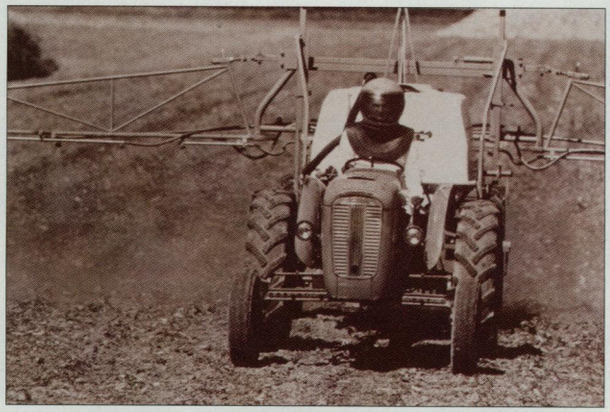
edited by DAVID P. HAMILTON

Tracing Disease Down On the Farm

Alarmed by reports of unusually high cancer incidence among farmers, the government is about to pay for a major new epidemiological study on farm chemicals and health. Three agencies—the National Cancer Institute (NCI), the National Institute of Environmental Health Sciences, and the Environmental Protection Agency—are ready to launch an ambitious program that will monitor the lifestyles and work habits of some 100,000 farmers and their families for the next 5 years.

Although farmers tend to be longer-lived and healthier than other people, says NCI epidemiologist Aaron Blair, they have higher than normal rates of several cancers such as leukemia, melanoma, brain cancer, Hodgkin's disease, and multiple myeloma—a cancer of the immune system's B cells. In the study, expected to cost about $13 million, epidemiologists will look for links between these cancers and a variety of occupational hazards, including farmers' exposure to pesticides, fertilizers, ultraviolet light, dusts, and viruses that can spread from livestock to people.

So far, this profusion of potential carcinogens has impeded efforts to link cancer to particular hazards, says Blair. The new study, however, should allow researchers to measure any difference in tumor rates between "safe" farmers and those who put themselves at risk by engaging in specific work practices.



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A farmer practices "safe" fertilizer spreading.

Higher Temperatures For Superconductors?

Signs are beginning to emerge that the race for yet higher "critical" temperatures in high-temperature superconductors—stalled since 1988—could be heating up again. The latest competition comes from Japan, where researchers claim to have found a compound that remains superconducting at a world-record temperature of 180 degrees Kelvin.

For years, the highest temperature superconductor has been a thallium-strontium-calcium-copper-oxide compound with a critical temperature of 125 K. But at a meeting of the Japanese Society of Applied Physics in Chiba last month, materials researcher Tomoji Kawai and collaborators at Osaka University reported a major advance. They measured signs of superconductivity in three of five thin film samples of strontium-calcium-copper-oxide at the record-high temperature of 180 K—a full 55 degrees higher than the present record holder.

But caveat emptor—this well-hyped field is no stranger to dramatic claims gone bad, such as a 1990 report by Hitachi researchers of a 130 K vanadium oxide superconductor. Still, IBM physicist Zack Schlesinger says Kawai's track record in superconductivity research gives observers reason to hope for the best. "I give it better than a 50-50 chance of being real," he says. More details should emerge later this month in San Francisco when Kawai presents his work at a meeting of the Materials Research Society.

European Observatory to Get New Chief

The European Southern Observatory (ESO) in Garching, Germany, will soon experience a shakeup in its top management. This June, ESO's governing council is expected to name a successor to Dutch astronomer Harry van der Laan as the head of Europe's most influential optical astronomy collaboration.

Technically, the council is not firing van der Laan—just declining to renew his 5-year contract, which runs out at the end of the year. But his predecessor held the job for 12 years before stepping down.

Described as a "forthright character" by fellow astronomers, van der Laan has reportedly annoyed ESO council members by not consulting them closely over his plans for the Very Large Telescope (VLT), a $200 million, 4 telescope array slated to open in Chile at the end of the decade. His decision to award some of the lucrative VLT design contracts to industrial, rather than academic groups, has been particularly unpopular.

Whoever takes over at ESO faces a difficult job juggling the eight-nation organization's resources. ESO is a small outfit, with only 150 staff members. Since work on VLT began, some ESO astronomers have become dissatisfied with the pressure to work full time on the VLT, which has left them little time to pursue their own scientific interests.

Big Turnover on House Biomedical Panel

From left: Roybal, Mrazek, Weber, and Pursell

Potentially dramatic changes are under way at the House subcommittee that holds the purse strings for NIH and most other agencies of the Public Health Service. Four of the subcommittee's 13 members have announced they will not seek reelection—and more could also be on their way out, if this year's anti-incumbent political dynamics continue to play themselves out.

So far, the retirees include Edward Roybal (D–CA), Robert Mrazek (D–NY), Vin Weber (R–MN), and Carl Pursell (R–MI). Mrazek and Weber are both casualties of the House banking scandal; Pursell (who is the subcommittee's ranking minority member) would have faced a tough reelection bid in a mostly Democratic district; and Roybal, 76, has spent "enough years in politics" according to a spokesman. Add to their number the members who are facing a tough reelection fight—in particular, Joseph Early (D–MA), who also bounced a number of checks—and you've got the formula for a major sweep.

As currently constituted, the subcommittee has dealt very favorably with biomedical research, frequently voting for NIH appropriations higher than the president's budget request. Certainly the lobbyists who push for research funding are unnerved: "We don't know what's going to happen next year," says one.