



**"SABO" WORKS**—Shown here is one of the main weapons—check dams in stream channels—used by the Japanese in fighting the battle of stream erosion. Revegetation of the eroded slopes is a related activity. Designs and results of Sabo Works need thorough investigation.

## NATURAL RESOURCES

## Japanese Battle Erosion

People slowly losing hard-fought contest for their land. A relatively new land, geologically, rainfall is high and much material is carried away.

► THE JAPANESE people are slowly losing a hard-fought contest for their agricultural lands with the geological forces of erosion. This is the opinion of Dr. Walter C. Lowdermilk, who went to Japan to survey the water resources and related land use. He went as a visiting expert consultant to the Allied occupation forces.

Japan, he explained, is a relatively new land, in terms of geologic time. Rainfall in Japan is extremely high. Therefore the process of erosion of the high areas into V-shaped valleys by short, rushing streams and the carrying of materials down to the lowlands is relatively fast.

Billions of yen have been spent and more billions will be spent in this battle against the normal geologic processes and in reclamation of new land, but the Japanese people are still losing ground, literally and figuratively, according to Dr. Lowdermilk. Most of the work being done is only to try to save the land already under cultivation. Even more of this land is lost than

new land is gained by reclamation. Meantime, the country's population continues to grow.

Dr. Lowdermilk called for a full scale evaluation of work already being done and the gathering of more information about the geological processes going on.

The battle lines of the contest in which the Japanese are engaged lie in the up-stream valleys that cradle flashy storm floods and rivers containing boulders, sand and gravel. Levees and dikes which are built to keep the floods out of rice crops constantly have to be built higher and higher as the water carries down more material from the mountains. More attention to flood detention basins and holders is needed.

The basic line of attack should be to reduce the cutting and transporting power of torrential floods. Normal geological erosion, which is so fast in Japan, cannot be slowed down only by stopping the over-cutting of forests, or by soil conservation

measures on sloping lands or by building levees.

One of the main weapons is "Sabo" works. This is a Japanese term to designate works of check dams in stream channels and revegetation of eroding slopes as related and supplemental activities. Dr. Lowdermilk called for a thorough investigation of principles, designs and results of Sabo works.

As one basic way of getting at the problem for the whole nation, Dr. Lowdermilk called for the treatment of the Tone River basin as a pilot project of integrated resource development and improvement. The basin, he pointed out, is of sufficient size and development and contains a wide enough range of further possibilities to serve as such a pilot project.

Dr. Lowdermilk is now a consultant on soil conservation and land development of the U. N. Food and Agriculture Organization with an assignment to the Israeli government for a year.

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## ICHTHYOLOGY

## Fishermen Can Tell Tall Stories of This Lake's Fish

► FISHERMEN WHO like to be truthful when they state their catch was "Sooo big" should try Lake Mendota, Wis. In the last 35 years, the average weight of each yellow perch caught has jumped from one-tenth of a pound to more than one-half of a pound.

This great increase is due to periodical cleaning out of the fish population by disease, John E. Bardach, a former University of Wisconsin biologist now with Iowa State Teachers College, believes. The same amount of food is available for the fish to eat, and when there are fewer fish, the young get more food. And young fish use their food more effectively than old ones.

About 150,000 perch are caught each year at the present time, so that pressure from anglers does not have much effect on the ups and downs of the fish population.

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## HORTICULTURE

## Wild Figs Are Sought On Mexican Expedition

► A SEARCH for wild, edible species of figs will be made in Mexico by Dr. I. J. Condit, emeritus professor of subtropical horticulture at the University of California's Citrus Experiment Station at Riverside. When cross-bred with those grown commercially in the United States, it is hoped that the wild figs will improve the flavor, size and disease-resistant qualities.

Brought to Mexico 500 years ago from Spain, the fig has had a longer opportunity to establish new varieties there than anywhere else in the New World.

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