HORTICULTURE

Victory Gardens Planted By Soldiers in Camp Areas

➤ SOLDIERS in training, awaiting their turn to go overseas for a crack at the Nazis and the Japs, are putting in Victory Gardens of their own, where suitable soil is available in the training camp areas, the War Department states. Substantial acreages have already been planted to vegetables in several Southern camps already, and as spring moves northward more will be spaded up in camps farther up the map.

Gardening is to be a strictly voluntary off-time recreational activity; no one is excused from exercises with rifle and bayonet to wield a hoe. Nevertheless plenty of willing workers have already been found. At one air field, the gardening has been taken over by 12 men who were professional truck-raisers in civil life, who figure that it gives them a chance to keep their hand in at their regular business, besides being just a little extra shove to send the Axis a bit faster toward its finish.

Science News Letter, April 17, 1943

NUTRITION

Stretching the Fat Ration Is Duty of Housewife

➤ FAT IS ONE of the daily diet "musts." Most people like it so well for its flavor and the staying quality it gives to meals that they need no urging to eat it. A number of hints for the thrifty housewife who wants to stretch her family's fat ration have been issued by the New York State College of Home Economics.

First rule, of course, is to use all left-over fats, both the drippings and that trimmed from steaks, chops and roasts. Fresh pork drippings are good for seasoning vegetables and making gravy. Beef fat or drippings, if fresh, may be clarified and added to lard or other soft fats. Such combinations can be used as shortening in muffins and spice cakes, for gravies and sautèing and in puddings.

Sausage, ham and bacon fats, because of their flavor, it is pointed out, are especially good for frying and for warming up foods. Mild bacon fat that has not been allowed to smoke can be used in muffins, cornbread, cakes, gingerbread and cookies. The flavor is not noticeable if the baked products are used within a day or two, but it becomes stronger on standing. It is a good idea to use strong-flavored fats in spice cakes or other baked goods that have a pronounced flavor of their own.

Here is an important don't on the use of fat: Don't ever let it smoke or burn. Smoking is a signal that the fat is beginning to break down chemically. The resulting product makes a poor food, "one that can kill a dog if eaten continuously," the New York home economists warn. Fat that has been burned or allowed to smoke gives an unpleasant flavor to the food and may irritate the digestive tract. The fumes of smoking fat have a sharp odor and will irritate the mucous lining of nose, throat and eyes. Fat that has heated to the smoking point, moreover, turns rancid rapidly.

All fats, including oils, should be kept covered in a dark, dry, cool place. Meat drippings particularly need a cool place because they may contain meat juices which spoil quickly.

Science News Letter, April 17, 1943

AGRICULTURE

Livestock Rehabilitation Is Planned at Cornell

➤ GREECE, rising from her ruins after the war, will have better cattle, sheep and other livestock as a result of a program of improvement initiated at Cornell University, under a grant of $2500 from the Near East Foundation.

A thorough study will be made of methods to restore and rebuild the food resources of that country, including possibilities with milk goats, dairy cows, chickens, geese, turkeys, sheep, hogs and rabbits.

Work is under the direction of Prof. F. B. Morrison of the animal husbandry department, and C. S. Stephanides, a native of Greece and a Cornell graduate.

At least 15 advisers from the staff of the College of Agriculture will assist, most of whom have done special work in foreign countries, including Turkey, Albania, North Africa, Costa Rica, New Zealand, Hawaii, Mexico, China and the Philippines.

Mr. Stephanides' work will take him to agricultural colleges and experiment stations and on certain farming trips, especially in Louisiana, Texas, New Mexico, Arizona, and California, for a study of feed and livestock problems.

The new program of reconstruction has the approval of the Office of Foreign Agricultural Relations, U. S. Department of Agriculture, and of Herbert H. Lehman, director of foreign relief and rehabilitation, who has asked that plans be turned in as soon as possible.

Science News Letter, April 17, 1943

IN SCIEN

AGRICULTURE

Food More Pressing Than Guayule Rubber Production

➤ FOOD CROPS for production in 1943 are more important at the present moment than guayule plantings for rubber in 1945. Since the recommendations of the Baruch committee were issued urging a greatly increased guayule raising program, the situation has changed.

"The need for the maximum food production has become more pressing, and the outlook for synthetic rubber has become somewhat clearer," declare Secretary of Agriculture Wickard and Rubber Director Jeffers.

Both men feel that it is not desirable to use any large quantity of land for planting the rubber plant this year as the first rubber yield would not be until two years from now. Not only is the land needed for food crops but the manpower is needed also.

The Department of Agriculture is planning to have plenty of guayule planting stock available in the nurseries in case a further survey shows by mid-summer that emphasis should shift again to rubber production.

Science News Letter, April 17, 1943

INVENTION

Enamel Coating on Pistons Reduces Engine Knock

➤ ENAMEL coatings on the face of a gasoline engine piston, and on the inner surface of the cylinder head, will materially reduce knocking and also minimize the formation of "shellac" or "varnish" on the piston skirts and hard carbon on the piston head, states Frederic H. Emery of Bedford, Ohio, in the preamble to patent 2,311,039.

To the glassy enamel, containing cobalt to make it stick better to the iron, the inventor also adds alumina or other refractory substance to increase its heat-resisting properties. The enamel, usually though not necessarily minus the refractory, may also be applied on the underside of the piston and on the radiating fins of air-cooled motors, to speed up transfer and dissipation of heat.

Science News Letter, April 17, 1943

CE FIELDS

MEDICINE

Better Typhoid Vaccine May Come from Germ Shell

➤ A BETTER vaccine for protection against typhoid fever may result from research at the Biochemical Research Foundation of the Franklin Institute, reported by Dr. Ellice McDonald, director, in his annual report of the Foundation's activities.

Using chemical and physical methods to split the typhoid fever germ into many portions, the scientists obtained some starch-containing fractions of typhoid fever germs which were non-poisonous to mice.

These fractions are believed to be the outer covering of the typhoid germs which normally serve to protect the germs against the white blood cells of the body's defenses. The outer covering of the germ also contains the substance, called antigen, against which the body develops specific defense mechanisms called antibodies.

Isolation of a non-poisonous, antigenic substance from the germs may mean that this substance can be used as a vaccine against typhoid fever, instead of the whole germ.

Science News Letter, April 17, 1943

GENERAL SCIENCE

Guggenheim Fellowships Awarded 11 Women, 53 Men

➤ MORE WOMEN than ever before are recognized in the annual award of fellowships by the John Simon Guggenheim Memorial Foundation. The list includes 11 women and 53 men. Each will receive an annual stipend of approximately $2,500. Those in war work or in the armed services will continue in this essential work until the war is won, and then receive the benefits of the award.

Moral philosophy seems to be emphasized in making the awards. A group of fellows will devote their studies to attempting to gain an understanding of the principles by which ethical judgments or judgments of human values are formed. The theme which underlies the diversified list of fellowships granted this year is the understanding of the civilization in which we live, particularly the understanding of the Americas.

No appointments were made this year in fields of the physical and mathematical sciences as it was felt that the first-rate persons in these fields are in direct war work or in essential teaching work. The list includes one Filipino poet, one Negro economist, and one Chinese artist.

Eighteen annual awards of Guggenheim fellowships have now been made. The Guggenheim Foundation was created and endowed by the late United States Senator, Simon Guggenheim, and his wife as a memorial to their son John. Fellowships are awarded to scientists, artists, writers, and others, who have shown creative abilities in their previous work, and made productive contributions to knowledge or to the arts.

Citizens of the United States and Canada, and of certain Latin American countries, are eligible to receive fellowships on equal terms. Men and women, married or single, of any race or creed, are equally eligible. The awards this year total $140,000.

Science News Letter, April 17, 1943

PUBLIC HEALTH

Week a Year Per Employee Is Lost Due to Illness

➤ ILLNESS accounted for the loss of 5½ days of working time per year per employee in a typical cross section of American industry studied by experts of the Industrial Hygiene Foundation, collaborating with the U. S. Public Health Service.

These studies, which concerned illness not due to industrial accidents, were announced through the annual report of the Mellon Institute of Industrial Research.

When only absences of eight days or longer due to illness were considered for the 1941 period in 14 companies the annual per employee loss was 2½ days. Eight per cent of the men and 10.5 per cent of the women employed suffered these illnesses. When absences of one day or longer were considered, estimates showed that 50% of the men and 82% of the women took time off due to illness.

In one company the sickness absenteeism loss amounted to $180 per employee annually when reduced efficiency before and after illness was estimated and included.

Science News Letter, April 17, 1943

MEDICINE

Cellophane Tubing Used In Concentrating Human Serum

➤ SAVING of 75% in weight and space needed for shipping human blood serum to the theaters of war is promised by a very simple apparatus in which the essential element is a short piece of cellophane tubing of the kind regularly sold under the prosaic title of sausage casing. How it is built and used is described in *Science* (April 2) by Dr. Gerald M. Needham and Dr. Paul F. Dwan of the University of Minnesota Hospital, Minneapolis.

The tubing is tightly attached as a kind of skirt to the open end of a glass bell, like a bent-necked bottle without a bottom. The lower end of the tube is folded over a narrow strip of wood and clamped tightly against a second strip. A bottle of serum is connected with the neck at the top, and the whole set-up is heated under steam pressure to sterilize everything.

The water from the serum evaporates slowly through the sheet-cellulose bag, under encouragement of a constantly moving current of warm air, until the volume is reduced by three-fourths.

Then the condensed serum is poured, still under aseptic conditions, into a storage bottle, which is kept at low temperature in a refrigerator. Before using, sterile distilled water may be added to restore normal volume.

Science News Letter, April 17, 1943

CHEMISTRY

Chemical Society Medal Awarded Harvard Scientist

➤ RESEARCH on defenses against the poisonous gases and sprays used in chemical warfare won for Prof. Arthur B. Lamb, dean of the Graduate School of Arts and Sciences at Harvard University, the 1943 William H. Nichols Medal of the New York Section of the American Chemical Society.

Citation in the award praised Prof. Lamb for "his investigations in inorganic and physical chemistry, leadership in defense against poison gas, and as a teacher, administrator and editor."

During the first World War, Prof. Lamb was a lieutenant colonel in the Research Division of the Chemical Warfare Service. Developments under his direction included activated charcoal, active soda-lime used in gas masks and detection and removal of carbon monoxide.

Science News Letter, April 17, 1943