



BOTSTIBER INSTITUTE
FOR WILDLIFE FERTILITY CONTROL

FACT SHEET

OvoControl[®]

Brand name: OVOCONTROL[®] P 0.5% Ready-to-Use Bait

Common name: nicarbazin

Manufacturer: Innolytics, LLC,
72377 Magnesia Falls Dr.,
Rancho Mirage, CA 92270

Regulatory Status: USEPA unrestricted-use pesticide licensed in 50 states and DC. Approved for use in pigeons and other pest bird species.

Website: <https://www.ovocontrol.com/>

General Description

OvoControl interferes with the hatchability of avian eggs. The active ingredient, nicarbazin, is registered by both the **FDA** and **EPA**. Originally used as a drug to control coccidiosis in chickens, the compound was subsequently developed and registered to interfere with egg hatchability in pest birds including feral pigeons. Nicarbazin has been used in chicken production for more than 60 years.

OvoControl deposits in the egg where it interferes with the formation of sperm receptor sites and prevents fertilization. Nicarbazin has been tested in mallard ducks, Japanese quail, feral pigeons, Canada geese, domestic turkeys, chickens and Pekin ducks. While all avian species are considered sensitive, different doses are required to achieve the optimal contraceptive effect.

At the recommended dose, the bird will continue to lay eggs, although the eggs will not hatch. OvoControl is considered an unrestricted-use (“general-use”) pesticide and does not require any special permits or license. All avian species are considered sensitive and care should be taken to avoid administration to non-target birds and other animals. For a current copy of the EPA-approved label, see the Innolytics website at www.ovocontrol.com.

Dosage

OvoControl P is a hard pellet suited for pigeons and other grain feeding birds. The recommended dose for feral pigeons (average body weight = 0.32kg) is 83.3 mg of nicarbazin/kg body weight or roughly 5 grams of OvoControl P 0.5%/day. In order to maintain a contraceptive blood level, the contraceptive dose of OvoControl must be consumed daily. The product is not toxic and has a wide margin of safety.

Toxicity

The LD50 of nicarbazin is greater than 25,000 and 10,000mg/kg body weight in the mouse and rat, respectively. The acute oral toxicity in Northern Bobwhite, a sensitive test species, exceeds LD50 > 2,250mg/kg BW. Avery (2008) showed no adverse effects in pigeons at a dose level of up to 133mg/kg BW up to 49 days. Too much OvoControl does not harm the bird and overdoses will result in a reduction of egg production, eventually dropping it to near zero (Reinoso, 2008). No adverse effects, other than impact on egg hatchability, have been noted at any of the dose levels or studies.

Furthermore, the chemistry of the active ingredient assures that there is a near zero risk of any secondary effect in a bird of prey. Once OvoControl is digested and absorbed, it is no longer biologically available to a secondary species. Any amount absorbed from secondary intake would be well below the established no-effect level.

Side Effects

The main side effects of nicarbazin, when used to control coccidiosis in chickens, include reduced hatchability of eggs, reduced numbers of eggs laid, and reduced eggshell pigment in eggs that contain the brown pigment porphyrin. No side effects have been noted when used to control hatchability in pest birds.

Recommended Use

For pigeons, OvoControl baiting can begin any time. OvoControl has been shown to have a wide margin of safety and efficacy.

(over)

Efficacy

OvoControl is extremely effective when consumed according to label directions. With the appropriate plasma blood concentration, the active ingredient will interfere with hatchability in +/-95% of the eggs. When fed according to the label directions, it is possible that each female bird will still lay a clutch of 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.

Non-targets

OvoControl only has a contraceptive effect in birds. Based on the baiting protocol, the risk to non-target birds is remote.

Learn More

For more information about OvoControl P visit Innolytics' website at <https://www.ovocontrol.com/>.

Avery, M., K. Keacher, and E. Tillman. **Nicarbazin bait reduces reproduction by pigeons (*Columba livia*)**. 2008. Wildlife Research 35(1) 80-85.

Jones, J.E., J. Solis, B.L. Hughes, D.J. Castadllo, and J.E. Toler. 1990. **Reproduction responses of broiler-breeders to anticoccidial agents**. Poultry Science. 69:27-36.

Reinoso, V. 2008. **Contraceptive Action of Nicarbazin in White Pekin Ducks** (Master's thesis). Retrieved from <http://etda.libraries.psu.edu/theses/approved/WorldWideIndex/ETD-3193/index.html>

Reinoso, V. P., R. Katani, and G. F. Barbato. 2007. **Nicarbazin reduces egg production and fertility in White Pekin ducks via reducing ZP3 in the perivitelline membrane**. Poultry Sci. 86 (Suppl. 1): 536.

Yoder, C. A., L. A. Miller, and K. S. Bynum. **Comparison of Nicarbazin Absorption in Chickens, Mallards and Canada Geese**. 2005 Poultry Science 84:1491-1494.



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