

SIOUX FALLS ARGUS-LEADER

Wildlife management served by technology

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South Dakota wildlife officials are starting to use computer-age technology to help manage the state's resources, a trend that Bob Best says he likes to see.

Best, who works with the Remote Sensing Institute in Brookings, has helped state Wildlife, Parks and Forestry personnel work on two game management projects in the past year. Both involve the use of aerial color infrared photography, and both, Best says, have produced positive results.

Best was one of about 300 state and federal biologists, remote sensing experts and government representatives on hand for the Pecora IV Symposium in Sioux Falls last week.

The three-day meeting brought together people from as far away as Australia. It was sponsored by the National Wildlife Federation and five government agencies.

An integral part of the symposium was a series of poster sessions in which specialists set up booths explaining their specific field of work.

On Wednesday afternoon, Best had set up his booth entitled "Utilization of color infrared aerial photography to characterize prairie potholes."

Earlier in the day, he displayed one entitled "The interpretation of available winter wildlife habitat from Landsat imagery."

Neither is as complicated as it sounds, once you listen to Best explain it. And both are actually exhibits of two programs he has helped the state WP&F institute on a test basis.

The pothole study uses color infrared photography to map out the location, size and habitat conditions of the prairie pothole system in a large area, Best said.

He said that compared with the traditional methods of mapping potholes, the aerial method is economically feasible, and actually is actual-

ly more economical than the traditional on-ground surveys.

Prairie potholes are, of course, an integral part of the entire prairie ecosystem. Besides being the home-base for many insects and plants of the prairie, they also serve as hatching spots or stopping off points for migratory waterfowl.

Therefore, the more information that is available about the wetlands, the more good game management programs can do.

Best said Remote Sensing is currently conducting the aerial color infrared surveys in the Sand Hills of Nebraska. And he said that the institute conducted the survey in Faulk County last year for the state WP&F department.

The beauty of the aerial survey, Best said, is that the data for the survey is already available, because three-fourths of eastern South Dakota is already regularly being photographed by the EROS Data Center near Sioux Falls.

And he said the surveys produce better results than the traditional methods, since they show shapes and sizes of potholes much faster than an on-ground survey can determine.

"We can do a pothole inventory in one-half the time for one-half the cost for a county-sized area," Best said.

WP&F officials were pleased with the Faulk County results, Best said. But their adaptation to the aerial method of surveying potholes may be low on the priority list because there are more urgent wildlife needs in the state, he said. However, a WP&F report has recommended the adaptation to the aerial survey method, Best said.

In his other project, Best and Remote Sensing started a program last winter with the WP&F people to use landsat photos of South Dakota to determine the location of the best winter habitat for pheasants.

By using the landsat photos taken

during different times of the winter, Best said technicians can tell where the most dense and the most suitable pheasant cover exists in the state.

That information can be then used in the Pheasant Restoration's land purchasing efforts, as well as in other pheasant management programs.

Besides the actual landsat and aerial surveys, however, Best said that the two programs allow for quicker processing of wildlife data, easier storage of the data, and more convenience for future reference.

In the case of the potholes, for instance, he said that no one knows for sure how many prairie wetlands were drained during the intensive farming period of the earlier 1960s.

"We simply don't have that information available," Best said. "We all know it was substantial (the number of potholes drained), but we don't know how substantial."

"With this program, however, we can look back in 10 or 15 years and see how many we've lost."

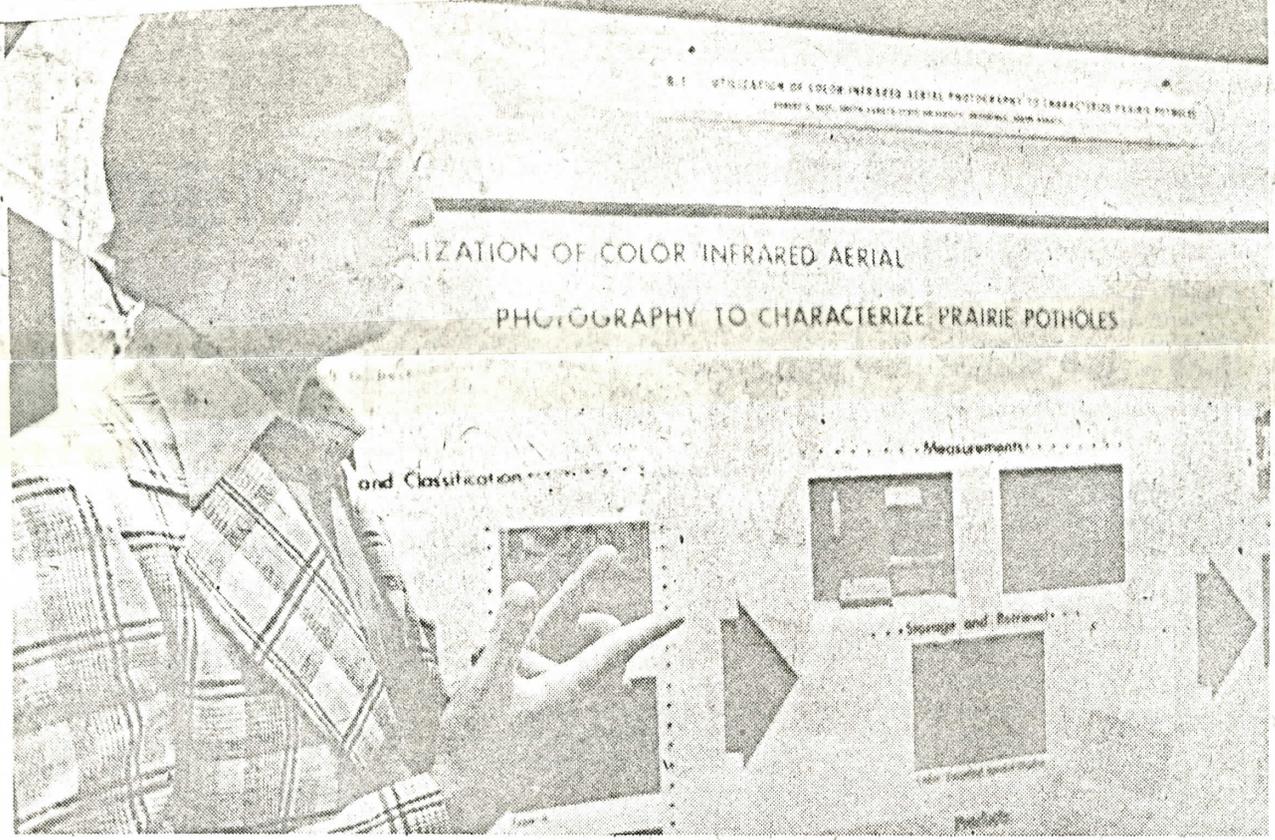
Remote sensing technology is "far, far superior than the application of the data we get from the technology," Best said. Scientists continue to invent techniques that man has no practical application for—yet.

"The military has classified sensors beyond your utmost imagination," Best, a native of Illinois and a South Dakota State University graduate said. "They (military scientists) are always one step ahead of the public."

"Once they invent something more sophisticated, they release it to the public. But they're always one step ahead of you and me."

It's Best's job to take the practical applications of remote sensing to the public—a job he said he enjoys and one he said is important.

"It's equally important to let people know what you're doing as it is to do it," he said. "And I think this (remote sensing) is important."



Bob Best of the Remote Sensing Institute in Brookings spent much of Wednesday afternoon last week explaining his wildlife management aerial survey programs to curious onlookers.

He was one of about 300 who attended the Pecora IV Symposium in Sioux Falls. (Argus-Leader Staff Photo by Frank Klock).