

Iowa's Pheasants

The Effects of Weather and Habitat on Pheasant Survival

Four-Part News Media Series by Mick Klemesrud, Illustrations by Emily Bainter

Iowa pheasant hunters have harvested more than one million birds annually 33 times since 1962. Since 2000, that's happened only twice. So, what has changed? Iowa pheasant populations have always fluctuated with annual weather patterns, however five consecutive years of unfavorable winters followed by wet nesting seasons between 2007 and 2011 was unprecedented. This weather pattern coupled with declining habitat produced a stark decline in pheasant numbers and hunters.

This factsheet is a collection of a four-part series the Iowa DNR produced in 2011 summarizing habitat trends and a five-year period of unprecedented weather on Iowa's pheasant population.

Pheasants Arrive, Thrive in Iowa: Part 1

Wild pheasants were brought over from China by Owen Denny in 1882 to establish a population in Oregon's Willamette Valley. That initial stocking and other imports from China are the sources for current day ring-necks across the U.S.

Iowa's wild population came through an accidental release of the Oregon birds' descendants. An early 1900s wind storm turned loose 2,000 wild pheasants from William Benton's Cedar Falls game farm to Iowa's patchwork of small grain, hay and corn fields and pastures. They thrived, eventually prompting crop damage complaints.

By 1913, the Iowa Conservation Commission, the fore-runner of the Department of Natural Resources, was stocking hatchery-raised pheasants, anticipating creation a hunting season. Results were mixed.

In 1924-25, the Commission began to trap and relocate wild birds and eggs to southern Iowa.

Iowa's first pheasant season was October 20-22, 1925, in Kossuth, Humboldt, Winnebago, Hancock, Wright, Cerro Gordo, Franklin, Mitchell, Floyd, Butler, Grundy, Black Hawk and Bremer counties. The season opened one-half hour before sunrise and ended at noon with a bag limit of three cocks. "It appears that the first counties opened to pheasant hunting were also those where complaints of pheasants caused crop damage were common," said Todd Bogenschutz, upland wildlife biologist for the Iowa DNR.

In 1932 state game farms closed, but reopened in 1938 after several poor weather years. Better weather in the 1940s helped bird populations recover. By 1945, most of northern Iowa was open to hunting. Through the '40s and '50s, it became apparent that pen-raised pheasants were not contributing to wild bird numbers. Yet, by 1965, pheasant

hunters spread across Iowa, save for a few southeastern counties.

Populations Ebb and Flow

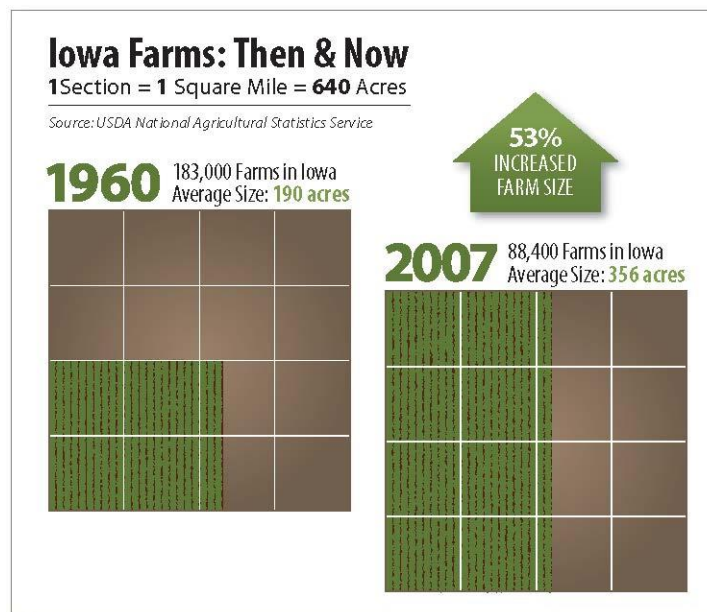
Northwest, north-central and central Iowa held the most pheasants through the 1950s. However, since the 1960s, changes in agriculture led to a decline in pheasant numbers. By the early 1970s, southern Iowa had become the premier pheasant range. The last state game farm was closed in 1973 and entire state was opened to hunting in 1976.

Pheasant populations in the northern and central regions

rebounded with establishment of the federal Conservation Reserve Program (CRP) between 1985 and 1996. Counts rose in the southern counties initially, but have declined steadily since 1992.

Even in its heyday, with hunters consistently harvesting more than one million roosters annually, clouds hung over Iowa's pheasant population.

Since 1962, populations and brood size have declined.



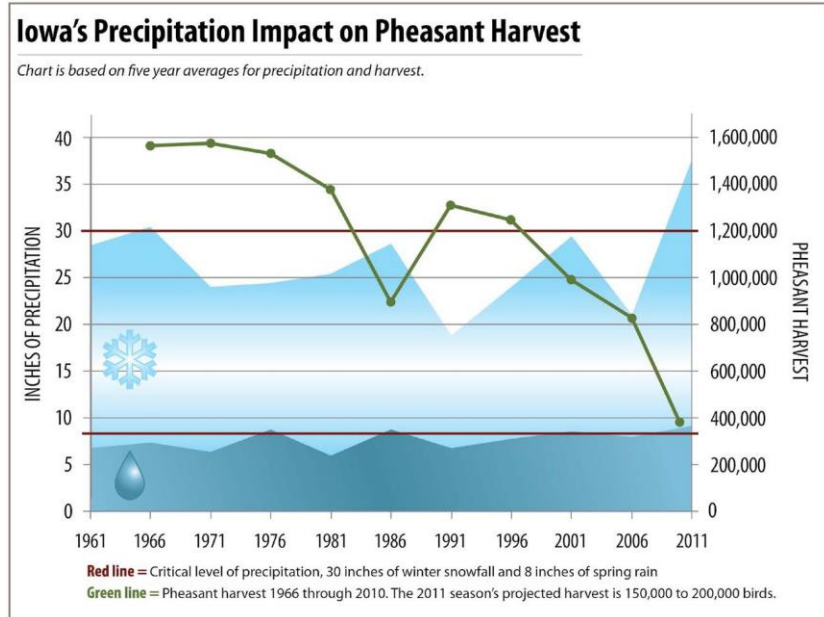
Changes in farming practices greatly reduced grassy field corners and fence rows. Advances in seed genetics nearly eliminate weeds and allow crops to be planted closer together. But weather is a major factor influencing pheasant numbers. Cold, snowy winters reduce marginal habitat and concentrate pheasants and predators. By spring, much nesting habitat is reduced to road ditches, terraces and grassed water ways, where spring rains flood nests and drown chicks.

million birds a year (often well above that). This year, the projected harvest is 150,000 to 200,000.

Why the plunge? The primary factor is one we cannot change: the weather. Coming out of the 2010-2011 winter, Iowa marked five years in a row of average statewide snowfall over 30 inches. That causes heavy mortality among overwintering pheasants. In a half century of standardized data collection, Iowa pheasant numbers never have increased in a year following a winter with 31 inches or more of snow.

Add an April-May hatching period with over eight inches of rain - the fourth time in five years - and survival of chicks from those remaining hen pheasants dropped drastically, too. Iowa sees an average of seven inches of rain during that nesting period. In the last 50 years, only once has there been a significant increase in pheasant numbers, when eight inches or more fell.

“A lot of folks will remember back to bad winters we’ve had in Iowa before,” agrees Mark McInroy, wildlife research technician for the Department of Natural Resources. “However, they forget that we have never had five consecutive years of bad winter-spring combinations. There hasn’t been a chance for our pheasants to recover.”



“The bottom line is weather trumps all when it comes to hen survival and nesting success,” said Bogenschutz. “Tell me the amount of snowfall, the amount of rain and the temperature in the spring, and I can tell you if pheasant counts will be up or down that summer. The weather models are that accurate. We are now in a weather pattern of five consecutive winters with heavy snow and springs with lots of rain. That has not happened in 50 years.”

Throw in loss of good habitat - especially winter cover - and pheasant survival faces a triple whammy. From 1990 to 2005, Iowa lost 2,500 square miles of Conservation Reserve Program (CRP), hay and small grain lands. That equals an eight-mile-wide strip across Iowa from Davenport to Omaha. Another 485 square miles of CRP has gone back to row crops since 2007. That leads to heavy game bird losses over the winter.

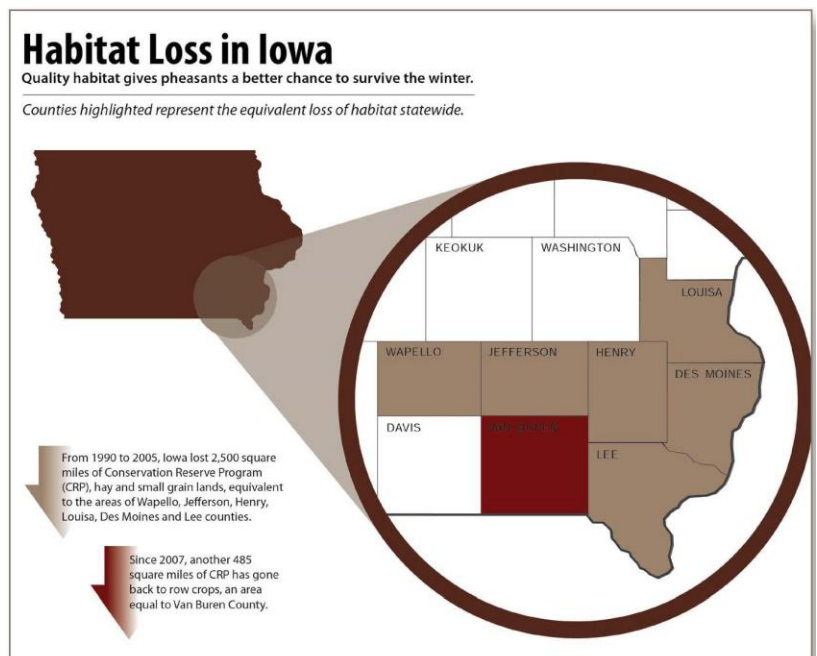
“It was pretty common to see hunters from Michigan, Georgia, Texas and every state around us,” said Rich Jordet, law enforcement supervisor for the DNR in northwest Iowa. “I remember checking hunters from 14 different states on opening day.”

Nonresident license sales also provided a boost in Iowa’s Fish and Wildlife Trust Fund.

Pheasant Plunge to Current Status: Part 2

An extra inch or two of spring rain. A few more inches of winter snow. Each by itself raises short term concern for Iowa pheasants. Strung together over multiple years and they spell major trouble for Iowa’s pheasant population, as well as our tradition of pheasant hunting and the economic boost it provides rural Iowa.

Heading into the 2011 season, biologists are forecasting a record low harvest of ring- necks — again. Not that many years ago, it was normal for hunters to take a



Yet where there is quality habitat, there are pheasants

Bill Kron owns 200 acres near West Branch, in Cedar County. On his CRP acres, he has grasses and wildflowers. He works periodic burning into his management routine. Alfalfa, clover and small food plots of corn and sorghum enhance cover and food sources.

“Our counts are down, but I can still go down a mile long stretch of gravel and count 10 pheasants, more or less, on any given day,” says Kron.

He lives within minutes of the two Cedar County routes surveyed each August by DNR wildlife biologists. Each 30 mile route is along heavily cropped fields, with little year-round cover. One route yielded zero pheasants this summer. The other tallied birds in the single digits.

The answer to plummeting pheasant numbers? The birds need a break.

“We’ve seen birds recover on their own, when Mother Nature has taken a break,” recalls McInroy. “We had a severe winter in 2001, then a wet spring. However, pheasant numbers doubled after good weather patterns in 2002 and 2003. The best thing Iowans can do is to maintain or improve habitat. We have habitat now that could support an 800-thousand pheasant harvest, if we could get a couple years of favorable weather.”

Still, only about one percent of pheasant habitat is on public land. The DNR’s private lands program and non-government conservation groups, like Pheasants Forever, are working with private landowners to get more high quality habitat on the ground.

Another opportunity is Iowa’s walk-in Hunting and Access Program (IHAP), through which property owners are reimbursed for conservation practices and in return allow public hunting access on their land.

Working to Improve Iowa Pheasant Numbers: Part 3

Left without a weather changing device, the Iowa DNR and other conservation groups are working to improve existing habitat and getting new habitat on the ground so when Mother Nature does relent, pheasants are in the best position for recovery.

That work includes increasing habitat on private land, using the federal farm bill, conducting an Iowa legislature-sponsored pheasant and quail restoration pilot project, growing landowner participation in the IHAP program and expanding the DNR’s private lands programs for landowners.

In 2002, the DNR conducted a pheasant and quail restoration pilot project on private land, primarily in four counties in southern Iowa - Clarke, Decatur, Lucas, and Wayne. The DNR paid for habitat improvement on about 2,500 acres per year for five years.

Economic Impacts: 1997 Peak vs. 2010

Estimated annual amount spent by Pheasant Hunters (resident and nonresident) in Iowa.

Data comes from a national survey of hunters conducted every 5 years by US Fish and Wildlife Service.



As the Pheasant Population Goes, So Go the Hunters

Iowa hosted 30,000 to 50,000 nonresident pheasant hunters in years past. They stayed for days in small town hotels, ate in the cafés down the street; and bought supplies from local stores. This was a multi-million dollar shot in the arm for small town Main Street.

The study concluded in 2007 and used spring crowing counts to judge the outcome. There was an average of 6.4 roosters per stop on the managed farms, versus 2 roosters on unmanaged farms. Quail counts found similar results - 2.3 bobwhites per stop on managed farms versus 0.2 on unmanaged farms.

“Those numbers are not great by any means but what it shows us is that habitat will attract existing birds,” said Todd Bogenschutz, upland wildlife biologist for the Iowa Department of Natural Resources.

In general, most wildlife species do not benefit by having less habitat and, with grain farmers enjoying healthy profits, the amount of land enrolled in the Conservation Reserve program has been shrinking each year.

But not all private land has gone that way.

Mike Nelson believes the sound of pheasant cackles will again be common across southern Iowa’s landscape. Nelson has been adding habitat on his Lucas County farm since he bought it four years ago and the results have been pleasing to the eyes and ears.

While the number of pheasants and quail on Nelson’s farm is not huge, particularly with the recent weather patterns, it still showed him that the right mix of habitat will draw and hold birds.

Nelson installed a continuous edge, 20 acres of CRP, buffers around timber and feather edging. Each year he adds a couple of projects, including most recently planting dogwood and nine bark bushes. These efforts provide nesting and winter survival opportunity for the birds.

Not only has he been seeing pheasants and quail on his property, he is hearing from neighbors who are seeing birds as well, which is exciting, he said.

“As guys start seeing birds, they are starting to believe we can get them back,” Nelson said. “I do believe we can get there. It just takes work.”

That excitement is echoed by Doug Spies who jumped at the chance to buy the land he grew up hunting when it was offered for sale and then enrolled his 60 acres of rolling Woodbury County hills into CRP 12 years ago.

Spies spent time and money to install high quality habitat, including adding 20 forbs, a few acres of bushes, he includes annual food plots and manages the grasslands with fire.

The result? Unlike most of Iowa, Spies had great pheasant hunting last year and this year he even has some quail. His property is adjacent to another 100 acres in CRP that happens to be owned by his childhood hunting friend, providing additional habitat.

“I have pheasants here,” Spies said. “Best pheasant hunting was out my back door.”

But once he left his property, there was not much habitat in the area to hunt.

Gordon Garrison can relate to that. He has a mix of grasses, forbs and bushes, restored wetlands, farm ponds and a water diversion canal on 200 of his acres in Emmet County in



continuous and general CRP. And yes, Garrison has pheasants.

“Habitat restoration has been very rewarding for me,” Garrison said. “The property is totally different than what existed in 1972 when we moved here. The opportunity to exit the house for a morning or evening walk among the ‘wild things’ is a priceless adventure.”

Replicating that success on a smaller scale is a large part of the workload of the DNR’s private lands staff. The DNR has been working in partnership with Pheasants Forever’s Reload

Iowa Program to ramp up efforts to help landowners establish habitat on private land.

The IHAP program has been very successful improving CRP habitat on private lands for the benefit of pheasants. The program peaked at over 40,000 acres enrolled and stands at around 32,000 acres in 2024.

“Both landowners and hunters have been very pleased with the IHAP program with satisfaction surveys showing over 90% support among both groups, we are optimistic that we could increase the number of sites and acres enrolled with additional funding,” said Nick Baumgarten, the Iowa DNR’s Private Lands program coordinator.

Hunters who choose to hunt these areas must obey hunting laws and must remain only on the land enrolled in the program.

The Future of Iowa Pheasant Populations: Part 4

Fortunately for Iowa ring-neck chasers, weather patterns do change and with the return to more normal weather patterns Iowa has seen a steady increase pheasant harvest since 2011, increasing from 109,000 roosters harvested that year to over half million in 2023. Hunters have also increased over that same time period from 41,000 to over 83,000. This increase in hunters and harvest is a welcome economic boost to many of Iowa’s small rural communities that cash-in on revenue (e.g., gas, food, and lodging) hunters bring to their communities.

Will Iowa again see a one million bird rooster harvest? The question has been asked of Bogenschutz several times since 2011. “My response is it’s possible, but it will depend upon weather and additional habitat, he said.” Between 2010 and 2020 Iowa lost 297 square miles of pheasant habitat, a mile-wide strip of habitat that would stretch from Omaha to Davenport. “The weather patterns since 2011 have been more favorable for pheasants thus we are producing birds in the habitat we have in 2023, it’s just we have less of that habitat than we did in 2011, said Bogenschutz.”

The last time Iowa harvested a million roosters the state had 3.5 million acres of pheasant habitat. In 2023 Iowa had 2.7 million acres of pheasant habitat, or almost a million less acres to grow pheasants. “For Iowa to get back to a million-bird rooster harvest we’ll need at least a half million more acres of pheasant habitat”, said Bogenschutz. USDA conservation programs like the Conservation Reserve Program, Environmental Quality Incentives Program, and the Regional Conservation Partners Program are presently the best opportunities for restoring pheasant habitat on private lands in Iowa.

Iowa’s pheasant season runs from the last Saturday in October through January 10 each year. Shooting hours are 8 a.m. to 4:30 p.m. Daily bag limit is three roosters, with a possession limit of 12.

For more information, contact Todd Bogenschutz, Upland Wildlife Biologist, todd.bogenschutz@dnr.iowa.gov.