Common places include mineral troughs, feeding troughs, barn entrances. If possible, the application devices should be hung in a dry area and out of the rain. Sprays, ear tags, and feed additives are also a good source of pesticide application.

PESTICIDE SELECTION:

As mentioned before, you should identify the pest before treating your cattle with a pesticide. If you apply an inappropriate pesticide, it is often not beneficial and only an economic waste. Before purchasing a product, identify the pest. Always read the label and identify which pest the pesticide is used for, how the pesticide should be used, and which animals it can be used on. We must select the correct pesticide, so we do not harm our animals or use our funds to purchase an unusable product. In addition to selecting an appropriate pesticide, choose one with a slaughter withdrawal time that meets your operation's needs. There are many pesticides on the market. Many are available in walk-in stores, but almost all can be found at online stores.

PEST RESISTANCE:

When addressing pest issues, we want to avoid pest resistance. Pest resistance appears when we use the same pesticide too frequently. This allows the pests that are resistant to the pesticide to survive and breed, producing more resistant pests. A way to avoid this from occurring is by suggesting that we rotate the use of pesticide chemical classes so that another kills the pests resistant to one chemical class.

Another method of avoiding resistance is not to treat animals until they reach the economic threshold of 200 or more flies per head. Treating the cattle before reaching this threshold is not only wasteful in expense but also aids the flies with resistance. Waiting until flies reach the economic threshold allows the non-resistant flies to reproduce and increases the possibility of a larger population of flies killed by the pesticide. A good rule of thumb is to treat your animal when you cannot cover the flies on their entire body, when gathered together, with both your hands.

For more information, please contact Michelle South, Area Extension Agent at (828) 260-5120 or by email at michelle_south@ncsu.edu.

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