

# What We Know About NESTING



Sparse habitat, rainy cool weather, predators and farm operations are the factors that most hurt pheasant nesting success. Although we cannot control the weather, larger blocks of forb and grass habitat away from low-lying areas will help pheasants hide from predators, provide better weather protection and keep nests from flooding. Habitat maintenance ensures a good home for pheasants year after year.

## NESTING BIOLOGY

### AVERAGE CLUTCH SIZE



Hens incubate eggs for approximately 23 hours each day.

If the eggs are destroyed before hatching most hens will renest one or two times.

Each time a hen renews, clutch size declines by two eggs.

Hens will not renest once eggs hatch, thus hens only produce one brood per year.



A clutch of eggs is laid in 15 days and the hen does not start incubating until the last egg is laid.

Eggs hatch after 23 days of incubation, thus hens require at least 38 days to produce a brood.

Hens can begin nesting as early as March and renest as late as August.

Average date for first nests is May 10.

Average date for incubation of first nests is May 24, peak hatch is June 10-18.

70% of the fall population of pheasants is hatched during the spring.

### ADDITIONAL CONTRIBUTING FACTORS

- Assuming all other population rates (chick survival, winter survival, etc.) are at average values, 42 percent of northern Iowa nests must hatch to keep pheasant numbers stable.
- When the total rainfall during the nesting months of April and May exceeds about 8 inches, nest success falls below 42 percent and populations decline.
- When the mean temperature during nesting months (April/May) is below 55F populations generally decline.
- According to telemetry data, predation (67 percent mammalian, 21 percent avian) is the cause of most hen mortality during nesting (April/May).
- Nest loss was 74 percent predation, remaining 26 percent to weather and farm operations.
- During April and May, hens with more edge in their home ranges had higher mortality than hens with less.
- Nest success in blocks of habitat greater than 40 acres averaged 62 percent, while nest success in disturbed patches or areas less than 40 acres averaged 45 percent.

## NESTING COVER

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- Pheasants prefer to nest in dense, leafy-stemmed, tall, erect vegetation with an overhead canopy.
- Pheasants nest in a wide variety of cover including cool and warm season grasses/forbs, weeds, alfalfa and oats.
- Cover should be managed (discing, burning, haying) every 3-5 years to maintain diversity and structure.
- Oats and winter wheat have low nest density but high nest success.
- Well managed, undisturbed habitat will produce an average of one pheasant per acre with stable weather.
- Nesting cover needs to be 10-12 inches in height to attract hens.
- Pheasants are six times more likely to nest in undisturbed grassland than woody areas such as tree rows.
- 15 percent of a pheasants' home range (300 acres or 1/2 square mile) should be nesting cover, while areas with 25 percent nesting cover are preferred.
- Pheasants will nest in small blocks of cover, but 40 acre blocks are the recommended minimum size with 160 acre or larger blocks preferred for the highest nest success.



## BROOD REARING

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- Brood rearing areas contain forbs and are relatively open at ground level.
- Grasslands with a mixture of grasses and flowers provide good foraging habitat and abundant insects.
- More than 90 percent of chicks' diet is insects during the first month.
- Chicks consume 1-3 grams of insects each day.
- Diet is still 50 percent insects by five weeks of age.
- Chicks' home range is 10-20 acres at first and expands up to 70 acres as the chicks age.
- Chicks can make short flights at 2 weeks of age.
- Broods break up at 10-11 weeks of age.
- 1 to 2 day old chicks exposed to 43 degree temperatures die in minutes if not brooded by the hen.
- Chicks begin to regulate their body temperature at 11 days of age.
- Chick survival through brooding is approximately 40 percent.
- Broods hatched later in the nesting season tend to have lower survival rates.
- Predation accounts for 80-85 percent and exposure 15-20 percent of chick mortality the first four weeks of life.
- Different age broods from different hens often cross in the field. Chicks often follow the wrong hen resulting in broods of differing age classes.