

AUGUST

By Ken Solomon

"Tired Hens"

The heat this summer can kill more hen pheasants than did last winter's cold. Why? The hen had to undergo a series of taxing, energy demanding changes during spring and into summer. All of which have left her tired and poor physical condition. First she was faced with the production of a number of eggs that equaled her body weight. She prepared herself by reaching peak weight in April. Then, with the first egg she laid, her weight decreased and has continued to do so. With her incubation of the eggs, came long hours without feeding herself as she attended to the nest. With hatching eggs came chicks to brood, feed and teach survival techniques. With motherhood also comes the replacement of all body feathers. By August she has lost 25% of her weight, and 73% of her body fat. Her vigor and health has decreased dramatically, and is shown by higher occurrences of diseases and parasites. Hen mortality will be high in August.

"Hen Survival"

Annually hen pheasant mortality is effected by: 1) the season of the year, 2) when the hen herself was hatched last spring, 3) last winter, and 4) her egg production. Let's talk about the season of year. It is obvious that spring and summer place hens under tremendous stress. The better the physical condition of the hens, the longer they can survive without food. In early spring (April) when hens are in peak physical condition, they can survive 40 days without feed. In mid-winter (January) hens can survive 29 days. In late summer (August) hens can survive only 13 days without food. Of course food will not be lacking in either spring or summer, but note that survival for summer is less than half that of winter survival. In other words, she was in better physical condition last winter than she is now in August. Hens will die after losing 40% of their weight.

"Food Availability"

Do pheasants seek foods that fulfill a specific nutritional need? The answer is "no", when we talk about cereal grains and weed seeds. Their consumption of these items is dictated by availability. With the July/August harvest of small grains, small grains constitute the largest part of the bird's diet. With small grains becoming less available due to consumption, discing of fields, or rotting, more weed seeds are consumed. As October corn and sorghum harvest begins, they become the largest parts of the diet, and will remain so until mid winter.

The answer is "yes", when we talk of calcium and insects.

During egg laying, the hen seeks out calcium and protein. Her diet will contain 10 times more calcium than the rooster's diet. She seeks calcium through calcareous grit. The hen also seeks more protein than roosters. Her protein intake increases to a June peak of 14.6 percent when she is producing eggs. The rooster reaches a peak of 12.8 percent in

April when he is building sexually. And chicks up to 4 weeks really select insects (90% of diet) to meet their 27% protein needs for growth.

"Chick Cover"

Where do hens take their chicks during the summer months? First, she will find cover with adequate insects. In Nebraska, she takes them into weeds, grass, sweet clover, and small grain stubble during July and August. Many hens are also found near tree and shrub cover. The hen finds more insects outside of tree cover, but woody cover is considered valuable to the chicks as shade in hot weather. Illinois noted that the summer shade benefit offered by woody cover might be more important than its winter cover benefit. The hotter the weather, the more pheasants will use woody cover. Nebraska found that small trees and shrubs were utilized more frequently than tall trees or hedgerows.

The summer shade that trees provide, as well as the accompanying cooler ground temperatures within woody cover, may be very important to pheasant chicks. The chick's metabolic rate and heat production is 2.4 times that of an adult. This makes keeping cool even more difficult for the chick. Of the chicks hatched last spring, 33 to 48 percent are dead by late August. The exact reasons for such high losses are unknown. But these losses might be even higher in areas lacking good woody cover for shade.

"Standing Water"

During the hot, dry days of August, folks ask if pheasants need standing water to survive? It depends on how hot. Through most of the growing season, the birds can survive on the moisture they consume in insects, and in morning dew on vegetation. Standing water is not needed. But if humidity levels are low enough, and if the temperature hot enough, no morning dew will be formed. Standing water may become important. Although the moisture in insects may pick up the slack, what happens when most of the insects are killed by chemical spraying? Answer ... unknown! Also consider that the main pheasant range in such dry states as Wyoming, Montana, Idaho, and Utah are along water ways or in irrigated areas. Are pheasants there because of the standing water available, or because such moist areas grow the better habitat and food?

"Molt"

In August, pheasant chicks are starting to grow their second set of feathers. All bird species molt twice before their first winter. Their down feathers at hatching, called "natal plumage", are replaced with dull brown feathers called the "juvenile plumage." After hatching, pheasant chicks immediately begin growing flight feathers, and are capable of short flights at 2 weeks. In July (3 to 4 weeks old), they have replaced all down with feathers looking like a hen. Pheasant chicks, in August (6 to 8 weeks old), begin the

"post juvenile molt", which will give them adult colored feathers at 17 to 18 weeks old (late October).

While adult pheasants and grouse grow new feathers once a year, ducks and songbirds do it twice. Pheasants simply replace the old with a new set of the same color. The hen starts this molt after the chicks hatch and will complete it in October. The rooster will complete his change this month, August. The pheasant loses and will grow one wing feather at a time, and is never flightless. Most ducks lose all wing feathers and are flightless. Once feathered with all brown plumage, ducks will immediately begin growing colored feathers again. Biologically there is no advantage to having two molts a year.

"Diseases and Parasites"

Diseases are not considered to be a major limiting factor for pheasant populations. Wild birds are free of many common poultry diseases such as coccidiosis, cholera, and blackhead. During years of high mosquito infestations, birds are susceptible to equine encephalitis as indicated by antibodies in their blood. Intestinal parasitic worms and cecal worms are found in a third of wild birds. An occasional tapeworm is also found. Ectoparasites (those outside the body) consist mainly of mites, with the average bird having over 100. Few ticks are found on pheasants.

While the wild population seems to be relatively safe from common poultry diseases, there is an ever growing concern about the stocking of domestically raised birds. Such birds are raised under poultry condition where disinfecting the facility and providing medicated feed are extremely important to protect the birds from disease outbreaks. Unfortunately though, these protected and often carrier birds are released into the wild to infect the unprotected wild pheasants.

"Soil to Grow Pheasants"

Why do pheasants survive well in one area and not another? Research has evaluated the effects of weather and habitat on bird distribution, but these do not always provide an answer. "I have a good population while a friend 40 miles away has few birds.... same weather....same habitat." Different soil? In 1931 it was noted that the pheasant's main range was on the most recently glaciated land. By 1954 it was determined that calcium in the soil was important to the birds. Lower calcium meant lower bird numbers. But early 1960s research found that hens select grit high in calcium even in poor soils. So why are there not good populations in low calcium areas? In 1969, research noted that calcium poor soils were often high in lead, cadmium, zinc, and barium... elements toxic to birds. Calcium blocks the uptake of these elements. Selecting high calcium grit may protect the hen from the toxic elements during the nesting season, but she is not protected the rest of the year.

"Brood Adoption"

August is a good month for observing pheasant broods along roads. It is not uncommon to see one hen with two broods. Both her own? Physically impossible! Probably adopted one brood. In most cases the ages of the two broods differ by only a couple weeks. A couple weeks are not enough time to produce another family. After the first nest hatches, it would take a minimum of 7 weeks before she could hatch another nest. And who is taking care of the first chicks while the hen is setting on the second nest? Also remember that after the first nest the hen is at her worst physical condition of the year. She's too pooped to produce a second batch of chicks. She will adopt another brood though if the other hen is missing.

"Feathers Everywhere?"

Through July the roosters were dropping feathers and re-growing a complete new set. In August, hens are doing the same thing. So why don't you see feathers lying on the ground, everywhere? Birds and mice! The small body feathers are easily swallowed by pheasants, and the larger feathers are eaten by rodents. Perhaps the feathers provide trace elements needed by the animals. Feathers are also used by other birds in building their summer nests. Rodents also feather their homes.