FEEDING LEVELS

To control manure-breeding flies, all cattle on the premises need to consume adequate quantities of ClariFly® Larvicide every day. The inclusion level for this product for cattle over 200 pounds is 0.10 mg. of the active ingredient per kg. of body weight per day.

No milk or meat withholding.

TAKE ACTION

Fly management programs on feedlots need to be proactive. Fly populations can grow quickly and spread to neighboring operations and communities. When stable fly populations reach 50 to 60 stable flies per animal, you can see a dramatic reduction in performance. ClariFly® Larvicide will not directly affect cattle health or production, but it will take care of the nuisance flies that do.

INTERRUPTING THE FLY LIFE CYCLE

ClariFly® Larvicide is ingested via feed which the animal disperses via its manure.

Female flies lay eggs in fresh manure or other organic waste.

ClariFly® Larvicide inhibits the development of a functioning exoskeleton during molting to cause larval death before the pupal stage.

Eggs will hatch into larvae that will feed and attempt to undergo 3 larval instars. ClariFly® Larvicide breaks the life cycle of flies developing in treated manure by not allowing the larvae to successfully molt from one instar to the next.

SUMMARY OF LAB BIOASSAY

A study was conducted to evaluate efficacy of ClariFly® Larvicide to prevent the development of house flies in the manure of cattle. Study animals were weighed and randomly assigned to one of two treatment groups. Individual treatment doses were prepared for each animal in the treated group for the entire 10-day test period (study day 0 – 9). Cattle in the untreated control group received placebo unit doses. Each animal was fed the individual dose each morning beginning on day 0. Manure was collected from each animal beginning on study day 3 and continuing through study day 9.

The treated group provided an average of 96.7% reduction of house fly development and emergence from manure when compared to the untreated control group over the seven days that manure was collected.

This study confirms that the active ingredient provides control of house flies developing in manure from cattle fed ClariFly® Larvicide at the label rate of 0.10 mg. of the active ingredient /kg. of body wt./day.

<table>
<thead>
<tr>
<th>Study Day</th>
<th>Untreated Control Group</th>
<th>ClariFly® Larvicide Treatment Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Flies</td>
<td>Average Flies</td>
</tr>
<tr>
<td>3</td>
<td>23.83</td>
<td>0.13</td>
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<tr>
<td>4</td>
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<tr>
<td>9</td>
<td>23.17</td>
<td>1.93</td>
</tr>
</tbody>
</table>

Average number of adult flies and percent reduction of emergence in the ClariFly® Larvicide treatment group by study day. For full study data, go to centralflycontrol.com. Average of 96.7% reduction in house flies compared to untreated control group.

*Data on file.

To get ClariFly® Larvicide in your feed mix, contact your micro ingredient supplier or local feed dealer.

For more information or help starting an IPM program, call 1.800.347.8272 or visit www.CentralFlyControl.com.

Always read and follow label directions. ClariFly, ClariFly Larvicide with design and Starbar are registered trademarks of Wellmark International. Central Life Sciences with design is a registered trademark of Central Garden & Pet Company. ©2018 Wellmark International. CTL 19-002
SEASON-LONG FLY CONTROL

ClariFly® Larvicide is a feed supplement that prevents stable flies and house flies from developing into adults. It is also effective on horn flies and face flies. The active ingredient prevents larvae from developing into pupae. It is not a neurotoxin like an organophosphate or a pyrethroid. ClariFly® Larvicide works as a feed-through, passing through the digestive system and into the manure where flies breed.

Start ClariFly® Larvicide in your feed early in the spring before flies begin to appear. Continue it through the summer and into the fall, until cold weather reduces or ends fly activity.

MAKE CLARIFLY® LARVICIDE PART OF INTEGRATED PEST MANAGEMENT (IPM)

There is no silver bullet for fly control. ClariFly® Larvicide is most effective as part of an IPM program. Practicing good sanitation, maintaining building repairs and utilizing baits and traps such as those in the Starbar® line of products, in conjunction with ClariFly® Larvicide, can significantly impact fly control. The key is eliminating breeding habitats. Manure can account for 60-70% of fly breeding in a feedlot operation. ClariFly® Larvicide goes to work in manure, stopping larval development and decreasing fly populations.

Studies have shown that reduced fly populations can improve feed efficiencies. When cattle are less agitated they stay on feed and are more productive. An IPM program including ClariFly® Larvicide can actually help increase your operation’s bottom line.

FIGHT THE FLIES THAT IRRITATE YOUR CATTLE

House flies have been implicated in the transmission of 65 disease organisms with populations that can burst out of control in a short period of time.

HOUSE FLY FACTS

- House flies carry diseases that are a risk to both cattle and workers.
- House fly populations can spread to neighboring operations and homes. It’s best practice to institute a control program before a complaint is issued.
- House fly control improves the work environment.

Horn flies are bloodsucking parasites that can be responsible for reduced weight gain, decreased feed efficiency and decreased milk yields.

HORN FLY FACTS

- Horn flies cause teat lesions and are vectors of Staphylococcus aureus, which can cause mastitis.
- Feeds on blood of animals with piercing mouthparts, taking up to 40 blood meals a day.
- Female horn flies only leave their hosts to lay their eggs in freshly deposited cow manure.
- Typically found congregating on the backs of cattle.

In addition to causing tissue damage with their rough spiny mouthparts, face flies spread diseases of the eye because they are constantly feeding on the fluid.

FACE FLY FACTS

- Face flies can transmit and spread pinkeye to cattle.
- Uses sponging mouthparts to feed on secretions around the eyes, nose and mouth of cattle.
- Lays eggs only in fresh, undisturbed cattle manure.

The stable fly has one of the most painful bites of any bloodsucking insect and feeds mainly on the legs and flanks of cattle.

STABLE FLY FACTS

- Feeder cattle with 50 stable flies per animal showed a reduced average daily gain of 0.2 lbs. per head per day with hindered feed conversions of 12.9%. Feeder cattle with 100 stable flies per animal showed a reduced average daily gain of 0.5 lbs. per head per day with hindered feed conversions of 10.5%.
- Stable fly irritation can contribute to increased “heat stress” in cattle and can cause reduced intake during summer months, reducing performance.
- When infested by stable flies, feedlot cattle will bunch – an indication that performance/cost of gain is being affected to the point of profit loss.

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