AXING THE MILITARY

A billion-dollar research cut

The ax landed on Defense Department research this week, when the House lopped off a whopping $5.3 billion from the $75.2 billion Defense had requested for fiscal year 1970. Only one previous cut has exceeded it: the $6.3 billion reduction right after Korea.

Of the $5.3 billion, which is an over-all reduction, at least $1 billion will be taken out of the $8 billion research and development pot. This was the amount specified in the previously approved authorization, and there's no telling how much more will be taken out by the time the Senate acts.

Research that cannot be justified by rigorous standards of relevance to national security will be the first to go. In a letter to Sen. Mike Mansfield (D-Mont.), majority leader and a member of the Appropriations Committee, Deputy Defense Secretary David Packard has formally agreed to abide by the 1970 Military Authorization bill and carry out basic research only if it has an apparent direct and clearly documented relationship to military functions. This means that if any basic research program can't prove it has military relevance, it will be eliminated.

One sure casualty will be Project Themis. Started in 1967 as part of a Government-wide effort to establish centers of research excellence in universities, Themis encouraged university researchers to submit research proposals that Defense would fund. Themis survived, to become a target of student dissent, even when civilian-run center-of-excellence efforts by the National Science Foundation and the National Institutes of Health were being cut. The new cutbacks are expected to decimate the $30 million program and preclude any new research starts under it.

Although priorities will determine what else is eliminated, there is still concern about the long-range effects.

"We're not going to have the benefit of as broad a research program as we'd like to have," says one Pentagon research manager. "It might take five years to find out we didn't support enough research in a particular area. You don't always see the results until five to ten years later."

To insure that the right projects are preserved, Defense's research chief, Dr. John S. Foster Jr., has invited the National Academy of Sciences to examine some of his basic research projects to see if they are far enough removed from hard military applications to be dumped. As a result, one of the oldest debated questions in scientific research will be brought in: What is basic research and what is applied research? The difference between the two is often indistinguishable since for practically any basic research project some practical application—even if remote—can be conceived.

"Exactly what is mission-oriented and what is basic is fuzzy," says a National Academy member involved in the review. "It's awfully hard to set up criteria. For years, we've been arguing what's basic and what's applied."

And now that millions of dollars are involved, the question is more than one of semantics.

The next move will come from the Senate, which must vote on the budget recommendations of its Armed Services and Appropriations Committees. The Senate is expected to emulate, if not exceed, the House, and a joint conference will work out any differences.

FEDERAL AID

Ecology and airports

High density airport operation has already resulted in the virtual strangulation of airport services and dangerously glutted air space (SN: 5/31, p. 531).

In the rush to aid the airlines and operators of private aircraft a new airport development bill now in the Congress may supply up to $2 billion of Federal money in the planning and building of new facilities and expansion of present airports.

The new measure would establish a trust fund by an initial appropriation of $150 million in 1970. User taxes would expand the fund.

But indications from the U.S. Department of Transportation suggest that new funds may be allocated selectively to encourage airport developers to observe local environmental standards.

Federal review of prospective airport sites may include studies of potential flight patterns and traffic volume over areas vulnerable to the effects of aircraft noise, and the effects of airport land use on over-all adjacent land quality.

The bill, passed by the House and now in the Senate, does not mention ecological review. But Transportation Department officials indicate that the new funds could be used as a spur to force local considerations of environmental quality. One possible application might be to limit the use of the recently constructed jet training airport in the Florida Everglades (SN: 10/4, p. 296).

BRAND NAME VICTORY

Effective antibiotics

In any consideration of the high cost of drugs, attention inevitably focuses on the relative merits of brand name versus generic products. The argument favoring the generally low-cost generics says that if two drugs are chemically identical there is little reason to pay for the more expensive brand-name version. Brand-name drug manufacturers counter by declaring that chemical identity does not guarantee equal effectiveness (SN: 4/22/67, p. 382).

To resolve the argument in any specific instance it is necessary to test the products in people. This is a tedious and expensive procedure. The Food and Drug Administration does not require it and drug houses seldom undertake it, unless the stakes are high enough.

In the case of Terramycin, a widely used antibiotic, the stakes were high. So its producer, Chas. Pfizer Co., ran a series of comparative blood studies to show that generic versions of Terramycin, called oxytetracycline, are not equivalent in patients in spite of the fact that they passed FDA's chemical tests. Terramycin sells for approximately 30 cents a capsule; the generic product costs about half that.

Pfizer submitted its blood-level data to FDA this summer. Then FDA conducted its own tests, concurred with the drug company's position and last week recalled nearly 40 million capsules of oxytetracycline made by eight manufacturers.

The agency said the capsules to be called off the market are of questionable medical value because the oxytetracycline may not enter the blood at levels sufficiently high to combat infections. Pfizer's brand-named Terramycin was untouched by the FDA action. So were the oxytetracycline capsules produced by the Rachelle Laboratories of Long Beach, Calif., and by West-Ward, Inc. of New York.

Pfizer scientists first discovered Terramycin in 1949, and the company was the sole distributor of the antibiotic in the United States until its patent ran out in 1967. Then competing firms entered the market with generic versions. Subsequently, to protect its investment, Pfizer researchers undertook the comparative studies, measuring blood levels in patients given one of 16 lots of oxytetracycline, against their own product. Each of the 16 lots had been FDA-certified on the basis of chemical tests for content—250 milligrams of drug—and purity. Seven lots produced blood levels below the minimal acceptable levels and none produced levels as high as Terramycin.