

## GENERAL SCIENCE

# Locusts in Iran Subdued

U. S. experts wage successful, air-borne battle against locusts. Other Point Four programs help to bring better health and living conditions to Iranians.

► WHILE PRESIDENT Truman's Ambassador, W. Averell Harriman, is trying to settle the oil dispute in Iran, other Americans are working to bring health and a better standard of living to the Iranians.

Americans are spending, through Point Four, slightly more than one million dollars on down-to-earth aid and training programs for the Iranians. This program may make Mr. Harriman's task easier.

Most dramatic was the recent air-borne battle against a great locust invasion. Millions of locusts threatened some 53,000 acres of badly needed food crops. Under the direction of the Department of Agriculture, eight small airplanes were rushed to Iran and more than 10 tons of a new insecticide, aldrin, were sprayed to stop the invaders.

William B. Mabee, of the office of foreign agricultural relations, who directed the operation, said, "We have been praised by landowner, peasant and tribesman alike, many riding great distances to tell us of the kill, others to request the planes in their own areas."

This and another dramatic program to stop malaria in its tracks serve to pave the way for the more fundamental programs being sponsored by Point Four. The problem is to induce the suspicious and education-lacking Iranians to accept new ideas in agriculture and sanitation. Quick results in locust killing and malaria abating serve to allay the suspicion.

A rural development program, costing almost \$300,000, is setting up a series of 75 village demonstration centers. There, the most rudimentary ideas in agriculture,

health and sanitation are taught to selected Iranians, who in turn are expected to teach them to their neighbors. It is hoped to advance plowing from the primitive scratched-earth methods now in use. Some Iranians need to be taught to wash their hands before handling the food they eat.

Training and leadership programs round out the Point Four operations for Iran. Nineteen trainees are being given instruction in this country, seven in agriculture, ten in health, one in industry and one in meteorology. Under the leadership program, persons who are already leaders in Iranian life are invited to this country for from three to six months to learn what Americans can contribute to their specialties and also to learn about the American way of life.

Science News Letter, August 4, 1951

## INVENTION

## Orange and Lemon Wastes Yield Valuable By-products

► WASTE CITRUS liquors, obtained from oranges, lemons and other fruit after the juices for canning have been extracted, yield valuable products under a treatment process which brought patent 2,561,072 to Gustave T. Reich of Philadelphia.

In the preparation of citrus juices for the market, relatively light pressure is used so that the products will not contain an over supply of oils and other constituents that are undesirable in a juice for beverage pur-

poses. By subjecting the remaining pulp to heavy pressure what is called waste citrus liquor is obtained. By this process this liquor yields products ranging from citric acid to alcohol and yeast.

In it the liquors are partially concentrated, then subjected to alcoholic fermentation. After fermentation has sufficiently progressed, further concentration is carried out during which the alcohol is removed by evaporation. Then the citric acid is separated from the final concentration, and solid matters dried out as an industrial product.

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