Service, together with the National Agricultural Library—which between them have a total budget just short of one and a half billion dollars.

These agencies have their own traditions, clientele, and links to Congress; the title of assistant secretary does not automatically endow the holder with any immediate influence over them unless he also has a will of his own. "Let's just start out with the assumption that I am a pretty strong-willed guy," Cutler remarked in an interview on the day he was sworn in. "I come in here with about 25 years' acquaintance with the forestry and soil conservation programs and I have a very clear idea of where they should be going and how I would like to change them."

Cutler says he is determined to make his presence felt in the policy-making process. He plans to defend his agencies' budgets personally before Congress instead of letting the agency heads do it all themselves. He also intends to use his finance staff to prepare alternative budgets to those his agency heads give him. "The science of policy-making is to be able to choose from among alternative courses of action," Cutler explains.

He has no plans to become "a ceremonial figurehead as some assistant secretaries have ended up being."

Asked what he hopes to accomplish in office, Cutler replies: "I share Secretary Bergland's determination to change the image of the USDA from that of the servant of agribusiness to the servant of all the people, rural and urban, rich and poor, black and white.

"The main difference between this administration and some of its predecessors will be that we will show a sensitivity and concern for the quality of life, in terms of protecting environmental values, as well as being aware of the social and economic impact of our decisions, and having a more long-range planning horizon."

Cutler puts emphasis on establishing a cooperative relationship with the Environmental Protection Agency and the Department of the Interior. In doing so, he says, "We are going to try to change the image of USDA so that it is recognized as pro-environmental quality, within the constraints imposed by the need to protect the rights of farmers and ranchers and loggers to conduct their business in a profitable and logical way."

The new assistant secretary concedes that his weakest point is research, and he has appointed as his deputy James Nielson, former director of agricultural research at Washington State University, Pullman. The appointment of Nielson was a pivotal step in allaying opposition from the agricultural research community, which was alarmed at Cutler's lack of scientific background (*Science*, 4 March, p. 854). "We were really concerned and did a lot of telephoning and looked into him, but were delighted at the outcome," says Dennis Rouse, dean of agriculture at Auburn University, Alabama, and spokesman for state agricultural scientists. Asked if Nielson would have real power or if his appointment might prove just a sop to agricultural researchers, Rouse replies that it looks as if Nielson will have a free hand in research matters.

Cutler comes to the USDA from Michigan State University where he has been assistant professor and extension specialist in resource development since 1973. He taught courses in natural resources law and policy and worked with local groups on land use issues. "I was a kind of environmental ombudsman,"

Bergland to Redirect USDA Research?

Secretary of Agriculture Bob Bergland is troubled about the present state of affairs with respect to soil conservation and agricultural research, and he plans to go to the President's science adviser, Frank Press, for advice.

Referring to the heavy and continuing losses of topsoil from erosion, Bergland—speaking in a recent interview with reporters from *Science* and other publications—remarked, "I'm going to ask the science adviser to round up a panel to tell us what things will be like 25 to 30 years from now if [the situation] doesn't change." Bergland expressed concern at the intensification of pressures on the land which has resulted as much of the agricultural economy has moved swiftly from a condition of surplus to one of relative scarcity. He observed, for instance, that over the past 5 years several million acres have been converted from the growing of cattle fodder to the production of corn and soybeans—a change that can lead to a big increase in the rate of soil erosion in the absence of careful conservation practices.

Bergland also will ask Press to undertake a study of what needs to be done in agricultural research. "I must confess, I'm not very impressed with the research advice that past secretaries of agriculture have been receiving," he said.

"I suspect that a lot of money has been spent on reinventing the wheel," he added. Also, besides this suspicion that there have been far too many essentially duplicative research projects, Bergland thinks that national research needs may have been neglected in favor of needs of a local or regional character. There are two questions in particular which he believes call for a larger research effort: the effect of increasing use of nitrogen fertilizer on the atmosphere's ozone layer and its long-term implications for agriculture; and human nutritional needs. As for the latter, Bergland remarked, "We know more about the nutritional needs of a dairy cow than about the nutritional needs of children."

Asked how he planned to stop further spending for needless research, Bergland said, "I just won't sign the [research] contracts." Bergland, who owns a 600-acre farm in Minnesota, served as a Democratic congressman from 1970 through 1976; during most of the 1960's he was an official of the Department of Agriculture's Agricultural Stabilization and Conservation Service.

On becoming Secretary, Bergland expressed great dissatisfaction at his department's practice of making crop forecasts contingent on an assumption of "average weather." "In 27 years of running a farm in Minnesota, I've had average weather twice," he has told a congressional committee. "For 25 years it's been too wet, or too hot, or too cold, or too dry." Bergland has directed that the department use probability models in arriving at its crop forecasts. "I've seen work done by climatologists at the University of Wisconsin," he said. "It's an exciting, and in some ways a very frightening thing. It's kind of like [being able to] see your own life for the next year ahead." Later, he added: "We'll be the Jimmy the Greek in the agriculture forecasting business. Hopefully we can devise the odds and let people bet against or with them, as they choose."—L.J.C.