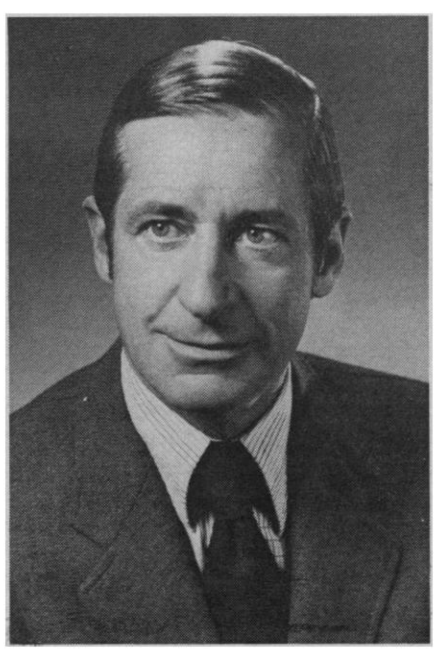
Robert W. Long: The Banker Who Heads Agricultural Research

The Bank of America is the world's largest bank. In its home state of California it provides more than 40 percent of the loans made available to farmers for crop production. In March last year President Nixon appointed its vice president in charge of supervising agricultural loans to be Assistant Secretary of the Department of Agriculture (USDA) for Conservation, Research, and Education. From this position Robert W. Long now supervises an annual $1.3 billion worth of federal programs, including some $350 million for research.

Long's tenure as assistant secretary comes at a time when rising food prices at home and plummeting food reserves in the world at large have pushed agricultural research to unaccustomed pinnacles of visibility. At the same time, the internal affairs of the national research enterprise have fallen under vigorous criticism from several diverse sources (see *Science*, 1 June 1973, p. 932 and 29 November 1974, p. 810). The assistant secretary is the individual best placed to address the problems identified in these criticisms, because he alone has a commanding say in both the federal and state research systems. The Agricultural Research Service and the Forest Service report directly to him, as does the Cooperative State Research Service, the federal check-writing organization through which the state research system receives some 20 percent of its support.

Long's predecessor, Ned D. Bayley, was a scientist who worked his way up through the Agricultural Research Service and accomplished a major reorganization of it before resigning 2 years ago. Long, before joining the Bank of America, was for 20 years an executive with the Irvine Company, a California enterprise concerned with farming and real estate. The company contracts out all its research to the University of California. According to Long's successor as head of Irvine's agricultural section, there is no research to administer and the company employs no research scientists. During Long's tenure the company did not even do much farming, most of its land being rented out to tenant farmers.

The Senate's power to advise and consent was but flaccidly wielded by the committee which held hearings on Long's nomination. Witnesses such as Senator George McGovern and Cesar Chavez complained that Long's service of large corporations would lead him to neglect the small farmer's interests, but no one asked the crucial question of how Long proposed to shape USDA's policies in conservation, research, or education when he had expertise in none. Senator Carl T. Curtis (R–Nebr.) asked after his agricultural experience but apparently saw nothing incongruous in Long's answer that at age 10 he had spent two summers on his uncle's farm in Iowa, and that when visiting Alaska as a precollege student, he had "experienced some very meaningful opportunities to learn about the tundra and the forests of the background of that State." The Irvine Company, Long went on to explain, grew into "more of a development company than an agricultural concern" while he was there, leading



Robert W. Long

Curtis to conclude a few moments later that the assistant secretaryship "could well use the services of someone with your experience and dedication."

What were the qualifications that singled Long out as the man most capable of directing American agricultural research in its hour of need? The manner of his appointment, according to an eyewitness's recollection, was as follows.

Two assistant secretaries had resigned, both of whom happened to be Californians. "A good sized delegation from California met with [USDA Secretary] Butz, saying they wanted to suggest names for either of the two assistant secretaryships," recalls a participant in the meeting. "Long was present, but his name was not on the delegation's list. Butz glanced round the room and said, 'If we're going to have a man from California it should be Bob Long.' Butz said he would make him assistant secretary for the Tom Cowden spot." Cowden's assistant secretaryship covered rural development and conservation. At some time before or after this selection process, rural development was hived off and research added.

Management experience of the type Long possesses is no handicap in administering the cumbersome federal-state research system. Long, however, has not been playing the forceful executive. During his 18 months in office, he has not made any strong impression on the congressional committees that oversee agriculture, and people in USDA and state research systems find it difficult to describe any specific policies, plans, or programs that Long has initiated. In the course of an hour's interview, Long himself seemed to encounter the same problem. Asked about his goals in USDA and what he wished to see done with agricultural research, Long said: "I can't tell the bench scientist* what to do. But I would like to create the best possible atmosphere for them to work in. . . . I can help with saying what the emphasis among programs should be."

Asked for an example of such an emphasis, Long noted that he had tried to bring scientists more into the decision-making process. Queried as to what specific policies he had adopted or was considering, Long said: "We

* "Bench scientist" is the term used by higher echelon administrators in USDA to refer to active scientists—by whom the term is generally much resented.

have created roles for users at regional levels. As we develop our research programs, we have a fairly broad spectrum of input, not just from the researchers or the federal system, but from users. It is kind of hard to develop for you the pattern of action which reveals a conscious policy. . . ."

A fundamental impediment to the rational coordination of agricultural research is that the 53 state research systems are able to operate independently of each other as well as of the structurally similar federal system. Long agreed that "this department cannot direct any one state to do anything" but said that the states had voluntarily shifted 20 percent of their workload in the last 2 to 3 years. (He did not know to what budget or manpower category the 20 percent referred.) Should federal research be different in character from that conducted by the parallel and overlapping state system? On the completion of an inventory of such research, Long said, the department will determine just what the lines of separation should be.

Long does not seem particularly receptive to the ideas proposed by the various recent critics of the agricultural research establishment. Of criticisms by John A. Schnittker, who served as Director of Agricultural Economics and later as Under Secretary of the USDA, Long comments: "I am told that during the time he was here he never did have much time or sensitivity for research, and maybe justifiably so, I don't know." *Hard Tomatoes, Hard Times*, a study by the Agribusiness Accountability Project which argues that agricultural research benefits the large grower at the expense of the consumer and small farmers, Long dismisses with a barnyard epithet. (The study's paradigm case is how tomatoes, despite consumers' preference for softness, have been bred for hard skins so as to be harvestable by machine. Asked what research was conducted by the Irvine Company, Long's former employer, its public relations director said, "We are coming up with tomatoes with harder skins so that they can be harvested.")

Long is certainly in favor of research in general—"My biggest job is to try to bring more consciousness [about the value of research] to the people who relate to us to bring these efforts to the levels that are necessary" —even if he seems more aware of the "users'" needs than of the research

FPC's Gloomy Outlook on Gas

In a deeply pessimistic analysis of the nation's natural gas resources, a new report from the Federal Power Commission staff concludes that U.S. natural gas production peaked last year and has begun what may be an irreversible decline. The report*, prepared by the FPC's Bureau of Natural Gas, says that U.S. gas production grew at an annual rate of about 7 percent for the 25 years prior to 1970, then flattened out as the first winter shortages appeared. Now, preliminary data for 1974 show a decline in production of about 3 percent.

This decline, and a worsening shortage that has already started pinching the economy, are viewed by the FPC staff as possible symptoms that the United States literally is running out of natural gas—that "the nation may indeed be experiencing the early effects of a resource being pushed toward exhaustion."

The FPC report lends substantial credence to charges by several prominent petroleum researchers that the U.S. Geological Survey has consistently and hugely overestimated the amount of economically recoverable oil and gas left to be discovered in the United States (*Science*, 12 July 1974). According to the FPC, the Geological Survey currently estimates that between 725 trillion and 1450 trillion cubic feet of gas remain to be found and added to proved reserves in the lower 48 states. The critics have independently come up with numbers that range between one-third and one-half the Survey's lower estimate.

Chief among the challengers is M. King Hubbert, a senior researcher with the Geological Survey. Hubbert is widely known for having correctly predicted in 1962 that U.S. oil production would peak between 1966 and 1971 (in fact, it peaked in late 1970). Hubbert also predicted that gas production would peak in 1976, and it looks as if he was very nearly right again.

The FPC staff refrains from endorsing the Survey's critics but urges that the government immediately undertake an impartial study to see who is right.

In the meantime, the FPC staff notes that current gas discovery statistics make the lower numbers seem more realistic. Between 1966 and the end of 1973 successful exploratory drilling for gas rose from 24 million feet to 36 million feet. But while drilling increased, discoveries fell, with annual reserve additions going from 16 trillion cubic feet in 1966 to a paltry 4 trillion cubic feet in 1973. Thus the all-important "finding rate" for new gas fell from 662 thousand cubic feet per foot of exploratory drilling to 104 thousand cubic feet in 1973.

The shrinking discovery rate is reflected as well in figures compiled by the American Association of Petroleum Geologists. According to the AAPG, the number of "significant" new gas fields found annually fell from a peak of 99 in 1957 to 41 in 1967, the last year for which data are available. A significant field is one estimated to hold more than 6 billion cubic feet of gas, based on a 6-year history of development.

If in fact the United States is reaching down to the dregs of its natural gas resources, as these statistics seem to suggest, then, says the FPC staff, the implications for national energy policy are "drastic" and "momentous." The main implication is that government efforts designed to stimulate exploration and development "are not likely to bring about a sustained increase in reserve additions or forestall a decline" in production, currently about 22 trillion cubic feet annually.

The report nevertheless urges that development of gas resources proceed with urgency even though it may not be possible to hold production at its present level. Beyond that, national conservation and allocation programs are seen as mandatory. "The hour is late," says the FPC. "From here on we must make do with less gas, in absolute terms."—R.G.

* "A Realistic View of U.S. Natural Gas Supply," Federal Power Commission, Bureau of Natural Gas, Washington, D.C., December 1974; 21 pages.

community's problems in satisfying them. He is undoubtedly an effective defender of research against external pressures exerted from Congress or the Office of Management and Budget. His banking expertise has helped him to argue the OMB's budget-parers out of certain proposed cuts, such as in the federal funds provided to the states.

The internal problems of the agricultural research system, however, are just as serious as the present financial bind, and in grappling with these, Long appears to be doing about as well as would a research scientist put in charge of the loan department of a large bank.—NICHOLAS WADE

Health Planning: New Program Gives Consumers, Uncle Sam a Voice

Some little-noticed legislation that wound its way through the last Congress and was signed by President Ford on 6 January could prove to be a major step toward public supervision of the $100 billion per year private health care industry in the United States. This was the National Health Planning and Development Act, principally sponsored by Edward M. Kennedy (D–Mass.) in the Senate and Paul G. Rogers (D–Fla.) in the House. The law establishes a new program of comprehensive health planning for the country and empowers a system of local planning agencies to oversee some federal health funds flowing to their areas, including funds for new hospital construction. Although not explicitly stated in the law, the new program is intended to provide a framework to review federal spending for national health insurance, which is expected to pass in the next year or two.

Those who backed the planning measure agree that federal and local health planning must be made more sophisticated and stronger if a major national crisis in health care costs is to be averted in the next few years. Estimates in late 1974 showed some costs for medical services rising at an annual rate of 26 percent, or more than twice the current general rate of inflation. Moreover, the prospect is that national health insurance, if enacted, would put pressure for more cost increases on the health care system—just as the start-up of the Medicaid and Medicare programs increased both the demand for and cost of health care in the mid-1960's. The seriousness of the situation is vouched for by the fact that the new law had the support of the Republican Administration, liberal Democratic congressmen, and the private health insurance industry.

The new program will replace three existing federal health planning efforts whose authorizations this year reached a total of more than $700 million: the Hill-Burton Hospital Construction Program, the Regional Medical Program (RMP), and the Comprehensive Health Planning (CHP) program.

At the heart of the new program will be a network of local health planning agencies, serving up to 3 million people each. These local agencies could be either private nonprofit groups, public bodies, or existing CHP agencies, provided that the Secretary of Health, Education, and Welfare (HEW) certified them according to criteria laid out in the law. A second layer of health supervision would take the form of statewide bodies to coordinate the work of local agencies.

The bills would also create something that the nation now lacks, namely, a set of guidelines for health care, which the localities, with the prodding of the new local agencies, would try to achieve. Also, states would appoint health planning agencies (many of these already exist), which would in some cases merely coordinate the work of the local agencies, and in others actively approve or disapprove actions of the local agencies. Because it involves several levels of government and even the nonprofit sector, the proposed health planning system has been nicknamed a "town meeting approach" to the subject. But some critics seize on the rather vague character of the local agencies, which nonetheless could wield great power, as one of the weak points of the legislation. Other critics, mainly the American Medical Association (AMA), go the other way and argue that the federal government would acquire too large a role. Eugene Rubell of HEW, who directs the outgoing programs and will run the new one, says, "This will be no panacea. But we hope it will be more efficient and effective than what has gone on in the past."

At present, there are few restraints on private hospital expansion, growth of medical fees, or the performance of unnecessary diagnostic tests or surgery—a situation which contributes to overall inflation rates in the medical field above the national average. Generally, if a group of doctors in a hospital wish to add a service, expand a facility, or raise their rates, the only approval they need is that of the hospital's board of directors—bodies which are not known for contravening doctors' wishes.

Present Controls Patchy

For the rest, controls are patchy or nonexistent. There is, for example, a provision in the Social Security Act by which the federal government can opt not to reimburse a hospital for the capital construction part of its Medicare, Medicaid, and maternal and child health care cost, if it decides that the hospital itself is unneeded. Also, 26 states have certificate-of-need laws, under which proposals for new facilities must be approved as necessary before a state license is granted. A few states including Maryland and Connecticut have gone farther and elected to regulate health care rates. Finally, some counties have controls on local health care.

The proposed bills would make many ongoing attempts at control more consistent from place to place and have them guided by national policy.

The country will be divided into discrete areas, each served by a new local Health Systems Agency (HSA). The HSA's may be private, nonprofit organizations or public groups.

Each HSA will then draw up a long-range plan outlining the strengths and deficiencies of health care within the