Grazing Season External Parasites

- Horn Flies
- Stable Flies
- Ticks
Horn Flies

• Lay eggs in **fresh manure**
• Life cycle 10-20 days
• Spend majority of life cycle on cattle!
• **Rarely** move from animal to animal
• Population rise in late May and persist into fall**
  – Depending on weather conditions
Horn Flies

• When do we treat?
• Economic threshold = 200-300 flies/animal
  – Each fly feeds 20 to 30 times/day
• Highest numbers on dark hided animals/bulls
Stable Flies

• Found on legs of cattle
  – Also impacts other species
• Very painful bite
• Only feed during day
• Economic threshold:
  – 5 flies/leg
• Adults spend time off of cattle.
Stable Flies

- Any moist organic matter is prime location for eggs and larvae
- Straw bedding, spilled feed, manure piles, round bale feeding sites, calf hutches, alleys, feed areas, etc.
- Rest in **Shaded** areas
- Historically a confinement or barnyard issue
- Why an issue in pastures??
Stable Flies

- Round bale feeding sites is a main breeding ground in pastures
- Residue from a bale ring can result in 1 million more stable flies the following year
Face Flies

- Feed on secretions from eye and nose
- Vector in spreading Pinkeye
- Lay eggs in fresh manure
- Able to travel long distances between hosts
Face flies

- Difficult to control since they spend so much time off the animal
- Forced exposure to insecticide on a daily basis
  - Ear tag
  - Dust bag/oiler/spray
House Flies

- More of a nuisance to livestock (do not bite)
  - Commonly found around houses near livestock
- Documented ability to transmit pathogens
- Serves as host for some nematodes for horses
  - Habronema
- Will lay eggs on open purulent wounds (fly strike)
- Lay eggs in decomposing organic matter
- Rest in sunny areas!
Biting Midges/Black Flies

- Lay eggs in wet organic matter or streams
  - Aquatic areas
- Minimize access to active pests environment
- Day time biters- black flies
  - Feed on head and neck of animal
- Before dusk-midges
  - Feed on dorsal and ventral areas of animal
Treatment options

- Feed through products
- Insecticide impregnated ear tags
- Pour-ons
- Sprays (on-animal/premise)
- Oilers/dusters
- Injectable
- Vet Gun
Insecticides

- Insect Growth Regulators (IGR)
- Pyrethroids
- Organophosphates
- Avermectins
What is Resistance

• The intended target no longer responds as it once did
• Occurs more commonly when exposed to a low dose of insecticide for long periods of time
• Up to 32 generations of flies w/in 1 grazing season
• Or when exposed to the same insecticide for multiple years in a row
• When can this occur??
Feed Through

• Must begin application before the vector season
  – April 1\textsuperscript{st} Kansas
  – March 15\textsuperscript{th} far SE Kansas
• ***Remember, Adult flies can still move in from a distance
• Products available for cattle/horses/swine/poultry
• Combination therapy is often warranted
Ear tags

• Must be removed at the end of the season!!!
• Effective duration of 12-20 weeks
• Class of insecticide must be rotated on a yearly basis!
  – Pyrethroid: no more than once every 3 years
  – Organophosphate: no more than two years in a row
  – Abamectin: Products newer to market. Have not developed resistance yet.
Pour-ons/sprays

- Generally do not carry as much risk to develop resistance
  - Do not have the residual activity
- Provide control for 2-4 weeks
- Pyrethroids/Organophosphates
- Macrocyclic Lactones:
  (Ivermectin/Moxidectin/Doramectin)
  - Primarily used to control internal parasites
  - Reliance on this class for fly control can lead to resistant internal parasites
Premise Sprays

• Short term sprays
  – Foggers, mist blowers, aircraft
  – Kill adults by contact

• Residual sprays
  – Directed to walls, ceilings, perimeter, fence lines
  – May provide coverage for a few weeks

• Label mixing and application is critical!!
Self Treatment Dusters/Oilers

• Follow label instructions when charging/re-charging
• Many animals will not use these voluntarily!
• Work very well when forced use near mineral/feed/water areas

*FSA7031- Controlling Horn Flies on Cattle
Vet Gun

- “Paintball” filled with insecticide CO2 gun
  - Pyrethroid
  - Abamectin
- 15-30 ft range
Parasitic Wasps

• Commercial parasitic wasp release
  – Labor intensive
    • Continued release (APR-SEPT)
  – House/stable flies
  – Several Species available
  – Don’t use premise sprays in conjunction with wasp release
Equine

• Many products approved for cattle also approved for Equine animals and premise
• Many repellant products available
  – Shampoos, ointments, sprays
Environmental Management

- Manure
- Heavy vegetation (drainage ditches)
- Water holding areas
- Barns
- Feed Residue
- Fly Traps
Environmental Control

- Continual movement of feeding sites
- Rolling hay out
- Feed in areas with low moisture and well drained
- Disturb hay residue
  - Pile and compost the residue (before the next season)
  - Burn the residue (before the next season)
My Personal Favorite

- Salt-Viewing Window
- Lift Cap Pour Salt (80 Shots)
- Pop-Up Sight Indicates Ready-to-Fire
- Flat Spot for Upright Standing
- Slide-Cocking
- Auto-Safety
- Flat Spot for Upright Standing

(K-State Research and Extension)
Taking tips from other species in nature??

- Decreased biting flies on animal by ~50%
- Decreased fly repelling behavior by ~20%

Ticks

• Eggs are laid off the host
• Thrive in high humidity areas
  – Brush
  – Trees (cedars)
  – Tall grass
• Depending on species, can be active from Feb-Oct
Tick Control

• Difficult with pasture animals – must handle the animals

• Sprays and Pour-On are labeled for ticks and do a good job for about 3 weeks
  – Spraying ears

• Ears tags are labeled for Spinose Ear Ticks and Gulf Coast Tick and will help with others
  – Tags do not get insecticide to groin and tailhead (Dog Tick)
Questions