

F A C T S H E E T

Title: Horn Flies 101
FactSheet #: VG-0003

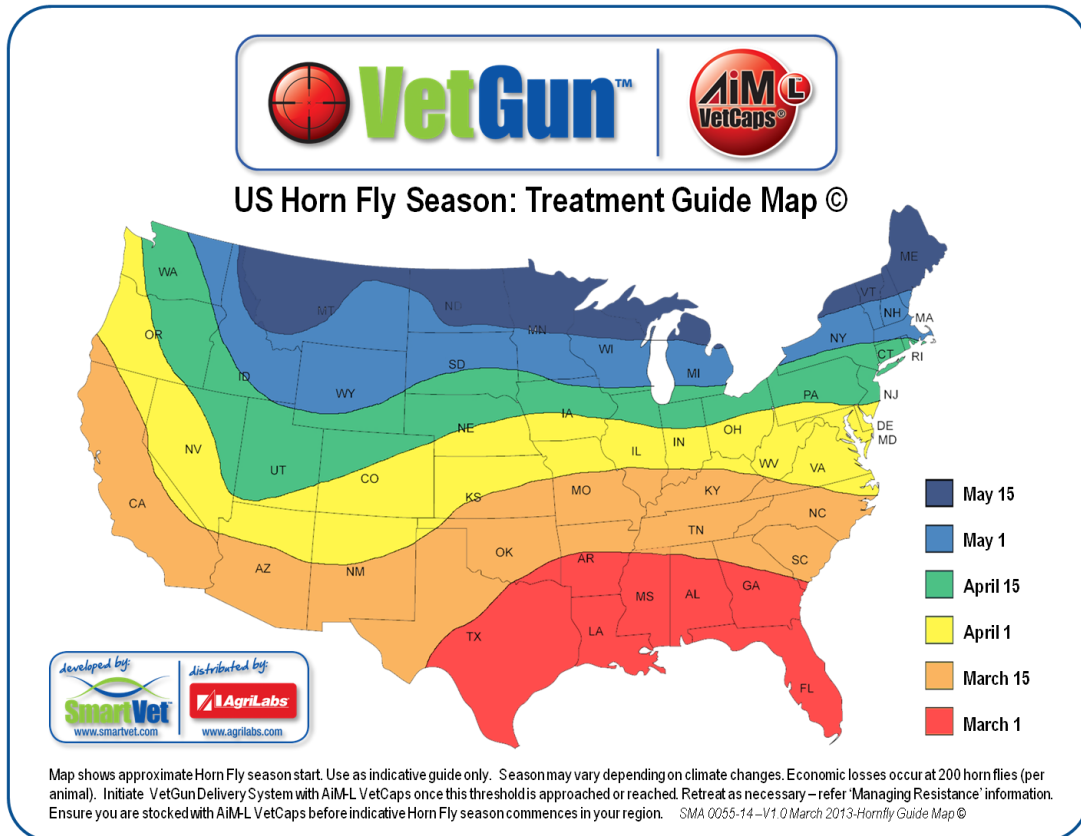
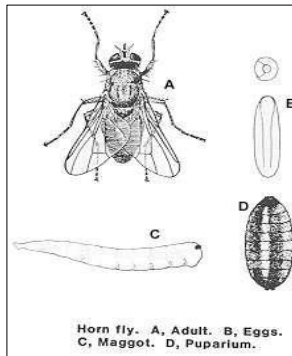
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Horn Flies 101

Brief Overview:

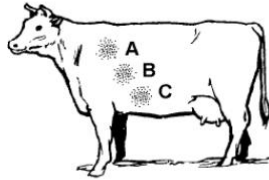
The leading cause of economic loss in the cattle industry is parasites, particularly horn flies. Horn flies can interrupt cattle from grazing and cause a loss of as much as one pint of blood per day, which can result in 30 percent less weight gain in just 80 days. Overall, horn flies cost the U.S. cattle industry nearly \$1 billion per year.

Pictures:

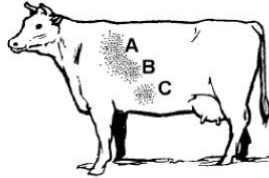


Use the following criteria to estimate fly numbers:

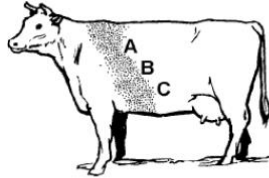
1. A single small patch of flies = 25 to 50 flies.
The patch is located in area A, B or C.



2. A single patch of flies that covers areas A and B, or B and C = 100 to 125 flies.



3. A patch of flies that extends through areas A, B and C = 200 to 350 flies.



4. A patch of flies that extensively covers areas A, B and C = 500+ flies.

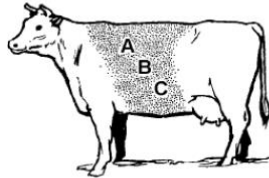


Figure 3. A method of estimating horn fly numbers in the field.

Points:

- ⊕ Horn flies = *Haematobia irritans*
- ⊕ Both males and females are blood feeding ectoparasites.
- ⊕ Imported to America from France in 1887 (*Bruce 1938*).
- ⊕ Found in all of the United States.
- ⊕ Fly seasons begin March 1st in southeast states to mid-May in northern states (see horn fly season map).
- ⊕ Horn fly life stages: adult, egg larvae, maggot; pupae.
- ⊕ Considered one of the most economically devastating cattle parasites in the US.
- ⊕ Cause \$700M to \$1BN in annual losses to the cattle industry (*USDA / Kuntz et al 1991*)¹.
- ⊕ Producers spend \$60M annually on insecticides to control horn flies.
- ⊕ Horn flies cause cattle to expend energy in defensive behavior resulting in elevated heart and respiratory rates, reduced grazing time, decreased feed efficiency and reduced milk production resulting in reduced weaning weights of calves (*Byford et al 1992*)². Reduced weaning weights of calves of 0.10 to 0.25 lb/head/day are common.
- ⊕ Although the average meal size of horn flies is just 10 microliter of blood/feeding (*Kuramochi 1980*)³, each fly takes 24 to 38 blood meals/day (*Foil 1994*). At an average of just 1,000 flies/animal, blood loss could result in 0.33 liter/day.
- ⊕ Horn fly feeding can severely damage hides resulting in poor quality leather (*Pruett et al 2003*).
- ⊕ 200+ flies/beef cow or stocker animal and 50+ flies/calf or lactating dairy cow is the economic threshold against which producers can justify taking control measures that will generate positive return on investment (refer to picture on estimating fly counts).
- ⊕ % reduction in animal productivity dramatically increases once fly thresholds start to exceed 200 flies/animal.
- ⊕ Control methods: pour-on, spray, dust bag, ear tag, injection, feed additives, walk-thru fly-traps.
- ⊕ Resistance and resistance management: Resistance = survival of the fittest = evolution
 - Reduce selection pressure: Refugia; Insecticide rotation
 - Increase selection pressure: Combination of insecticides and/or other methods
 (see separate Fact Sheet for more detailed analysis of Horn Fly Resistance Management)
- ⊕ Costs & Economics: see separate Fact Sheet for more detailed analysis of cost & economics on horn flies.

Resource & Reference Points:

- ⊕ Visit www.agrilabs/vetqun.com for more information.
- ⊕ ¹ USDA / Kuntz et al /² Byford et al 1992 / ³ Kuramochi 1980

Inquiries:

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