



## **“Top 25”**

### ***Most Popular Questions about OvoControl® P for Pigeons***

#### **1. What exactly is OvoControl P?**

OvoControl P is a specially formulated bait that interferes with the hatchability of eggs from pigeons. OvoControl contains nicarbazin, an active ingredient originally developed to prevent an enteric disease in chickens. Registered by EPA, OvoControl is currently approved for use in pigeons.

#### **2. How does OvoControl P work and how does it affect hatchability?**

Recently published research has shown that the active ingredient inhibits the ZP3 sperm receptor sites on the vitelline membrane to prevent the fertilization of eggs. Sperm are effectively prevented from fertilizing the egg and therefore no embryo is ever formed.

#### **3. Can OvoControl be used concurrently with other pigeon control techniques?**

Yes, OvoControl complements all other bird management tools, with the possible exception of toxicants.

#### **4. What does OvoControl P cost?**

Depending on the distribution channels, the cost of OvoControl is approximately \$6.95/pound. To keep pigeon eggs from hatching, apply the bait at a rate of 1 pound/80 birds/day. The quantity of OvoControl bait required declines in parallel to the population of pigeons.

#### **5. What are the opinions of animal welfare groups to OvoControl P?**

The Humane Society of the United States (“HSUS”), People for the Ethical Treatment of Animals (“PETA”), American Society for the Prevention of Cruelty to Animals (“ASPCA”) as well as other animal welfare groups, support the use of non-lethal technology to moderate the populations of pigeons. Left unchecked, pigeon numbers in a local flock can grow very rapidly. Innolytics' egg hatch control technology enhances the quality of life for pigeon populations while controlling their numbers. The effects of OvoControl are analogous to neutering programs in domestic animals, except that OvoControl is reversible.

#### **6. Can pigeons consume so much bait that they get too high a dose of OvoControl P?**

No. A single day dose that would be 3 to 4 times the anticipated dose of OvoControl would not produce any toxic effects. In the event that this did occur, the result would be that blood levels of nicarbazin would increase and absorption of the nicarbazin in the yolk of the egg would also increase.

## **7. What happens if a raptor consumes a pigeon that has been treated with OvoControl P? Will the raptor's eggs also not hatch?**

Fortunately, the chemistry of the active ingredient assures that there is no risk of any effect in a raptor. To have an effect, the bird MUST consume the bait – raptors enjoy fresh meat and fish, not OvoControl bait. Once OvoControl is digested and absorbed, it is no longer biologically available to another bird. There is effectively no risk of secondary toxicity.

## **8. How quickly is the active ingredient, nicarbazin, eliminated from soil and the environment?**

Carbon 14-labeled nicarbazin studies have shown that the half-life of nicarbazin is approximately 49 weeks in field soil and 18 weeks in greenhouse soil. Studies of radio-labeled nicarbazin in field soil plots have shown that the nicarbazin incorporated into the upper 3 inches of soil does not leach through the soil beyond 6 inches in depth and slowly degrades over time.

## **9. OvoControl could get into the aquatic systems through unconsumed bait or pigeon feces. What happens to OvoControl P once it enters aquatic environments?**

Nicarbazin as a complex has poor solubility in water. As nicarbazin goes into solution it dissociates into DNC and HDP. HDP facilitates the absorption of DNC in the gut. Nicarbazin is excreted as DNC and HDP; DNC excreted in the form of pigeon feces would not be well absorbed from the gastrointestinal tract and would pass through the animal with very minimal absorption. Studies have shown that there are no toxic effects in aquatic species.

## **10. What can you expect in terms of feral pigeon population control following the first year of use?**

Under ideal conditions, with all pigeons in the area consuming the appropriate dose during the breeding season the expected outcome is no new pigeons. The average lifespan of a pigeon is 2 to 3 years, although the population turnover through predation and disease is very high. The objective for OvoControl is to minimize the hatchability of pigeon eggs. Studies conducted in the United States and Italy show the population of pigeons declining by 50% within the first year and the lower population density dominated by adult birds. Within a few seasons, flocks typically stabilize with a 90 to 95% reduction in the population.

## **11. If we feed the birds OvoControl, won't we attract even more pigeons?**

Pigeons are flocking birds and the flock represents a social unit. While an OvoControl program is designed to attract the local “flock”, it does not attract birds from neighboring flocks. Pigeons are territorial and while the birds will share feeding resources, nesting and roosting sites are defended from intruders. Furthermore, pigeons are monogamous and only adolescents, widows or widowers seeking reproductive opportunities will potentially move from their existing flock.

## **12. Will the pigeon still lay an egg(s)?**

It is quite likely that each female pigeon will still lay two eggs. If the OvoControl dose is high enough and the blood DNC levels are high enough, fewer eggs than normal may be laid. OvoControl mainly works to reduce hatching of the eggs that are laid. Having eggs is actually a beneficial effect, as the pigeon will stay at the original nest and incubate the eggs rather than leaving the site and starting a new nest elsewhere.

### **13. How long does it take for the effect of OvoControl to wear off?**

OvoControl must be consumed for several days to achieve blood levels that affect the hatchability of eggs that are forming. Nicarbazin is undetectable in the plasma 4-6 days after consumption of the OvoControl bait has stopped. Once the level of DNC falls by approximately one half its peak levels, the effect on egg hatchability has almost disappeared.

### **14. What advantage does OvoControl have over nets, spikes and other common deterrent devices?**

Conventional pigeon deterrent systems are designed to exclude birds from an area. While this may resolve a modest pigeon problem, in the very best case, it moves the birds to another location. OvoControl is designed for sites where simply moving the birds does not resolve the problem. Exclusion systems complement the effects of OvoControl, consistent with an Integrated Pigeon Management (IPM) program. These tools can be combined for optimal results.

### **15. What advantage does OvoControl have over other chemical control programs?**

Use of OvoControl allows for the reduction in hatching of eggs laid by treated pigeons without the risks of toxicants. Other than a declining population, there are no long-term effects and nothing ever dies from OvoControl.

### **16. When do you start and stop using OvoControl P?**

OvoControl baiting can begin at any time during the reproductive season. Pigeon reproduction is concentrated in the spring through fall although, depending on the climate, they can reproduce throughout the year. With adequate food, water and nesting sites, pigeons can hatch eggs as often as six times a year.

### **17. Is there a pre-baiting period?**

We recommend pre-baiting with cracked corn to help condition birds to the daily baiting routine. Once fully acclimated to the program, the birds can be transitioned from corn to OvoControl.

### **18. Where should the bait be broadcast or feeders located?**

The OvoControl feeder provides an automated delivery system for the bait. Pigeons become conditioned to the daily baiting event through the consistent and predictable availability of food. The feeders come with digital controls allowing the applicator to dispense the appropriate quantity of OvoControl at pre-programmed 24-hour intervals. The units come equipped with a battery and optional solar charger.

### **19. What are the advantages of using an automated feeder?**

Ideally, bait is offered in the early morning on urban rooftops in the areas where pigeons are nesting or feeding. Innolytics offers economical automatic feeders to ease the labor and manpower burden of daily feeding.

### **20. Do the baiting sites need to be monitored?**

OvoControl is offered in the early morning on a daily basis. Initially, each site is observed for approximately one hour to ensure that pigeons are eating the bait. With automatic feeders, baiting can

be preprogrammed to dispense the appropriate amount of bait once or twice a day, with periodic inspections to observe feeding behavior and to refill the bait. Some applicators are using automated cameras to supplement monitoring.

## **21. Who is allowed to use the product?**

OvoControl is classified as an unrestricted use pesticide in every state. OvoControl is not registered for use in New Hampshire. With the exception of Hawaii and Puerto Rico, no special permit is required to apply the product. OvoControl is used primarily by facility and property managers or a pest control professional working on their behalf.

## **22. Since this product is delivered under free-feeding conditions, how can you be sure you are not over-or under-dosing the pigeons with OvoControl P?**

OvoControl is applied at a rate of one (1) pound per 80 pigeons per day. It is very difficult to administer exact doses of OvoControl P under free-feeding conditions such as those that will exist using broadcast application. However, OvoControl P has been shown to have a wide margin of safety and efficacy. Broadcasting the bait ensures that all pigeons have an opportunity to consume an appropriate dose.

## **23. Can you skip a day or two of bait and still get the desired effect? If the pigeon skips eating for a day or two, what happens?**

In the ideal situation, each pigeon consumes 5 grams of bait each day. Bait should be available every day to maximize the chances of the pigeons getting their daily dose of OvoControl. There appears to be a threshold level of DNC in the blood required to affect hatchability of the eggs formed during that time period. If a pigeon doesn't eat the bait for a day or two, it is likely that the DNC levels in the blood will fall and may fall below the level required to affect hatchability. The DNC levels in the blood will rise again when the pigeon consumes more bait.

## **24. How do you prevent other birds from consuming OvoControl P? (i.e., starlings, house sparrows, songbirds, raptors, etc.)**

All avians are considered sensitive to the product. OvoControl has therefore been designed to limit non-target exposure to birds. There are five techniques employed:

- The bait is relatively large, suitable for a pigeon but not to the average songbird.
- The bait is fed sparingly, at 5gm/bird, or roughly 15% of the pigeon's daily dry matter intake – in the early morning. Experience shows that once the pigeons are conditioned to the baiting routine, it is consumed within a few minutes, leaving little opportunity for non-target feeding.
- Pigeons are flocking birds and feed rapidly as a group. Most passerine activity is at or below the tree canopy level, and feeders are placed on rooftops where the risk of non-target exposure is limited.
- A daily dose is required during the breeding season – a single dose has no effect. It is possible that a non-target receives a dose from time-to-time, but periodic observation by the applicator ensures that OvoControl is reaching the target population.
- Raptors, insectivores, fish and crustacean eating birds will not consume bread-based bait.

## **25. What is the effect on non-target mammals?**

Nicarbazin is considered "practically non-toxic" by EPA. Traditional reproductive studies in rodents show very limited contraceptive action.