

# Natural Enemies Control Fly Problems

UNIVERSITY PARK (Centre Co.) — Controlling flies in poultry houses need not require excessive use of chemical pesticides, according to an expert in Penn State's College of Agricultural Sciences.

"Using natural predators and parasites can cut down on fly problems," said Dr. Charles Pitts, professor of entomology. "But for these biocontrol methods to work, producers must use proper management practices and monitor fly populations."

Poultry producers must deal

with a number of fowl parasites, structural pests, and filth flies in their facilities. Perhaps the most troublesome pest is the house fly.

House flies lay eggs in chicken manure and reproduce quickly in large numbers. They sometimes defecate on chicken eggs, and can carry salmonella and other harmful bacteria. In addition, house flies can migrate to nearby properties, causing a nuisance and potential health hazard for a poultry farm's neighbors.

Chemicals are available to control house flies. But Pitts says flies

can develop resistance to many insecticides. "Pesticides also may kill beneficial insects, leave residues in meat and eggs, and harm the environment," he said. "The use of biocontrol strategies can reduce the need for and cost of pesticide applications."

Several native and commercially available predators and parasites attack and feed on house fly eggs and larvae.

The macrochelid mite is the most common mite in poultry manure. This mite, less than 1/16 of an inch in size, lives on the out-

ermost layer of manure and feeds on house fly eggs and larvae. Each mite can eat up to 20 fly eggs per day.

"Macrochelids can substantially reduce house fly numbers," Pitts said, "but large mite populations are required for any appreciable impact. About three or four weeks of manure accumulation is needed for these predators to become established."

Another mite found in poultry manure is the uropodid mite. It feeds on fly larvae and lives deeper in the manure, complementing

the egg-feeding activity of the macrochelid mite on the manure surface.

Certain types of hister beetle also help to contain house fly populations. Like the macrochelid mite, this eighth-inch long, black beetle feeds on fly eggs and larvae in the surface layers of poultry manure. Also, like the mites, hister beetles are not attracted to fresh manure. Accumulations of six weeks may be necessary for significant beetle populations to develop.

Tiny, stingless wasps that act as parasites can be included in a fly control program. Adult female wasps lay their eggs in fly pupae and the developing parasite larvae devour the pupae, emerging as adult parasites. Because these wasps are found only in small numbers on farms, some producers purchase them from commercial laboratories and release them in their poultry houses.

Pitts says to use these beneficial insects successfully, proper management is essential.

"Manure should be kept as dry as possible," Pitts said. "That discourages fly breeding and reduces the weight of the manure so it's easier to move when the manure pit is cleaned." Producers should avoid and correct leaks in watering systems and maximize air flow over manure to reduce moisture.

"Producers who plan to release commercial parasites need to consider which species to release and in what numbers," he said. "Parasite strains must be adapted to the local climate. Even then, many parasites offered by commercial insectaries have trouble becoming established, so periodic releases are necessary."

**WALTEMYER'S SALES & SERVICE, INC.**

RD #3, Box 43-B  
Red Lion, PA 17356

**SHUEY'S SALES & SERVICE**

Main St.  
Ono, PA 17077

**NORMAN D. CLARK & SON, INC.**

Box 27, Main St.  
Honey Grove, PA 17035

**MEYER'S IMPLEMENTS, INC.**

400 N. Antrim Way  
Greencastle, PA 17225

**MESSICK FARM EQUIP., INC.**

Rt. 283, Rheems Exit  
Elizabethtown, PA 17022

**FINCH EQUIPMENT**

Box 247, E. Main St.  
McAllisterville, PA 17049

**HISTAND'S FARM & HOME**

RD #1, Box 231  
Rome, PA 18837

**GEORGE V. SEIPLE & SON**

1521 Van Buren Road  
Easton, PA 18042

**FIELD EQUIPMENT**

720 Wheeler School Road  
Whiteford, MD 21160

**C.H. RINEHIMER**

Route 11  
Berwick, PA 18603

**BINKLEY AND HURST BROS., INC.**

133 Rothsville Station Rd.  
Lititz, PA 17543

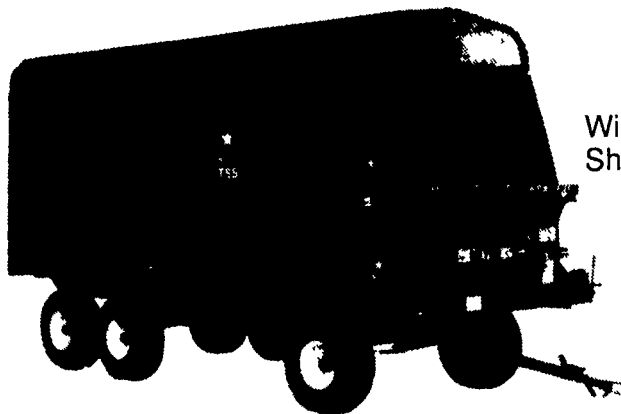
**BEN VAN DUSEN MACHINERY**

RD #2, Box 400  
Sayre, PA 18840

**AGRI-COMMODITIES**

1585 Granite Station  
Gettysburg, PA 17325

## Meyer 500 & 600 TSS Forage Boxes Total Speed System



The High Performance  
Wagon Built To Last

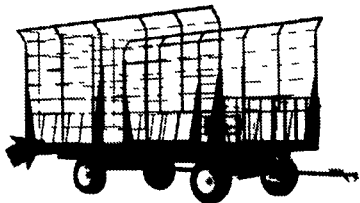
Wide Track Five Models To  
Short Turn Choose From

Torture Tested  
And Field Proven  
For Your Satisfaction

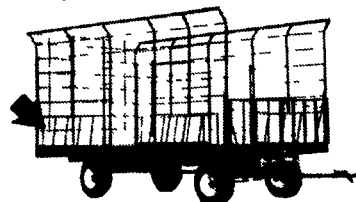
Meyer Mfg. Corp. has developed a new style of forage box that can unload at a much faster rate of speed. This is accomplished thru a low range-high range variable speed system. Apron speeds range from 0-7.5' per minute in low range and 0-17' per minute in high range. The Meyer TSS also allows the operator to inch the augers free of material before engaging the apron chain. This box is available in the All Steel TSS or the TSS AL Aluminized model.

## Meyers Steel Bale Throw Boxes Choose between our Deluxe or Price Fighter Bale Throw Boxes

Meyers brought you the first and most dependable self-unloading forage boxes; now Meyers offers you the most convenient and strongest steel bale throw boxes. Our goal has always been to provide farmers with quality products they can afford to buy.



DELUXE MODEL (WITH FEEDER SIDES)



PRICE FIGHTER (WITH FEEDER SIDES)

### THESE FEATURES STANDARD ON BOTH MODELS

**FOLD DOWN FRONT**

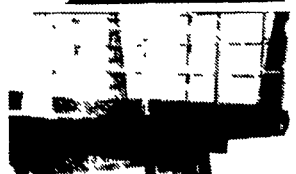
Our spring loaded front fold down gate opens and closes with one lever. Expanded metal on front gate is comfortable to walk on and can be seen through for better visibility.

**REINFORCED CROSSPIECE**

Meyers has reinforced this floor with a 2" x 8" on edge bolted to the last 4 x 4 to give it additional strength. No more bowing of floors as seen on many older bale boxes.

**FLOOR CONSTRUCTION**

The 4x4 crosspieces are fastened to the main bed pieces with formed steel gussets—braces to prevent them from going in or out. The complete floor is treated to insure maximum life.



Spring loaded lift assists in opening and closing gates.

**MEYER** Mfg. Corp.  
DORCESTER, WI Ph 715-654-5132



**KEN CLUGSTON**  
(717) 665-6775

**CRAFT-BILT  
CONSTRUCTION INC.**

FARM-HOME BUILDING  
1242 Breneman Road  
MANHEIM, PA 17545  
PH: (717) 665-4372

BUILDING & REMODELING FOR —  
DAIRY RESIDENTIAL  
SWINE POLE BUILDINGS  
BEEF BEEF STORAGE

**Leon Ray Martin  
Excavating**

710 Fivepointville Rd. • Denver, PA 17517  
General Excavating Site Preparation  
(215) 445-4667



We Have A Backhoe, Loader & Pan  
To Better Serve Your  
Excavating Needs