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Iowa State College

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Environmental Controls
The Forester's Contribution to Game Conservation
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Every game crop is the resultant of two forces: (1) the breeding habits of the species, and (2) the environment in which it lives.

Breeding habits are constant. Environment is the variable. If the environment is favorable there will be a crop; if unfavorable there is no crop, and even the capital stock may decline.

Environment is the summation of many factors—food, cover, predators, hunting, disease, etc.

Bird lovers, by and large, have made the mistake of seeing only one of them, hunting.

Sportsmen, by and large, have made the mistake of seeing none of them. They insist on turning out stock without regard to whether the environment is fit to receive it. If the environment were improved the constant planting of stock would be unnecessary. It is often cheaper to improve environment than to constantly plant game.

Foresters are taught from the outset the futility of plantings in unfavorable environments. They are schooled from the outset to the broad idea of environmental controls. Foresters can render a great service to game conservation by helping to work out a technique of environmental controls for game.

No state stands in greater need of such work than Iowa. The prairie chicken has been crowded out of the state, probably by reason of the elimination of residual patches of prairie cover. The quail is being slowly but surely reduced by the grazing out of woodlots, the devegetation of creek banks and drainage channels, and the elimination of fencerows. Waterfowl are shrinking before the advance of drainage. The only basic remedy is environmental control.
Most thinking conservationists realize this. What they do not realize is that favorable game environments in the past have been accidental, whereas from now on they must be built by human hands and brains, for the deliberate purpose of raising a game crop.

Here enters the mission of game research. It takes more knowledge to put together than to take apart. Just how do we build a quail range? How much cover, and what kind, must be put into this gully to make it produce a covey every year? How can that cover be arranged to give minimum interference to the adjacent crop and maximum erosion control to the adjacent ploughland? What cover-plants produce food as well as cover for the quail? What kinds and numbers of predatory species can be allowed to inhabit it? What supplementary winter feeding is necessary? When? What mechanical arrangement will prevent winter feed from being covered by snow or sleet, or eaten by less valuable species, when worst needed by the quail?

The exact answers to such questions must be worked out for each species and each region, just as analogous questions are being worked out for each species and region in forestry. Some think a guess is good enough, but foresters know from experience in their own field that technique based on guesses is expensive in the long run. There is a best way. Foresters can help find it.

Agriculturalists as well as foresters can help find it. The technique of environmental controls for game production must be dovetailed to both farming and forestry at every point, else it will never be practiced. Game is essentially a by-product of farming and forestry. If the system of raising the by-product interferes with the main crop, the by-product will not be produced. If it does not interfere, but actually benefits the main crop, economic as well as altruistic forces will eventually bring about its adoption. Most game crops can be made to benefit the main crop.

Iowa State College has the opportunity to do real pioneering in game conservation, for it is the center of agricultural and forestry leadership for that state.