

within the FDA, FPC has had a difficult history over the last decade. To be produced economically here, the substance must be made from whole fish, including heads, tails, viscera, and sometimes bones. But the FDA in 1962 refused to hear of such a product, which it labeled "filthy," unless the fish were cleaned and eviscerated. Finally in 1967, after pressure from Congress and a favorable report from a committee of the National Academy of Sciences, the FDA certified the product as nutritious and safe; however, it categorized FPC as an additive rather than as a food, which meant that FPC, unlike other protein supplements, is surrounded by a forest of restrictions that are normally applied to potentially toxic chemical additives. Among these restrictions is the stipulation that children under 8 should not consume more than 20 grams daily (fluoride, which is concentrated in fish bones, can, in great quantities, mottle young teeth).

But the real rub has been the provision that fish flour can only be sold in packages of 1 pound or less. This rule has had the desired effect of keeping FPC out of processed foods because no food manufacturer wants to buy it in 1-pound lots. It is for this reason that Ezra Levin says "the FDA is responsible for FPC's failing in the U.S."

In fact, the FDA has not single-handedly accomplished this feat; but its restrictions have succeeded in turning FPC into what one government researcher calls "a much more emotional issue than any protein supplement should be." The rationale for the FDA policy is that it takes the cultural and esthetic inclinations of the American public, as well as considerations of health, into account in decision-making. Virgil Wodicka, director of the Bureau of Foods, agrees that gelatin made from hooves or sausage made with ears and snouts might also be psychologically repellent, but says that these products have been around for a long time and are culturally acceptable. The idea of eating whole fish, though, is new, and the FDA, as "technical representative of the consumer," believes in protecting its charges from surprises.

But FPC has many other problems. Although a couple of hundred tons of FPC have been shipped to Latin America (the packaging restriction is void outside the country), an AID official points out that its cost keeps it out of competition with vegetable and milk proteins, even though vegetables don't

have certain essential amino acids. A pessimistic view of FPC's ability to compete in the marketplace is also expressed in a 1970 report prepared at the Massachusetts Institute of Technology for the National Council on Marine Resources and Engineering Development. The AID and the U.N. agencies concerned with nutrition want to encourage some fish-rich and protein-poor countries to develop a degree of nutritional independence by building their own FPC factories, but until successful large-scale projects have been established elsewhere, these agencies have little to offer in the way of guidance.

Domestic food-distribution programs are even less interested in FPC. An employee of the Office of Economic

Opportunity notes that it would be impolitic to distribute a normally unavailable "test food" to the nation's poor, and besides, he says, soy is "cheaper and just as good." A scientist at the Department of Agriculture believes that FPC has been ignored "for good reason" and believes its usefulness will be limited to countries low in indigenous sources of protein.

The chief disadvantage of FPC, and one that government scientists are now working to ameliorate, is its lack of "functional" properties. That is, it has nothing to recommend it as a flavoring, texturizer, binder, or preservative, unlike soy and milk products, which have been incorporated into various foods that have a character of their own. If poured into a glass of Kool-Aid, for

New Security Rules for Rand

The Pentagon last week released a memorandum spelling out stringent new rules governing access by Rand Corporation researchers to classified information at Rand's Santa Monica and Washington offices. The action was attributed to the compromise of Rand-held classified materials at the time Daniel Ellsberg was employed at Rand in the late 1960's (*Science*, 23 July).

The provision of the memo that has had greatest immediate effect on Rand is the requirement that all top secret and "special access" documents be removed from individual offices and safes and stored centrally in a secure room and be used under supervision in an adjoining reading room.

Potentially more serious for Rand and other contract research organizations is a revamping of "need to know" procedures by which federal agencies make classified information available to think tanks and other contractors. The new Pentagon memo signed by Air Force Secretary Robert C. Seamans, Jr., specifies that "Revalidation of Rand's need to know will be accomplished after certification by user agencies." This means that agencies must review the documents they have made available to Rand researchers and must justify in detail that access. Of broader significance is a government-wide order with White House authority behind it directing federal agencies to determine and list which individuals inside and outside government have access to top secret documents. The implications are that clearance will be less easy in the future and central control tighter.

At Rand, Air Force security officers have been supervising transfer of top secret documents from individual offices and safes to a central repository and have also been overseeing an inventory of documents. The Seamans memo noted that Rand held 5000 top secret and special access documents and 153,000 secret documents in Santa Monica. Rand, which began its own inventory before the Air Force moved in, has been reducing its holdings of classified material not currently being used.

According to Rand officials, Defense Secretary Melvin R. Laird ordered that changes in security procedures be implemented in a way which would not interfere with research at Rand. Research is said to be going on relatively unhindered, and the burden of complying with new security procedures, including a major change in document record keeping, is falling on Rand administrative staff and secretaries—J.W.