weather modification techniques have been used in Indochina comes from some references in *The Pentagon Papers* which indicate that the Joint Chiefs of Staff (JCS), probably in 1966, had rainfall experiments conducted over Laos "successfully." In 1967, the JCS urged President Lyndon B. Johnson to authorize an operational weather program with the innocuous name of Operation POP EYE as a means of escalating the war. According to the Gravel edition of the papers, volume 4, page 421, the JCS suggested to Johnson in a memo that this might be one way of widening the war with minimal political repercussions at home.†

> 4. LAOS OPERATIONS—Continue as at present plus Operation POP EYE to reduce trafficability along infiltration routes
>
> *Authority/Policy Changes*—Authorization required to implement operational phase of weather modification process previously successfully tested and evaluated in same area.
>
> *Risks/Impact*—Normal military operational risks. Risk of compromise is minimal.

Again, on 21 February 1967, the President was handed a "shopping list" of escalation proposals recommended by the JCS and apparently written by John McNaughton of the Office of International Security Affairs in DOD. Volume 4, page 146, lists among the recommendations:

> 8. Cause interdicting rains in or near Laos.

The narrative text summarizes the rest of the memo:

> The discussion section of the paper dealt with each of the eight specific option areas noting our capability in each instance to inflict heavy damage or complete destruction to the facilities in question.

Evidently, the JCS considered weather modification worthy of consideration as one way of waging war.

Some who have been closely associated with *The Pentagon Papers* study, asked about these references, pointed out that the study was compiled by civilians with relatively little knowledge or data on day-to-day combat operations. They say it is reasonable to infer that the relatively few references to weather modification activities in *The Pentagon Papers* are no clue to the actual extent of military weather modification operations.

The other evidence that rainfall augmentation might still be going on is circumstantial. On 18 March 1971, the well-known syndicated columnist, Jack Anderson, in his column in the Washington *Post*, claimed that the Ho Chi Minh trail, which runs through both Laos and Cambodia, had been seeded by the Air Force since 1967 (the date of the JCS recommendations listed in *The Pentagon Papers*). In part, Anderson wrote:

> The hush-hush project, known by the code name "Intermediary-Compatriot," was started in 1967 to hamper enemy logistics. Those who fly the rainmaking missions believe they have increased the precipitation over the jungle roadways during the wet seasons.
>
> . . . These assertedly have caused flooding conditions along the trails, making them impassable.
>
> The Ho Chi Minh trails will get their next monsoon bath from May to September. . . . Only those with top security clearance knew, until now, that nature would be assisted by the U.S. Air Force.

Anderson was alleging that "Intermediary-Compatriot" would be going on from May to September 1971. The Pentagon has never confirmed or denied the charge. Its response, in fact, has been to say that the answers are classified—a statement that leads some liberal congressmen to conclude they must be doing it. John S. Foster, Di-

† *The Pentagon Papers: The Defense Department History of United States Decisionmaking on Vietnam* (Beacon Press, Boston, Mass.), vol. 4.

New Prizes to Honor Technology

The Office of Science and Technology (OST) has announced the creation of a new kind of prize—called Presidential Prizes for Innovation—which will be roughly approximate to technology what the National Medal of Science is to science.

President Nixon announced the idea in his science and technology message last March. The OST has since been scouting around for nominations, and it plans to make the awards in September.

The awards are designed to honor individuals or teams who have been responsible for developing technological applications of "demonstrable utility and benefit to society" that have emerged in the last 10 or 15 years. The innovation must be in one or more of ten fields: environmental quality, energy, natural resources, health care and safety, food and nutrition, education, housing and community development, transportation, communications and information processing, and productivity and international trade.

An example of the kind of thing they are looking for, says Carl Muehlhause of OST, is the development of xerography, which revolutionized the copying business (xerography would probably not be eligible because, although it has only been in widespread use for the past 15 years, it was developed in the 1930's). Between five and ten awards will be made this year.

Additional prestige in the form of a cash award of around $50,000 is attached to each prize, with the money coming from the technological incentives program of the National Science Foundation. Willis Foster of the Presidential Prizes staff says the prizes are seen as sort of "domestic Nobel prizes," in that they supply "incentive to young scientists" by according "ultimate recognition for an achievement in technological applications."

The new awards, though, are designed to spotlight a particular innovation rather than a particular scientist, and a prize could go to an entire company, if deemed appropriate. Asked if the prize-givers were worried about awarding a private corporation what amounted to a free presidential commercial, Muehlhause said they would try to avoid doing anything that was not "politically savvy."

Final selection of recipients—to be performed by a panel of experts appointed by OST Director Edward David—will be tricky. There will inevitably be some controversial decisions about when an innovation underwent its significant phase of development and who was most responsible for the benefit to mankind. If all goes well, Presidential Prizes for Innovation will become an annual event.—C.H.