



“Providing Tomorrow’s Innovative Solutions Today”[®]

Avipel® is the first scientifically formulated seed treatment to stop birds from eating newly planted seed.

Its bird repelling action works around the clock through emergence. The result means greater yields, peace of mind, and less hassle!

Bird Species Involved

- Blackbird
- Starling
- Cowbird
- Crow
- Pheasant
- Crane
- Grackles



Reason for seed loss

- **Seed loss is caused by a number of species in the spring when birds need starch for egg production.**
- **Crows, Blackbirds, Sandhill Cranes, Pheasants, Cowbirds & Grackles damage seed from planting through the seedling stage.**



How it works!

- **Avipel seed treatment causes rapid stomach distress in birds.**
- **If they do attempt to eat newly planted seed, they quickly begin foraging for other food sources.**
- **One application protects seed through emergence.**



Why use **Avipel[®]**

- The active ingredient, anthraquinone (AQ), is an organic chemical found naturally in many plant species.
- AQ is non-systemic in corn
- Non-lethal to Birds, including game birds
- No aquatic toxicity
- No terrestrial plant toxicity
- No fish toxicity

Available in both liquid and dry





Typical Bird Damage



Typical Bird Damage

 **Avipel®**
**BIRD REPELLENT
SEED TREATMENT**





Typical Bird Damage





Avipel[®]

**BIRD REPELLENT
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Typical Results



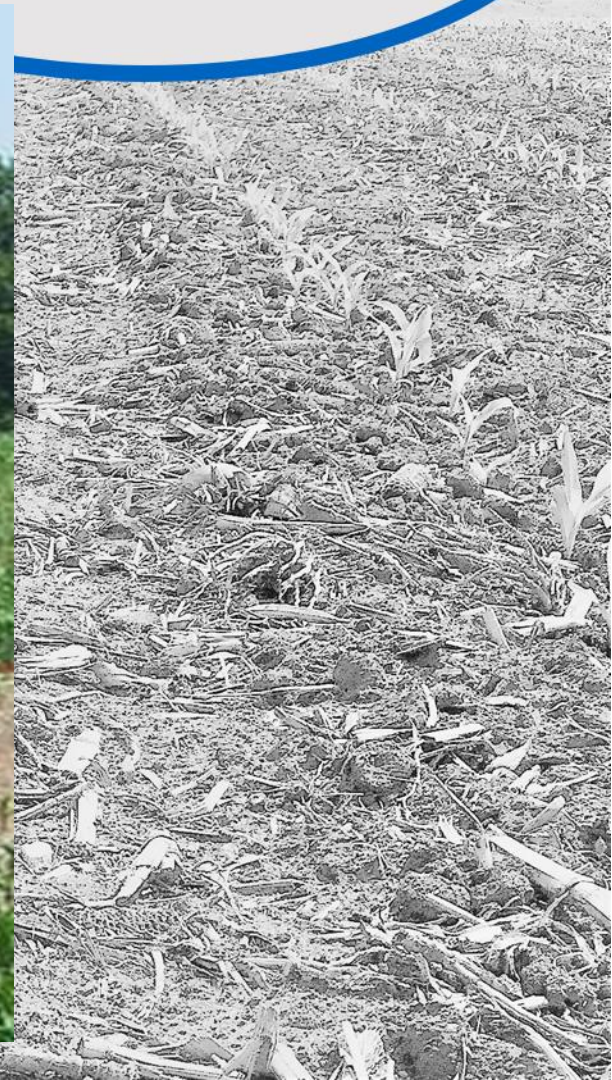
Untreated



Treated

Typical Results

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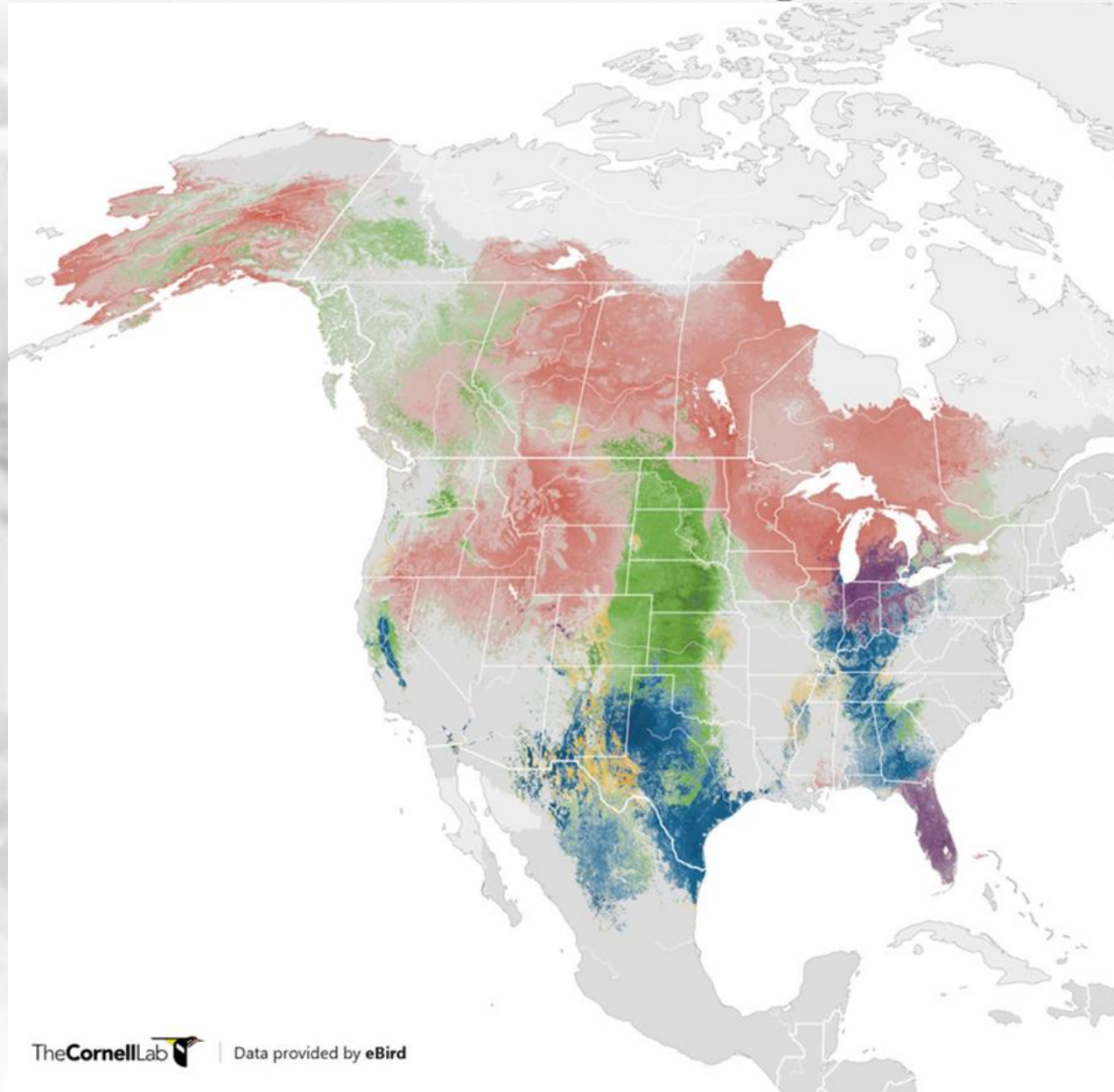


PHEASANT FACTS

- *Weight:* Male ring-necked pheasants (roosters) average 2 to 3 pounds while their female (hen) counterparts average 2 pounds.
- *Length:* Males measure 24 to 35 inches long (a rooster's tail accounts for more than 20 inches of length); hens are smaller with a much shorter tail.
- *Flight Speed:* 38-48 mph (but can reach up to 60 mph when chased)
- *Favorite Foods:* Corn, seeds, insects
- *Preferred Habitat:* Undisturbed grass
- *Average Nest Initiation:* Early May
- *Average Incubation Start:* Late May
- *Length of Incubation:* 23 days
- *Average First Hatch:* Mid-June
- *Average Clutch Size:* 12 eggs
- *Average Nest Success:* 40-60%
- *Average Hen Success:* 50-70%
- *Average Rate of Chick Survival:* 50%
- *Major Nest Predators:* Fox, raccoon, skunk, feral cats
- *Major Adult Predators:* Human, fox, hawk, owl

* Info provided by Pheasants Forever

Sandhill Crane *Antigone canadensis*



Sandhill Crane *Antigone canadensis*

Abundance

This map depicts the seasonally-averaged estimated relative abundance, defined as the expected count on a one-hour, one kilometer eBird Traveling Count conducted at the ideal time of day for detection of that species in a region. [Learn more](#)

RELATIVE ABUNDANCE birds per km/hr

Year-round

Breeding season May 31 - Sep 7

Non-breeding season Dec 21 - Feb 1

Pre-breeding migratory season Feb 8 - May 24



Post-breeding migratory season Sep 14 - Dec 14

0.1 3.46 5,816.38

Note: Seasonal ranges overlap and are stacked in the order above; view full range in season maps.

SEASONS TIMELINE [Learn more](#)



 Modeled area (0 abundance)
 No prediction [Learn more](#)

eBird data from 2004-2016. Estimated for 2016.

Fink, D., T. Auer, A. Johnston, M. Strimas-Mackey, M. Iliff, and S. Kelling. eBird Status and Trends. Version: November 2018. <https://ebird.org/science/status-and-trends>. Cornell Lab of Ornithology, Ithaca, New York.



Avipel® Ecotox Profile

- **Bio pesticide labeled for Corn seed treatment**
 - Naturally occurring
 - Not toxic
- **Not soluble, no soil migration**
- **Biodegradable**
- **No Aquatic Toxicity**
- **Not Systemic**
- **Tolerance work yet to be done for food**

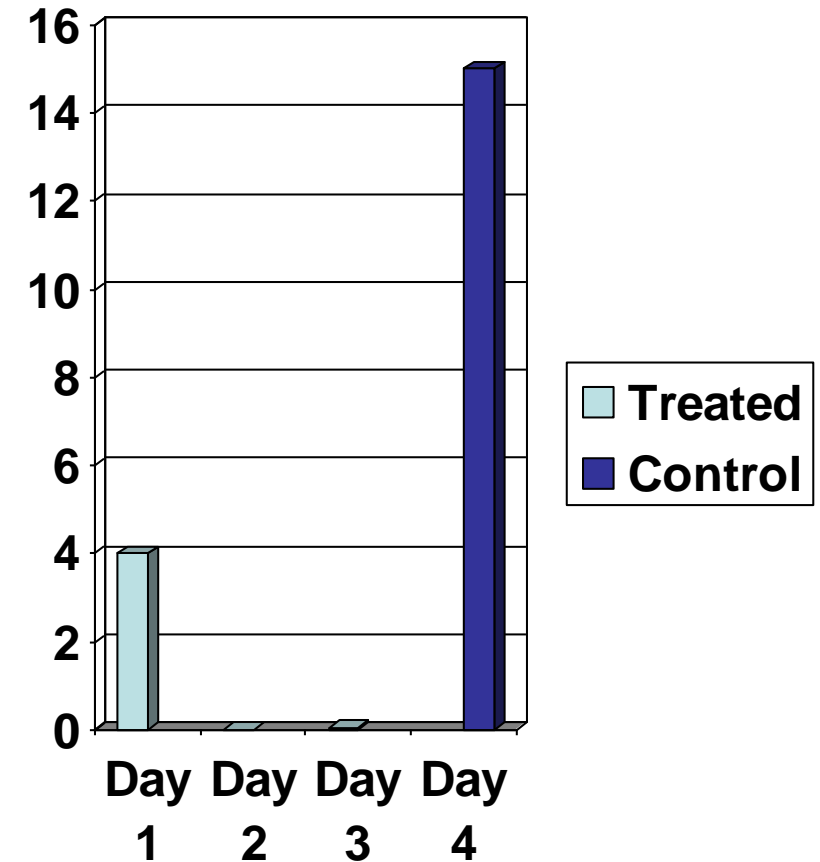
How **Avipel®** Works as a Bird Repellent

- **AQ creates a powerful negative gut reaction in all birds.**
 - Non-Toxic
 - Learned Response
- **Bird Species**
 - Sandhill Cranes
 - Ring-Neck Pheasants
 - Cowbirds
 - Crows
 - Black Birds (Red Wing & etc.)

USDA Blackbird Results

NO Choice Test

- Blackbirds starved rather than eat 1% (2% formulated product) AQ treated rice.
- Indicates repellency as strong as any product ever tested by USDA in over 40 years.



Study done by USDA in cooperation with LSU Rice Station.



Liquid Seed Treatment

- **Labeled for Field and Sweet corn**
- **Permits treating seed ahead of busy planting season**
- **Cost effective treatment**
- **Can be applied in continuous flow or batch seed treaters**
 - **Slurry or direct injection systems**



Hopper Box (Dry) Formulation

- **Labeled for both Field and Sweet corn**
- **Easy to apply**
- **Cost effective treatment**
- **Permits treating seed just prior to planting**



Avipel[®] Liquid

- 13.5 fl. oz. per 100 lb. of corn seed
- Available in 2 x 2.5 gallon cases

Avipel[®] Hopper Box (Dry)

- One 16 ounce canister treats approx. 200 lb. of corn seed
- 12 – 16 ounce canisters in a case
- Handy Measuring scoop with each canister

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SEED TREATMENT**