



## Wildlife Services Tech Note

### Egg Oiling: A Bird Population Control Tool

Wildlife Services (WS), a program within the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS), provides Federal leadership to help manage damage associated with locally overabundant gulls, waterfowl, and other birds. Management methods include trapping and relocation, surgical sterilization, mechanical scare devices, repellents, and lethal removal. These methods, and others that reduce or prevent eggs from hatching, such as shaking, freezing, nest destruction, and egg removal, are labor intensive and may not always be effective.

Egg oiling requires less time and resources. It involves applying mineral or vegetable oils to the surface of eggs during the incubation period. The oil prevents the eggs from hatching by closing the eggshell's surface pores and preventing oxygen from reaching the developing embryo. This method is more effective than nest destruction or egg removal because nesting birds continue to incubate their eggs, often well beyond the normal time for hatching while nest destruction or egg removal may cause birds to renest.

Certain substances are exempt from the requirement for federal registration under Section 25(b) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended ([www.epa.gov/minimum-risk-pesticides/active-ingredients-allowed-minimum-risk-pesticide-products](http://www.epa.gov/minimum-risk-pesticides/active-ingredients-allowed-minimum-risk-pesticide-products)). This exemption allows corn oil (CAS No. 8001-30-7) to be used to mitigate damage from certain bird species without U.S. Environmental Protection Agency (EPA) registration provided the product meets EPA's six conditions ([www.epa.gov/minimum-risk-pesticides/conditions-minimum-risk-pesticides](http://www.epa.gov/minimum-risk-pesticides/conditions-minimum-risk-pesticides)).

Although corn oil is a minimum risk pesticide active ingredient under FIFRA Section 25(b), it is not automatically exempt from regulation or registration requirements by the State or Territory when it is used to control pests on another person's property. Before using corn oil as an egg oiling product, contact the Territory or State agency responsible for pesticide regulation to determine whether additional regulatory requirements apply, such as State registration of a minimum risk pesticide label.

This label must be added to each container and include an ingredient statement listing the active ingredient's name used by EPA (corn oil), its percentage by weight in the product (100%), and the name and contact information of the producer (WS State Program contact).

Laboratory and field studies conducted by WS' National Wildlife Research Center (NWRC) show that corn oil is 95 to 100 percent effective in preventing the hatching of treated eggs. Corn oil can be obtained from any commercial supplier. This tech note describes how to use corn oil to treat the eggs of nesting gulls, waterfowl, and other birds, per the requirements outlined in FIFRA Section 25(b).



*Wildlife Services employee applying corn oil to gull eggs using a pressurized backpack. Photo by WS*

### Endangered Species Considerations

Before treating eggs with corn oil, consult with appropriate wildlife authorities to ensure its use is not hazardous to threatened or endangered species. It may be necessary to obtain a permit from the U.S. Department of the Interior's U.S. Fish and Wildlife Service and/or the applicable State or local wildlife agency before corn oil can be used. Obtaining all required permits and licenses is the responsibility of the applicator.

## Application Equipment

Apply a similar amount of corn oil to each egg without excessive contamination of the nest and surrounding area. A pressurized backpack or hand-held sprayer that holds from 1 to 2 gallons of corn oil is recommended. Sprayers should be pressurized (between 15 to 40 lbs./in<sup>2</sup>) and calibrated to deliver between 3 to 6 milliliters (ml) of oil per second. The spray wand should contain a tip that produces a fan or circular pattern.

## Application Period

Monitor the breeding and nesting activity of birds targeted for treatment. To be most effective, corn oil should be applied between the fifth day after the laying of the last egg in a clutch and at least 5 days before hatching. Treat all eggs in a nest at the same time, and do not move or turn eggs. For colonial nesting birds, such as gulls, newly completed clutches may have to be treated at 10-day intervals to assure complete coverage. The amount of corn oil used varies with egg size.

For pressurized sprayers, place the wand tip 6 to 8 inches above each egg and apply an appropriate amount of corn oil. For example, treat goose eggs with approximately 7 ml of corn oil per egg and gull eggs with 2 ml of corn oil per egg.



*Applying corn oil to goose eggs. Photo by WS*

## Storage and Disposal

Store corn oil in the original container. Recycle containers or dispose of them in an appropriate landfill.

## Potential Hazards

Potential hazards to applicators are low unless the person is allergic to corn oil. Because corn oil applied to the eggs of any bird results in embryo death, applicators should identify and mark the nests of nontarget birds in mixed colonies so nontarget species are not treated. Do not spray or apply corn oil to anything other than eggs. Do not apply directly to water.

## More Information

Learn more about the use of corn oil for egg addling and minimum risk pesticides at: [www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nepa/ct-ws-risk\\_assessments](http://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nepa/ct-ws-risk_assessments) or contact the NWRC (970-266-6000 or [www.aphis.usda.gov/wildlifedamage/nwrc](http://www.aphis.usda.gov/wildlifedamage/nwrc)).

For information about the availability of this product, contact your WS State Director at 1-866-4USDAWS (1-866-487-3297) or WS' Pocatello Supply Depot at (208) 236-6920.