

## balEnce™ BioPesticide Fly Spray - Pest Control for Swine

The basics of fly management for swine facilities are similar.

However, differences in the types of feeders, drinkers, manure storage, and manure moving equipment in the three distinct production phases (Production Facilities, Breeding Barns and Gestation Rooms, and Farrowing Rooms and Nurseries) require variations in the use of balEnce™ BioPesticide Spray and Bait.

In addition, several types of flies are commonly found in swine production facilities including: house flies, fruit flies, sewer flies and blow flies.

Both the balEnce™ BioPesticide fly spray and bait have shown excellent results in controlling the flies and fly larvae commonly found in the swine environment.

It is important to begin application of balEnce™ BioPesticide Spray and Bait as soon as flies and/or larvae are observed — good early fly control is easier than attacking a fly population that has gotten out of control.

**SEE FULL DIRECTIONS FOR USE ON PRODUCT LABEL. Always follow the instructions on the product label.**

**Always read and follow label directions for all products. Information here is not a substitute for directions on the product labels.**

### Using Terregena© balEnce™ BioPesticide Spray and Bait in a Swine

#### *Integrated Pest Management (IPM) Fly Control Program*

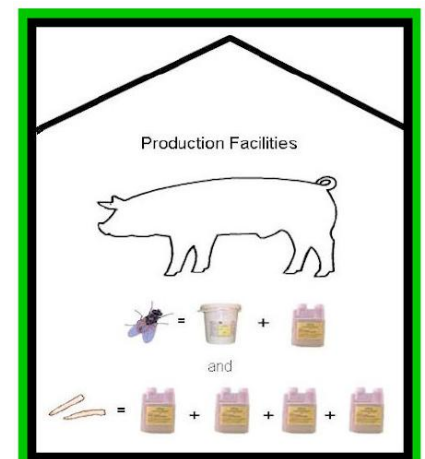
Terregena© balEnce™ BioPesticide Spray for adult flies and fly larvae and Terregena© balEnce™ BioPesticide Bait for adult flies provide a safe and economic alternative to chemical pesticides for fly control and are approved for use in organic production systems. Both the balEnce™ BioPesticide fly spray and bait have shown excellent results in killing flies found in the swine environment. It is important to begin application of balEnce™ BioPesticide Spray and Bait as soon as flies and/or larvae are observed — good early fly control is easier than attacking a fly population that has gotten out of control.

The basics of fly management for all swine facilities are similar. However, differences in the types of feeders, drinkers, manure storage, and manure moving equipment in the three distinct production phases (Production Facilities, Breeding Barns and Gestation Rooms, and Farrowing Rooms and Nurseries) require variations in the use of Terregena© balEnce™ BioPesticide Spray and Bait in an IPM fly control program.

### Production Facilities

The types of flies most commonly found in production facilities include house flies, fruit flies, sewer flies and blow flies.

- House Flies — breed in manure or any decomposing organic matter. They have a 70 to 40 day life cycle.
- Fruit Flies — breed in spilled feed that becomes wet. They prefer dark areas and will rest on ceilings, crates, and farrowing data cards. Fruit flies have a five to seven day lifecycle and reproduce very quickly.



- Sewer Flies — breed in liquid manure. They are poor fliers and are normally observed around the end of the swine houses where manure exits and a residue is left from poor flushing or poor pit recharging.
- Blow flies – breed in animal carcasses. They only exist when swine carcasses are not disposed of in a timely fashion.

As soon as adult flies are observed, production facilities should be treated with balEnce™ BioPesticide Spray. Mix a half bottle (7.5 ounces) of balEnce™ in four gallons of water to treat 25,000 square feet. Apply this concentration in a heavy mist with a backpack sprayer twice per week during the fly breeding season.

Suspend two balEnce™ BioPesticide Bait trays per 1000 square feet. Trays are a more effective manner of distributing balEnce™ BioPesticide Bait than bait stations due to the openness of these facilities and the variability in construction and penning designs.

Where larvae/maggots are observed, mix three ounces of balEnce™ Biopesticide Spray in four gallons of water for up to 1000 square feet and spray in a steady stream directed at the maggots two times a week.

### Breeding Barns and Gestation Rooms

Due to the rapid turnover and cleaning of gestation rooms after each cycle as well as the accumulation of dust on all surfaces after sows are placed in the gestation rooms, the use of balEnce™ BioPesticide Spray should be supplemented with additional fly control methods such as balEnce™ BioPesticide Bait. One balEnce™ BioPesticide Bait Station should be hung (distributed equally) 12 to 18 inches from the ceiling per 100 square feet.

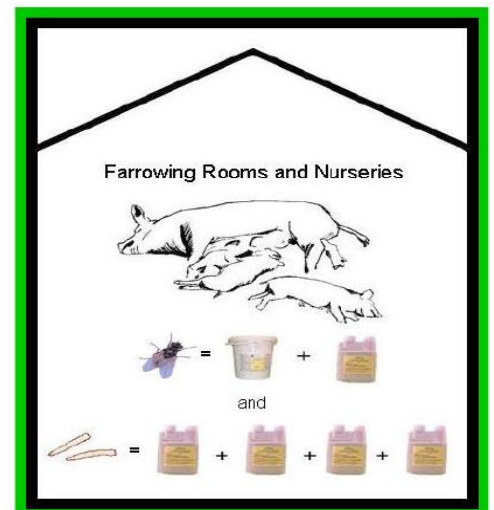
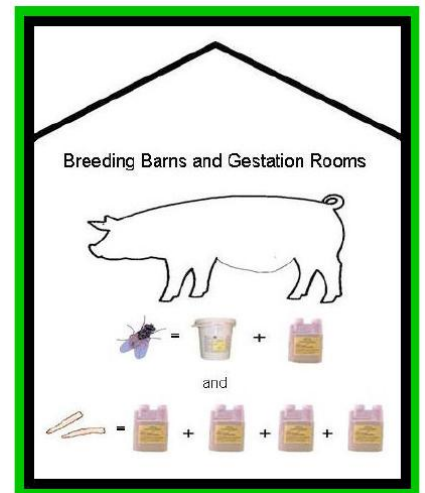
### Farrowing Rooms and Nurseries

Farrowing rooms are used by lactating sows and piglets for a 14 to 21 day rotation. Following weaning of the piglets, rooms are cleaned and returned to use. As in Gestation Rooms (above), the rapid turnover and cleaning of all farrowing rooms after each cycle and the accumulation of dust make the addition of balEnce™ BioPesticide Bait to the regular spraying of the rooms with balEnce™ BioPesticide Spray necessary to control the fly population.

Manure pits require proper preparation and should not have floating fecal material or visible feed piles in the pit, as it will provide breeding material for both house flies and fruit flies. One balEnce™ BioPesticide Bait Station for every five to eight farrowing crates in the farrowing room should be suspended 12 to 18 inches from ceiling. balEnce™ BioPesticide Bait should be replaced or refreshed twice a week. Hang balEnce™ BioPesticide Bait Stations so they can be taken down when the room is cleaned and then re-hung for the next farrowing group. balEnce™ BioPesticide Spray should be used twice a week starting at week one and applied in a heavy mist with a backpack sprayer. If fruit flies are the main problem, it may take two or three application cycles to reduce the breeding population since these flies have a five to seven day life cycle.

In areas where larvae/maggots are observed, mix three ounces of balEnce™ Biopesticide Spray in four gallons of water and spray up to 1000 square feet two times a week. The spray should be in a steady stream and directed at areas where maggots are observed, which will normally be along the edge of the farrowing rooms or under feeding and water stations. If larvae are observed in the entire room, then the entire surface should be treated. Treatment should continue until larvae and adult flies are under control.

Nurseries should be treated with balEnce™ BioPesticide Spray after cleaning and prior to the placement of the piglets. Application should



be continued twice per week during the fly breeding season. balEnce™ BioPesticide Bait Stations should also be used. Eight to 12 balEnce™ BioPesticide Bait Stations should be suspended 12 to 18 inches from ceiling for a standard size nursery room. Where larvae/maggots are observed in the nursery areas, use balEnce™ Biopesticide Spray as described above in Farrowing.