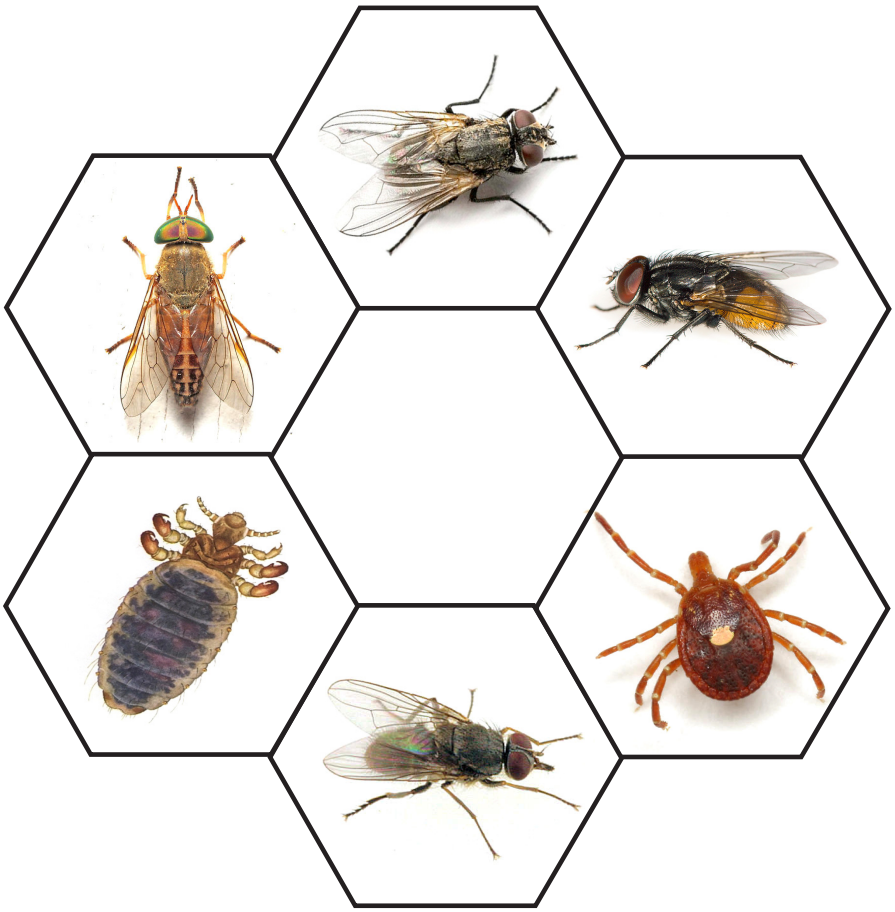
Y-TEX®
EXCELLENCE IN ANIMAL HEALTH™



Pest Control for Cattle

A guide to ectoparasites,
how they damage your cattle,
and how to effectively combat them.

Introduction

Knowledgeable cattle producers recognize proper management of external pests is critical for optimal animal production and animal welfare. Observing cattle routinely allows producers to recognize slight changes in behavior so they can stay ahead of any threats to the herd. External pests are one of those threats that require vigilance. The main external pests that attack cattle (flies, ticks & lice) are discussed in this brochure along with effective methods to control them.

Damage

Pests that attack cattle can cause a wide range of problems for the animal ranging from mild irritation to death. Persistent pest irritation may compromise animal performance. The chart below lists the damage external pests may cause cattle if left untreated.

1. Slowed growth
2. Decreased lactation
3. Disease transmission (Anaplasmosis, Cattle Fever & Blue Tongue)
4. Degraded hides
5. Anemia
6. Lower weaning weight
7. Increased risk of pink eye

Warning Signs

It's important for producers to look for any signs of pest invasion to stay ahead of the assault. Observable signs of pest invasion may include the following changes in animal behavior.

1. Tail twitching
2. Stomping
3. Rubbing/scratching
4. Hair loss/Dermatitis
5. Standing in groups (bunching)
6. Standing in water
7. Head swinging to dislodge pests for temporary relief

Flies

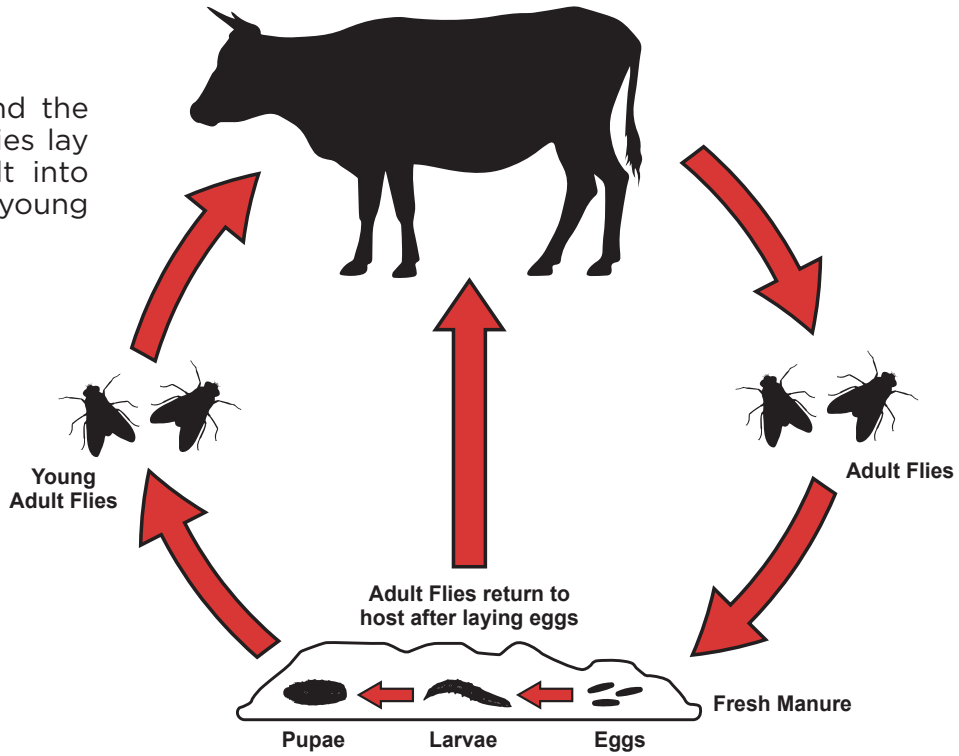
Cattle producers in the U.S. are typically most concerned about Horn Flies or Face Flies. In fact, recent studies estimate the Horn Fly is responsible for $1 billion in damage to U.S. cattle annually.

Horn Flies are biting flies that are known to take a blood meal every 45 minutes. Control measures should be used to keep Horn Fly counts below the economic threshold of 200 flies per animal. The life cycle of the Horn Fly can be completed in just 7-10 days with their adult stage ranging from 4-6 weeks depending on weather and other factors. The female Horn Fly can produce 360 eggs in her lifetime.

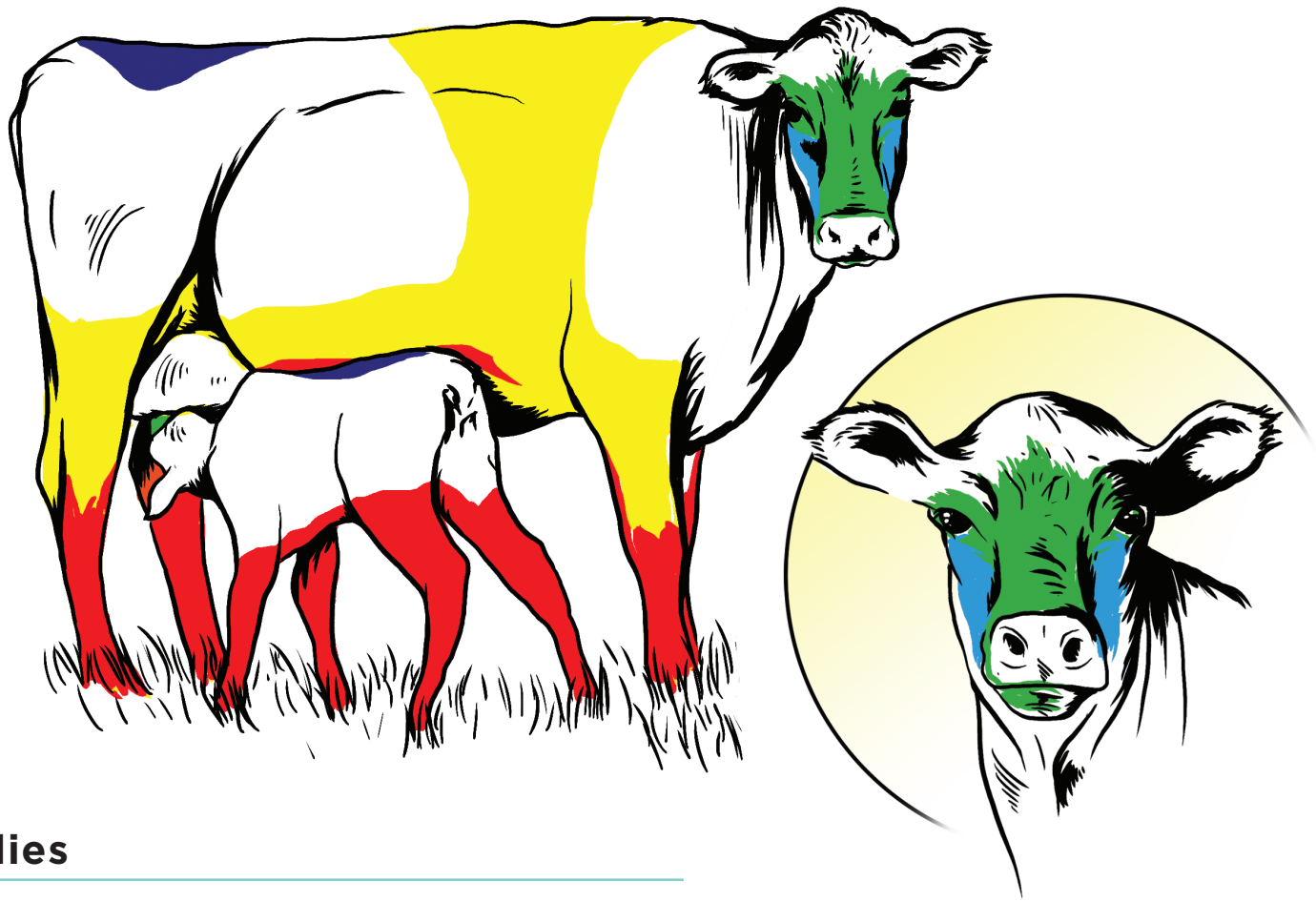
Face Flies are non-biting flies, but they still cause irritation impacting performance. Face Flies feed from moisture around the eyes and nose as well as manure and may transmit pink eye in cattle. Their life cycle can be completed in 10-15 days with their adult stage ranging from 2-3 weeks depending on weather and other factors. The female Face Fly can produce 250 eggs in her lifetime.

Fly Life Cycle

The life cycle of the Horn Fly and the Face Fly are very similar. Adult flies lay eggs in fresh manure. Eggs molt into larvae, then pupae, to emerge as young adults in 1-2 weeks.



Common Locations of Flies on Cattle



Flies

Horn Fly (*Haematobia irritans*)
- #1 problem fly in the U.S.
- Contribute to weight loss up to 50 lbs/head
- Disease vector
- Lays eggs in manure
- Completes life cycle in 2 weeks

Stable Fly (*Stomoxys calcitrans*)
- Contribute to weight loss up to 50 lbs/head
- Disease vector
- Can take 2-3 feedings per day
- Lays eggs in mixture of feed, hay and manure

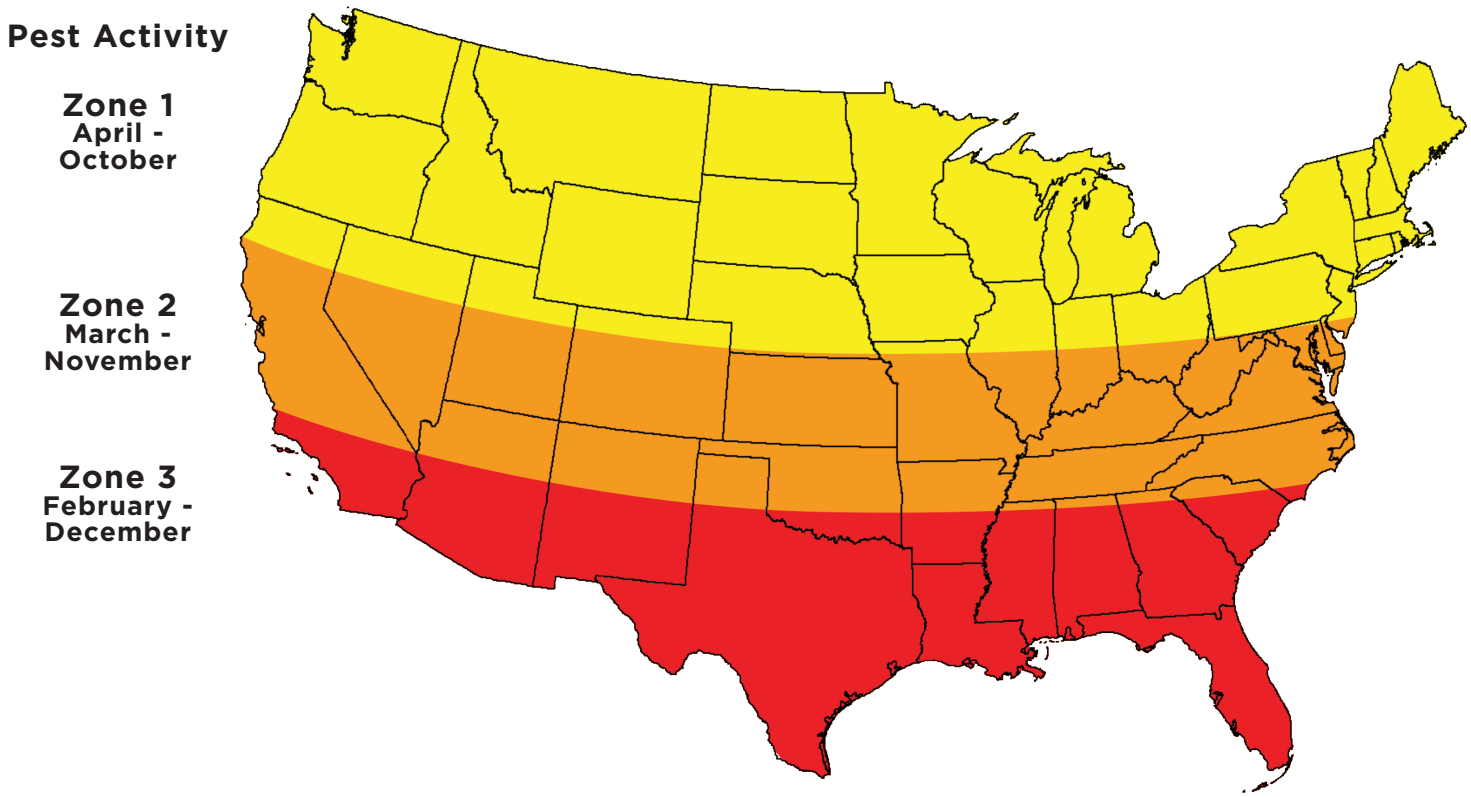
Horse/Deer Fly (Various species)
- Painful bite
- Contributes to weight loss
- Disease vector

House Fly (*Musca domestica*)
- Transmits bacteria and viruses
- Major source of irritation and fly worry

Face Fly (*Musca autumnalis*)
- Feeds on body fluids
- Transmits bacterias that may cause pink eye
- Congregates around wounds, eyes & nose

U.S. Fly Zones

The map below divides the U.S. into three fly control zones. Some of the southern parts of zone three may fight flies 12 months of the year. Producers should be thinking about pest control and which methods they intend to use year-round.



Resistance Management

Combatting resistance is part of an effective pest control strategy. Over the years Horn Flies have developed documented biological resistance mechanisms to pyrethroid and organophosphate insecticides and are therefore the main focus of resistance management. Researchers have proven that a properly implemented integrated pest management (IPM) program combats resistance, improves herd health and insecticide efficacy. An effective IPM program should contain the following controls;

1. Chemical – rotation of insecticides
2. Cultural – cleaning premises
3. Biological – fly predators and dung beetles

Economic Impact

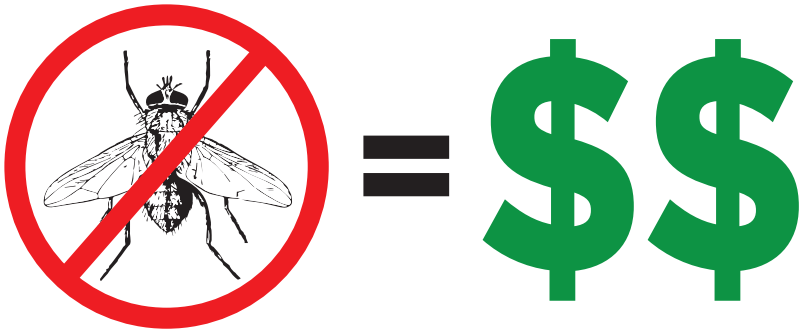
NMSU* Study Shows Value of Horn Fly Control in Cattle

A four-year study was conducted by researchers at New Mexico State University from 2013 to 2016 on rangeland cattle to assess the growth and reproductive performance of cows and calves infested with naturally occurring seasonal populations of Horn Flies versus those animals in an untreated control group. One hundred five Angus Hereford cow-calf pairs were evaluated as a randomized complete block that was replicated across the four years. Cows were randomly allocated to either an untreated control or an insecticide treated herd. The insecticide treatment regimen for the treated cows included Y-TEX XP820 Insecticide Ear Tags and BRUTE Insecticide Pour-on for Cattle when appropriate. Horn Fly populations were monitored throughout each yearly replication. Initial body weights of cows were collected in May with final body weights and calf weaning weights acquired in October of each year. Monthly Horn Fly control ranged from 85.5% to 99.6% throughout the four years.

NM STATE UNIVERSITY

Bottom Line Results

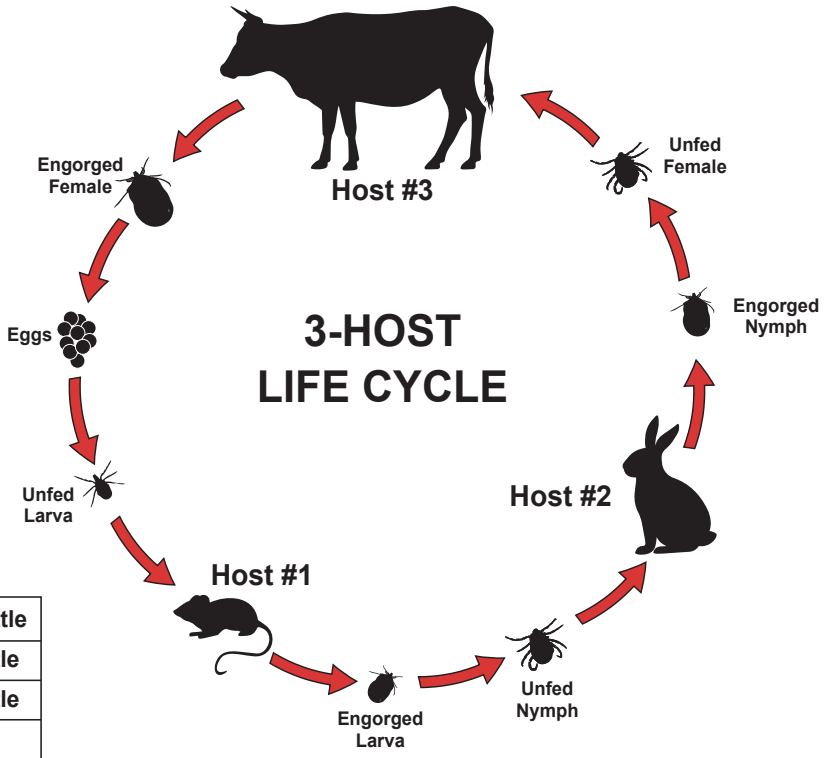
Calves paired with insecticide treated cows weaned **35.9** pounds heavier than calves paired with untreated cows and treated cows gained **60.8** pounds additional weight on average throughout the fly season when compared to untreated cattle.



**NMSU does not endorse or promote any marketed horn fly control product or formulation type.*

Ticks

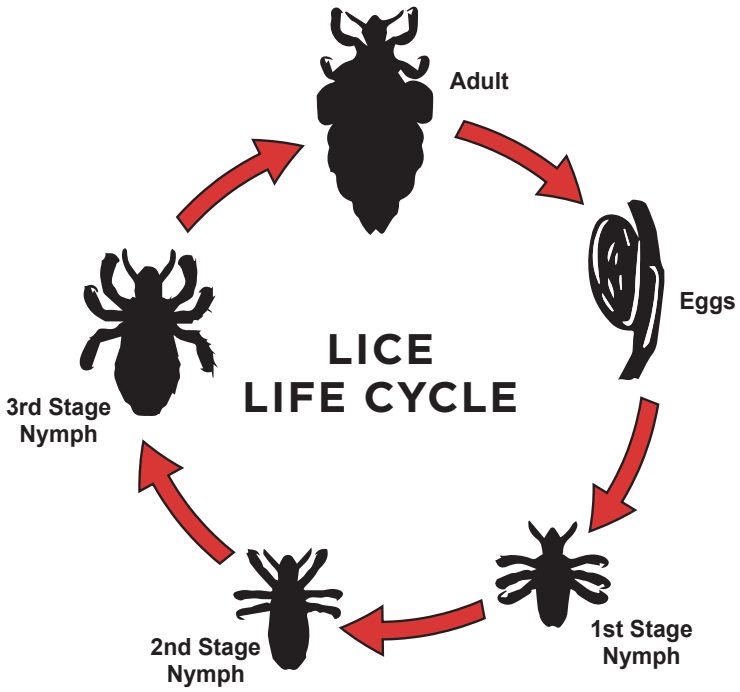
Ticks are blood sucking pests that can transmit disease, impact animal performance and damage hides and ears. Cattle producers are typically most concerned about Lone Star and Gulf Coast Ticks. Severity of infestations by species can depend greatly on geographic location. Ticks life cycle can transpire on one, two or three hosts.



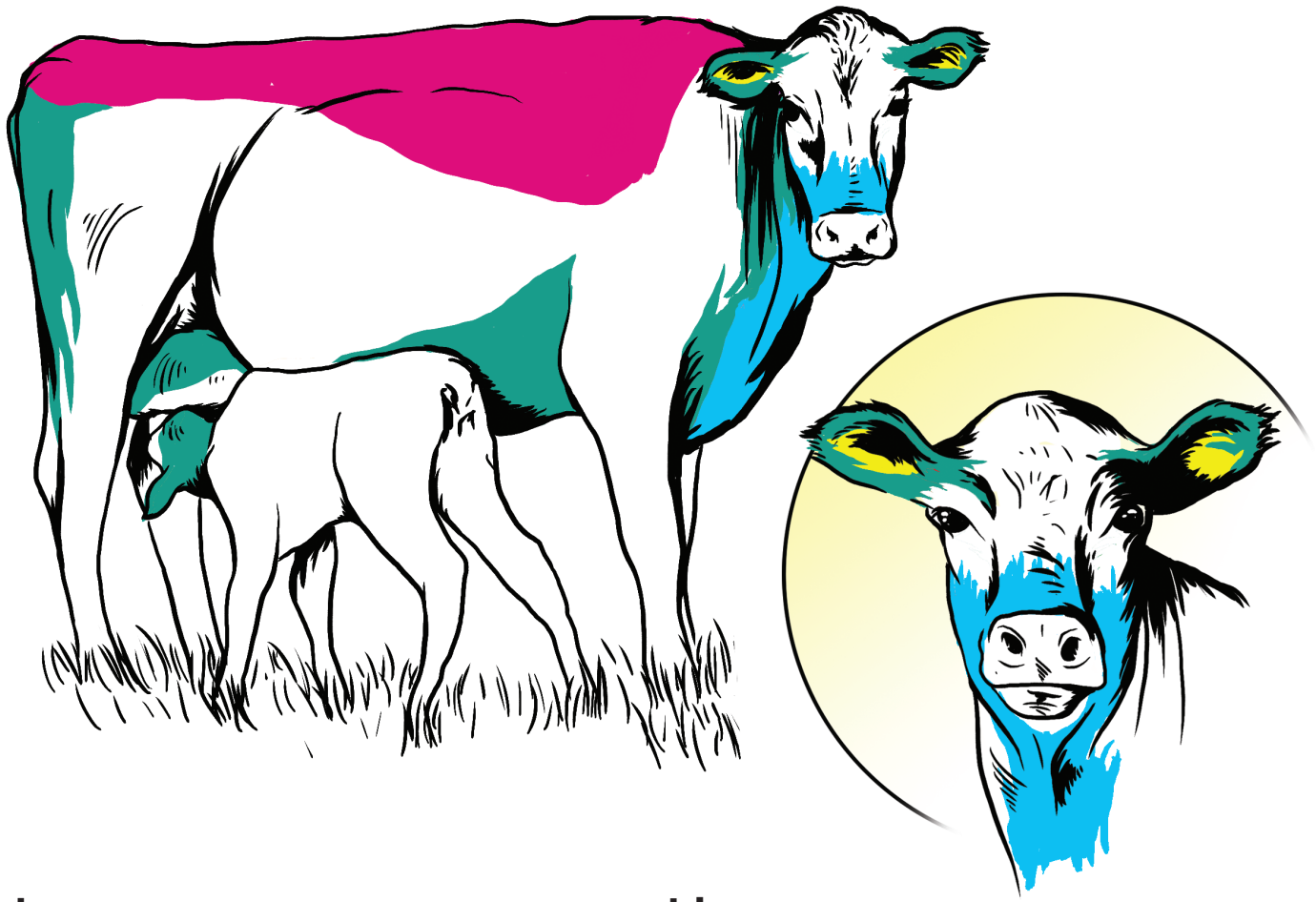
Lone Star	**3 host tick**	**all phases may occur on cattle**
Gulf Coast	**3 host tick**	**adult stage primarily on cattle**
American Dog	**3 host tick**	**adult stage primarily on cattle**
Cattle Fever	**1 host tick**	**all phases on cattle**
Spinose	**1 host tick**	**all phases on cattle**

Lice

Biting and sucking lice reside on cattle year-round but flourish in cooler temps when cattle hair grows thicker for winter protection. Severe infestations cause mild to extreme irritation and can lead to irreversible damage to the hide. Cattle producers typically use pour-on insecticides in the fall as a protection against lice or in the spring to treat infected animals. Infected cattle may cause damage to fencing and equipment as they seek relief from the pest.



Common Locations of Ticks & Lice on Cattle



Ticks

- Impede weight gain and milk production
- Contribute to Anemia
- Cause damage to ears and hides
- Transmit disease

Spinose Ear Tick
(*Otobius megnini*)
In ear canal only

Lone Star Tick (shown)
(*Amblyomma americanum*)
Gulf Coast Tick
(*Amblyomma maculatum*)
Cattle Fever Tick
(*Rhipicephalus annulatus*)
American Dog Tick
(*Dermacentor variabilis*)

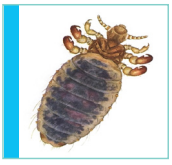
Lice

- Impede weight gain and milk production
- Spend lifetime on animal
- Cause hide damage and hair loss
- Increase damage to fencing and facilities

Biting Lice

Cattle Biting Louse
(*Damilinia bovis*)

Blood Sucking Lice



Long-nosed Louse (*Lingonathus vituli*)
Short-nosed Louse
(*Haematopinus eurysternus*)
Little Blue Louse (*Solenopotes capillatus*)

Methods of Control

The most common methods for controlling external pests are listed below.

Ear Tags

Insecticide Ear Tags provide the best return on investment for the cattle producer. Insecticide Ear Tags should be applied to be present on cattle when pest populations peak then removed at end of label claim period. Producers should rotate chemical class every year to keep pests from developing resistance mechanisms to the ear tags active ingredients.

Spray

Livestock sprays are commonly used by producers because of perceived value or preference to not run animals through a chute to apply insecticide ear tags. Sprays typically provide a few weeks control between applications. Producers will find best results when sprays are applied per label directions and with a pressurized sprayer.

Pour-On

Allows for a more precise application of insecticide for several weeks control. Products range from low concentration/high volume treatments to high concentration/low volume treatments. Dose is determined by animal body weight. High concentration treatments typically reduce run-off and provide longer control. To help keep Horn Flies and other pests in check, supplement your insecticide ear tag program with a pour-on treatment to extend fly control until the first killing frost and manage lice populations through the cooler winter months.

Backrubber/Oiler

Producer selects insecticide concentrate of choice and mixes it with mineral oil or diesel fuel for season long control. Most effective in forced-use situations where cattle must walk under the unit to get to water or mineral. Requires weekly maintenance.

Air Gun

Delivers capsule of concentrated insecticide for several weeks control of pests. Animals can be treated in the field without restraint.

Dust Bag

Producer hangs dust bag in restricted passage such as a narrow gate or doorway for season long control. Most effective in forced-use situations where cattle must walk under the dust bag to get to water or mineral. Requires weekly maintenance.

Oral

Insecticides can be added to feed or via bolus to disrupt the fly life cycle. If used properly the maggots developing in the manure will not reach adulthood. The biggest challenge with feed-through control is getting a balanced level of control in every animal. Additionally, producers must still address pests that may migrate to their herd from outside the controlled herd.

Biological

Parasitic Wasps and Dung Beetles are the most common forms of biological fly control for cattle. Requires optimal environmental conditions to be most effective.

All methods of control have features and benefits that may fit into the optimal IPM program for any given situation. Producers must monitor pest populations, know which pest they are targeting and observe the herd routinely to determine if what has been chosen is working or if changes are necessary.

Insecticide Ear Tags

Insecticide Ear Tag

Y-TEX offers cattle producers the most innovative insecticide tag formulations in many different chemical classes. Producers can choose from synergized pyrethroids, organophosphates, macrocyclic lactones or a combination of these active ingredients to fit their specific needs and budget.

TRI-ZAP®
Insecticide Ear Tag

Features

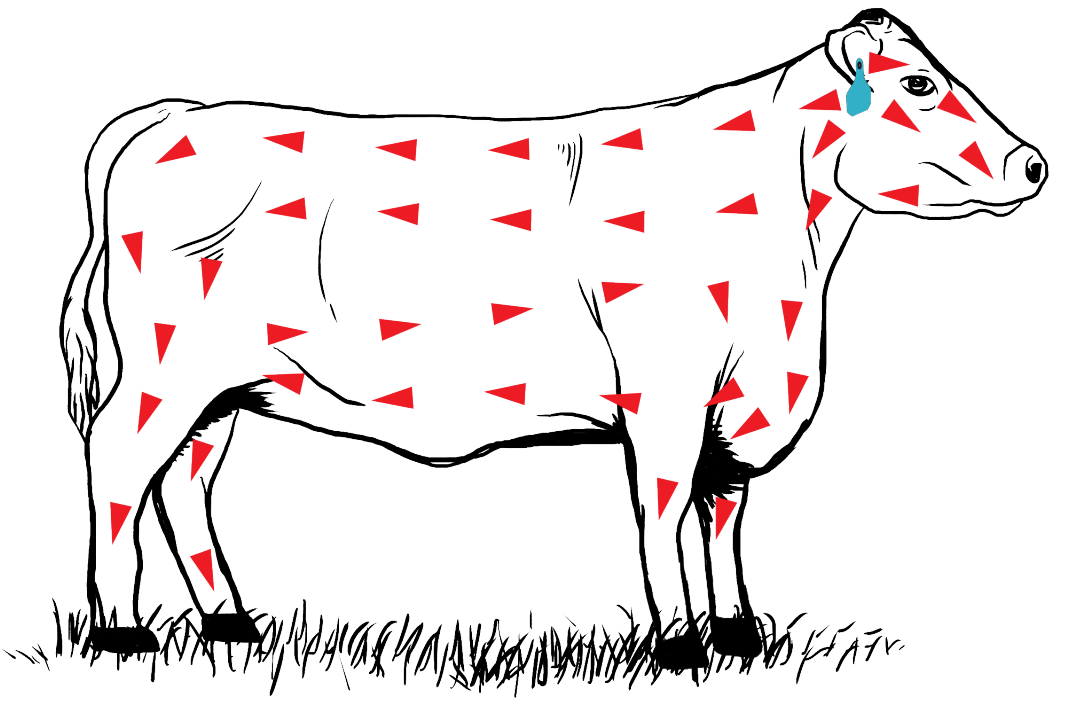
- **Slow-Release Insecticide:** Tags contain active ingredients that are slowly released over several months, providing continuous protection.
- **Widespread Distribution:** The insecticide moves from the tag to the animal's hair and oils, then spreads to other parts of the body and across the herd through grooming and contact.
- **Variety of Active Ingredients:** Tags contain different types of insecticides, including pyrethroids, macrocyclic lactones and organophosphates, which target different pests and combat resistance.
- **Rotation-Ready:** The availability of tags with different active ingredients allows for rotation to manage and delay insecticide resistance.

Benefits

- **Convenience:** Tags offer long-term control without the need for frequent reapplication, saving time and reducing stress from handling.
- **Reduced Handling Stress:** By eliminating the need for frequent applications, tags minimize the stress and labor associated with handling the herd.
- **Cost-Effectiveness:** As a long-lasting pest control method, tags are often considered a cost-effective solution.
- **Economic Benefits:** Control of pests that cause weight loss and reduced milk production contributes to overall herd health and economic productivity.
- **Pest-Specific Control:** Different tags target specific pests, including horn flies, face flies, lice, and various types of ticks.
- **Resistance Management:** Using tags with different active ingredients allows producers to rotate insecticide classes, helping to prevent fly populations from becoming resistant.

Insecticide Ear Tag Management

- **Always read and follow label directions**
- **Tag every animal**
- **Use correct number of tags per head (1 or 2)**
- **Store and dispose of used tags per label directions**
- **Follow recommended insecticide ear tag rotation program getting neighbors to participate in like program**
- **Remove tags after 4-5 months or as tags lose control**



Insecticide ear tags for cattle are molded with a slow release, contact insecticide and are the most cost-effective pest control option for cattle. The insecticide starts to release from the tag when applied to the animal and small volumes are released constantly over the 3-5 month efficacy claim period.

The active ingredient is then transferred over the animal via their hair follicles and the natural grooming and contact habits within the herd. Due to the small doses released daily, active ingredients are not absorbed into meat or milk.

Insecticide Ear Tags

MAX40®

15g

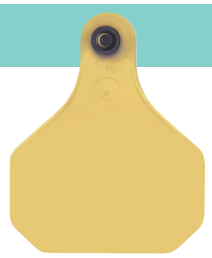
ACTIVE INGREDIENTS:	BY WEIGHT
Diazinon (CAS #333-41-5)	40.00%
OTHER INGREDIENTS	60.00%
TOTAL	**100.00%**

TRI-ZAP®

9.5g

ACTIVE INGREDIENTS:	BY WEIGHT
Zetacypermethrin (F2700)	3.17%
Abamectin	6.00%
Piperonyl Butoxide	20.00%
OTHER INGREDIENTS	70.83%
TOTAL	**100.00%**

XP 820®



9g

ACTIVE INGREDIENTS:	BY WEIGHT
Abamectin	8.00%
Piperonyl Butoxide	20.00%
OTHER INGREDIENTS	72.00%
TOTAL	**100.00%**

PYTHON® II MAGNUM™

15.4g

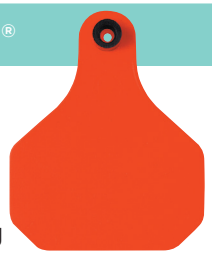
ACTIVE INGREDIENTS:	BY WEIGHT
Zetacypermethrin S-enantiomer S-cyano	5.00%
Piperonyl Butoxide	20.00%
OTHER INGREDIENTS	75.00%
TOTAL	**100.00%**

PYTHON® II

9.5g

ACTIVE INGREDIENTS:	BY WEIGHT
Zetacypermethrin S-enantiomer S-cyano	5.00%
Piperonyl Butoxide	20.00%
OTHER INGREDIENTS	75.00%
TOTAL	**100.00%**

GARDSTAR®



9.5g

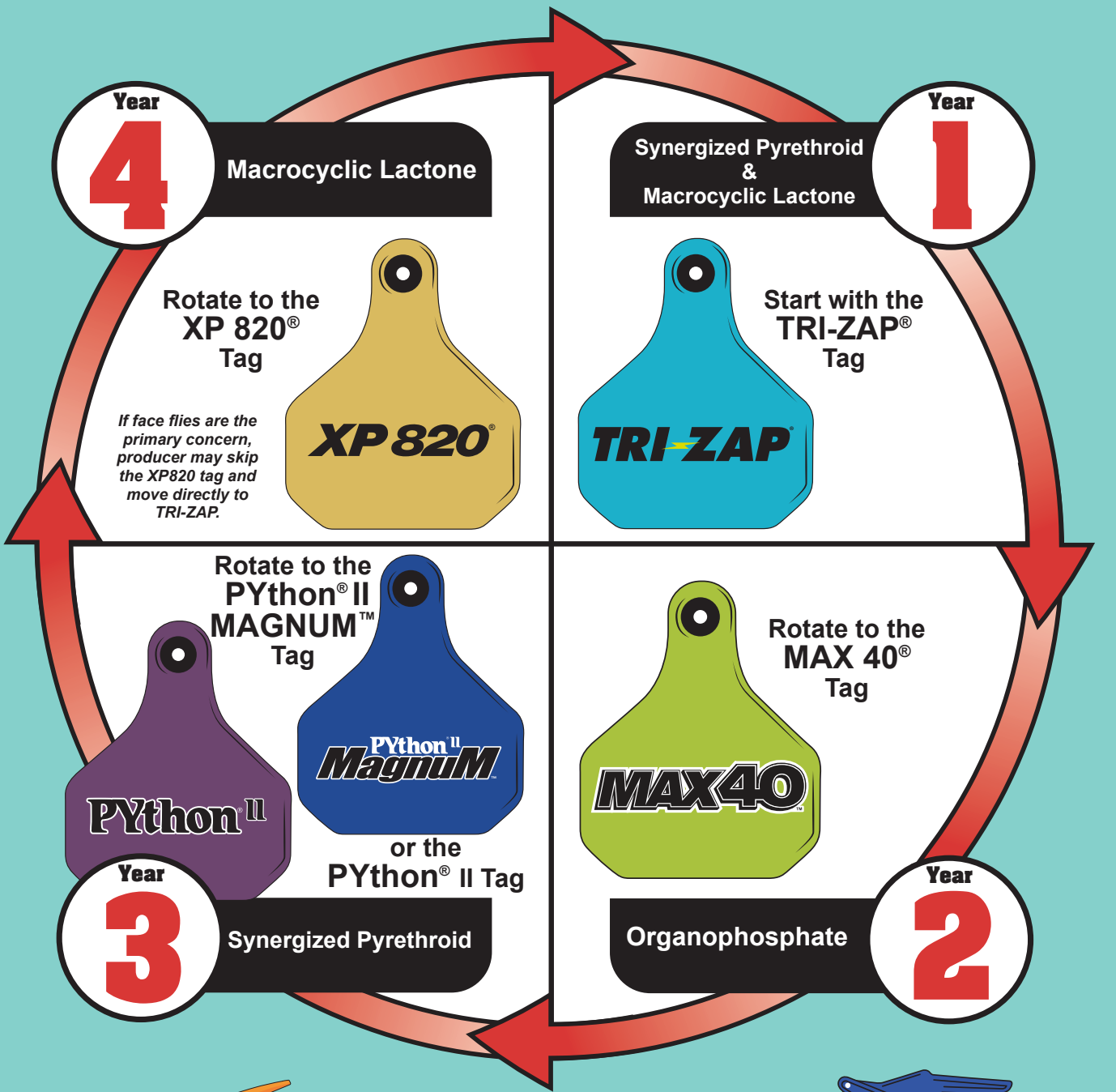
ACTIVE INGREDIENTS:	BY WEIGHT
Permethrin	10.00%
OTHER INGREDIENTS	90.00%
TOTAL	**100.00%**

= Organophosphate = Macrocyclic Lactone = Synthetic Pyrethroid

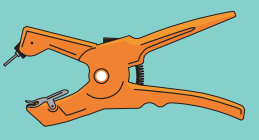
Tag Brand & Insecticide Chemical Class:	For Use On:		Controls or Aids in Control: Flies	Ticks	Lice
MAX40® Organophosphate 	• Beef Cattle • Non-Lactating Dairy Cattle	• Calves over 3 months	●	●	●
TRI-ZAP® Synergized Pyrethroid & Macrocyclic Lactone 	• Beef Cattle • Lactating Dairy Cattle	• Non-Lactating Dairy Cattle • Calves *(any age)*	●	●	●
XP820® Abamectin Synergized with Piperonyl Butoxide 	• Beef Cattle • Lactating Dairy Cattle	• Non-Lactating Dairy Cattle • Calves *(any age)*	●	●	
PYthon® II MAGNUM™ Synergized Zetacypermethrin 	• Beef Cattle • Lactating Dairy Cattle	• Non-Lactating Dairy Cattle • Calves over 3 months	●		●
PYthon® II Synergized Zetacypermethrin 	• Beef Cattle • Lactating Dairy Cattle	• Non-Lactating Dairy Cattle • Calves *(any age)*	●	●	●
GardStar® plus Pyrethroid 	• Beef Cattle • Lactating Dairy Cattle	• Non-Lactating Dairy Cattle • Calves *(any age)*	●	●	●

Insecticide Ear Tag Rotation Program

Stay one step ahead of pest resistance by rotating to a tag in a different chemical class each year. Organophosphate, Synergized Pyrethroid and Macrocyclic Lactone are all effective in controlling pests but continued use of one insecticide class over two or more seasons can allow resistance to develop to that particular chemical class.

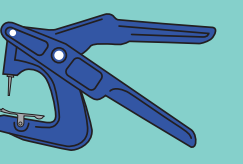


REPEAT THE CYCLE



UltraTagger® Compact

Y-TEX insecticide ear tags are designed to be applied with Y-TEX taggers.



UltraTagger® Plus

Insecticide Products

In addition to ear tags, the following products from Y-TEX should be used to effectively fight external pests on cattle.

Dust

PYthon® II Dust is an exclusive formulation that contains a flow control agent to deliver a consistent supply of insecticide and will not harden in dust bag if it gets wet. It is the first "ready to use" synergized insecticide dust for season long control of Horn Flies, Face Flies, Stable Flies, Ticks, Keds, Lice and other nuisance flies. Approved for use on beef and dairy cattle. Available in Dust Bag Kits, 12.5 lb. refills and 2 lb. shaker cans.

12.5 lb Refill

2 lb. Can

Features

- **Dual Active Ingredients:** Python II Dust is formulated with two active ingredients: zetacypermethrin (0.038%) and piperonyl butoxide (0.150%)
- **Zetacypermethrin**: A 5th-generation pyrethroid insecticide, highly effective against common pests like Horn Flies, Face Flies, and Ticks.
- **Piperonyl butoxide**: A synergist that enhances the effectiveness and residual activity of zetacypermethrin and helps overcome insect resistance.
- **Odorless and Low Toxicity:** Making it safer for both animals and handlers compared to some other insecticide options.
- **Versatile Application Methods:** Can be applied using various methods, including dust bags, shaker cans, dusting gloves, and mechanical dust applicators.
- **Convenient Packaging:** Available in different sizes, such as a 2 lb. shaker canister for easy application around wound areas or on smaller animals, or 12.5 lb. dust bags ideal for forced-use situations with larger herds.

Benefits

- **Controls a Wide Spectrum of External Parasites:** Effectively kills Horn Flies, Biting Lice, Ticks, and Keds, and also aids in the control of Face Flies, Stable Flies, and other Nuisance Flies.
- **Approved for Various Livestock:** Can be safely used on lactating and non-lactating dairy and beef cattle, sheep, goats, and horses of any age.
- **Resistance Management Tool:** Offers a valuable option for rotating with organophosphate insecticides to combat pest resistance.
- **Enhanced Efficacy and Residual Activity:** The synergistic action of the two active ingredients provides maximum efficacy and long-lasting control of pests.
- **Safe for Animals:** Allows for topical application without milk withholding or slaughter withdrawal restrictions.
- **Easy to Use:** The diverse application options make it convenient for both pasture and confined animal treatments.

Insecticide Products

Pour-On

BRUTE® is a highly concentrated (10% permethrin) "ready to use" pour-on insecticide in a rain resistant oil-based formula that provides up to 6 weeks control of Horn Flies with one application. Only 15 milliliters required per head. One gallon treats 252 1,000 lb. cows or 504 500 lb. calves. Also effective against Lice, Face Flies, Stable Flies, Horse Flies, Deer Flies, House Flies, Black Flies, Mosquitoes and Ticks. No milk or slaughter withdrawal required. Available in gallon or pint bottles.

Features

- **Active Ingredient:** Contains 10% Permethrin, a synthetic pyrethroid insecticide. Permethrin works by disrupting the nervous system of the insect, leading to paralysis and death.
- **Concentrated & Ready-to-Use:** Requires no dilution and delivers a high concentration of permethrin, making it effective at lower dosages.
- **Broad Spectrum Control:** Effective against Biting and Sucking Lice, Gulf Coast Ear Ticks, and Horn Flies.
- **Aids in Control of Other Pests:** Helps manage other Tick species, Face Flies, Stable Flies, Horse Flies, Deer Flies, House Flies, Mosquitoes and Black Flies.
- **Non-Systemic:** Acts externally and doesn't get absorbed into the bloodstream, making it safe for year-round use and reducing concerns about host/parasite reactions that can occur with cattle grub treatments.
- **Rain-Resistant:** Maintains efficacy even in challenging weather conditions.
- **Flexible Application:** Can be used as a pour-on, spray, wipe-on, or diluted for use in backrubbers.
- **Convenient Packaging:** Available in a pint bottle with a measuring chamber for easy and accurate dosing. Available in a gallon for use with the adjustable dose applicator.
- **Will Not Freeze:** Maintains its liquid state and efficacy even in cold weather.

Benefits

- **Long-lasting Ectoparasite Control:** Provides up to 6 weeks of control against susceptible Horn Flies, Biting and Sucking Lice, and Gulf Coast Ear Ticks.
- **No Milk Withholding or Slaughter Withdrawal:** Allows for use on lactating and non-lactating cattle without disrupting production schedules.
- **Cost-Effective:** The concentrated formula and lower dosage requirements lead to efficient and economical ectoparasite control.
- **Easy to Apply:** The pour-on application is simple and requires minimal handling of animals.
- **Safe and Compatible:** Can be used safely with other treatments and medications, and the non-systemic nature minimizes risks to animals.
- **Improved Herd Health and Comfort:** Reduces irritation and discomfort caused by ectoparasites, promoting overall animal well-being.

Concentrate

GardStar® 40% EC is a highly stable and highly concentrated (40% permethrin) broad spectrum emulsifiable concentrate insecticide with multiple pest treatment possibilities around the farm. GardStar 40% EC can be mixed with water or oil. Mix with water to be used as a cattle spray or premise spray or with oil or diesel fuel in cattle oilers and backrubbers. Approved for beef and dairy cattle with no milk or meat withdrawal required.

4 oz. Quart

Features

- **Permethrin-based:** Contains 40% permethrin, a synthetic pyrethroid effective as both an insecticide and repellent. Permethrin works by disrupting the nervous system of insects, leading to paralysis and death.
- **Broad-spectrum Pest Control:** Highly active against a wide range of arthropod pests, including various types of Flies (Horn, Face, Stable, House, Horse, Deer, Black Flies), Mosquitoes, Eye Gnats, Mites (Mange, Scabies, Northern Fowl), Ticks, Lice, and Sheep Keds.
- **Versatile Application:** Can be used on beef and dairy cattle (including lactating cows), sheep, goats, swine, poultry, horses, and dogs (but not cats). It's also suitable for use in their premises, including milk rooms.
- **Residual Control:** Provides residual treatment against pests like House Flies, Stable Flies, Fire Ants, and Ticks.
- **Easy to Apply:** Can be used in various application methods, including:
  - High and low-pressure sprayers.
  - Backrubbers and self-oilers.
  - Dip washes and dips (for dogs only).
- **Convenient Dosage:** One 4 fl. oz. bottle or quart treats a significant number of animals or premises.
- **Stable Dilution:** Remains stable for up to 1 year when diluted to 0.5% in water.
- **No Milk Withholding Time:** When used on cattle, goats, and sheep, there is no withdrawal time for milk.
- **Slaughter Withdrawal:** Swine require a 5-day withdrawal period before slaughter.

Benefits

- **Convenient Multi-species Control:** Offers a single solution for managing pests on multiple animal species and their surroundings.
- **Dual Action:** Acts as both an insecticide and repellent, providing comprehensive protection.
- **Effective Against Major Ectoparasites:** Controls a wide range of external parasites that can affect livestock health and productivity.
- **Long-lasting Protection:** Provides residual control, reducing the need for frequent reapplication.

Y-TEX Fly Control Program

Three steps to better fly control in cattle

Horn Flies, Face Flies, Horse Flies, Deer Flies and other flies are more than just a minor nuisance. They're some of the leading causes of monetary losses in cattle production.

Studies show that Horn Flies cause estimated losses of between $850 million and $1 billion dollars every year. Along with the stress and resulting weight loss inflicted by these blood-sucking pests, Horn Flies also serve as vectors for beef heifer mastitis, anaplasmosis and anthrax. Meanwhile, Face Flies frequently transmit infectious bovine keratoconjunctivitis (IBK), commonly known as pink eye. With weight losses and treatment costs exceeding $100 or more per head, pink eye costs American cattle producers more than $150 million a year.

That's why it makes sense to stop flies before they do their damage with the Y-TEX Fly Control Program.

Step 1

Apply BRUTE Pour-on for Cattle or GardStar 40% EC early in the season.

The best way to get a head start on effective, season-long fly control is to apply BRUTE Pour-on for Cattle or GardStar 40% EC when flies first appear in the spring. Just one application of BRUTE or GardStar provides long-lasting control of Horn Flies, Face Flies and other Flies for just pennies per head per day.

Along with protecting your herd from Flies for up to six weeks, BRUTE or GardStar will help rid your cattle of overwintering Ticks, Lice and other harmful ectoparasites.

Step 2

Follow up with an application of Y-TEX insecticide ear tags.

When it comes to providing your cattle with round-the-clock fly protection for up to five full months, university trials show that insecticide ear tags are your most cost-effective option.

Y-TEX offers you a choice of six different insecticide tags in three distinct chemical classes, plus one combination tag, making it easy to control flies while preventing pesticide resistance. Just apply the tags when flies reach threshold levels: 200 per animal (100 per side) for Horn Flies; 25 per head for Face Flies. A single tagging should be all that's needed to deliver effective, season-long fly control.

Step 3

Finish the season with a fall application of BRUTE or GardStar.

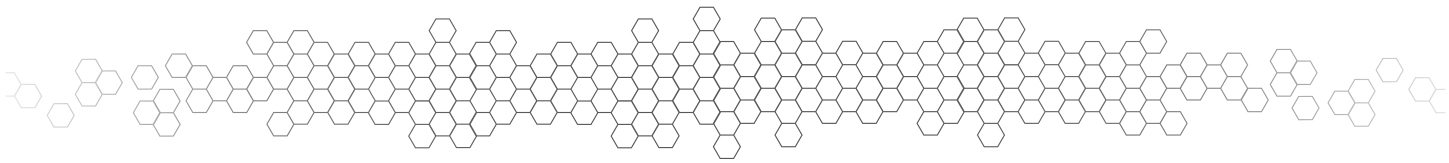
Horn Flies overwinter as pupa in or beneath manure pats. Face Flies hibernate as adults, usually in attics, barns or sheds. By treating your cattle in the early fall with BRUTE or GardStar, you'll reduce overwintering fly populations and get a head start on next year's fly control program. Plus, both products offer excellent control of Biting and Sucking Lice, Ticks and other cold-weather insect pests.

If you prefer the convenience of a dust formulation, simply use PYthon II dust bags in Steps 1 and 3 as an alternative to BRUTE or GardStar for added, season-long pest protection. However, Python II Dust Bags should not be used in combination with insecticide ear tags containing a pyrethroid.

About Y-TEX

Millions of cattle are treated with Y-TEX products every year. As a global leader in ectoparasite control for cattle, Y-TEX has been providing effective animal management solutions for livestock producers for more than 50 years. Over this period more than 200 product trials have been conducted on insecticide ear tags alone. The products offered by Y-TEX are regulated by the United States Environmental Protection Agency and approved for use on animals when used as directed.

The products discussed in this brochure can be found where you currently buy animal health products. More information on these products, including a retailer near you, can be found at www.ytex.com.



Y-TEX®

EXCELLENCE IN ANIMAL HEALTH™

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