AGRICULTURE

# U.S. Self-Dependence Stressed In Plant Industry Report

## Search Continuing for American Foods, Flowers, Insecticides, Tung Oil and Natural Rubber

ABILITY of the United States to get along on its own, or to replace former dependence on the Old World by mutual aid between peoples of the Western Hemisphere, figures importantly in the annual report of the Bureau of Plant Industry to the Secretary of Agriculture.

An outstanding influence of such intra-hemisphere aid is the announcement that new kinds of wheat from Brazil are showing high resistance to leaf rust and some degree of resistance to stem rust as well. These wheats are being used as breeding stocks in producing rust-resistant wheats for growing in the Southwest.

The Biblical maxim that "man shall not live by bread alone" receives practical exemplification in the production of new, American-produced Easter lily bulbs, to replace the stocks heretofore imported from Japan. The new American lilies can be grown so far out of season that they can be brought into bloom for use at Thanksgiving time as well as halfway around the calendar, at Easter.

Possible plant sources of poison for insects that eat other plants are being investigated by the Bureau. Most promising are new strains of the rustic tobacco plant (*Nicotiana rustica*) which produce several times more nicotine than is obtainable from ordinary tobacco. Another possible source of anti-insect munitions is the native seashore plant known as devil's shoestring, which yields rotenone, at present extracted from East Indian derris and South American cubé.

Further declaration of independence of foreign sources is proclaimed in such diverse fields as fertilizers, sugar-beet seed and tung oil. Magnesium for mixed fertilizers used to be imported from Germany; Bureau chemists have shown how to use an American magnesium compound with satisfactory results. For potato fields, domestic muriate of potash is shown to be a good substitute for imported (and more expensive) potassium sulfate.

During World War I, the American beet-sugar industry found itself in a bad way for lack of foreign-grown beet seed, on which it had become dependent. The Bureau of Plant Industry insisted on the development of an American source of seed—and sugar-beet growers have reason now to be glad they did.

Efforts to grow the Chinese trees that yield tung oil have run into some difficulties because of their sensitiveness to cold. This, the report states, is mitigated when the trees are in a fully dormant state at the onset of the cold wave.

Cold-resistance seems to be possible also in the tropical Hevea rubber trees that have been the subject of breeding experiments at the Bureau's experimental farm at Coconut Grove, Florida. So well have Hevea trees thriven there that the Bureau scientists have been able to pull a coals-to-Newcastle stunt—they have sent some of the seeds grown there for planting in tropical American countries!

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HORTICULTURE

## Orchid Imports From Europe Now Cut Off By War

GLAMOUR girls with a yen for orchids are among those feeling (more or less) the hardships of war. For the European greenhouses that used to supply much of the American market for rare and exotic blooms have been cut off from the American market (glass doesn't stand up very well against bombings) and the American orchid-raising industry has not yet been developed sufficiently to meet the full demand.

As one result, orchids sent by collectors direct from their native homes in the tropics are having something of a boom. This, however, has its own drawbacks, it is pointed out by E. R. Sasscer of the U. S. Bureau of Entomology and Plant Quarantine. Orchids grown in European greenhouses are usually free from pests and diseases, whereas those from the tropics must be very carefully inspected to see that they do not bring in any of their considerable assortment of the insects and fungi that prey on them in their native state lest these get loose and wreak havoc in American greenhouses.

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GENERAL SCIENCE

## Commonwealth Fund Backs "Long Shot" Researches

THE Commonwealth Fund, philanthropic organization, was revealed as a backer of "long shots" in the report of its activities during the past year.

"One out of every three of the research projects now being aided by the Fund might be called a 'long shot,' while the other two are sufficiently conservative in conception and conventional in method to warrant the confident prediction of a successful outcome," states the report from Barry C. Smith, general director of the Fund.

Medical education and research received one-third of the $2,000,000 appropriation for the year. Other health services, including chiefly aid to rural health departments and rural hospitals, received nearly $1,000,000.

The war brought the problem of relieving immediate suffering without sacrificing the long-time program designed to prevent such suffering. Steering a "middle course between underplanned and overplanned giving," the Fund appropriated $135,000 for war relief through the American Red Cross, the Allied Relief Fund (now the British War Relief Society), and Finnish Relief Fund, the Harvard Medical School Epidemiological Commission to England, and the assistance of English Refugees.

The child guidance program supported by the Fund in England, although suffering some disruption of organization because of the war, has apparently increased its usefulness especially with regard to problems arising from evacuation of city children to rural areas.

Explaining the Fund's policy of backing "long shots" in research, Mr. Smith states: "It is good for a foundation to take long risks in some of its philanthropic investments. In these frontier jobs objectives may be dim, long efforts fruitless, and findings confusing. Yet out of them may come the revolutionary concepts that point the way for a generation of medical progress."

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