CHEMISTRY

Hemp Needs New Uses

War-born American industry is looking for industries, other than cordage, to use its products. Rug warp, fire hose, canvas, toweling, tropical clothing suggested.

➤ AMERICA'S war-born hemp industry will require new uses for its products if some 42 processing mills built by the government are to continue in operation. These plants were constructed, and domestic hemp-growing encouraged, to meet a shortage of rope and cordage due to the Japanese control of Manila hemp from the Philippines and elsewhere in the Far East.

"Clothing and textiles from hemp offer one means of nourishing a 'war baby' into a young industry important in national defense," declares *Industrial and Engineering Chemistry*. It states also that government retention of these hemp processing plants and expansion of the domestic hemp industry are being urged by some in the interest of national preparedness.

"To utilize these plants at anything near capacity, new industries for hemp, other than cordage, will be needed," the publication says. "Commercial development of hemp for clothing and textiles in this country has attractive possibilities, since hemp is both the longest and the most highly absorbent natural fiber known."

Among other uses for hemp suggested are use in rug warp, fire hose, canvas, toweling, tropical clothing, by-product paper, and home insulation.

Since the Far Eastern supply of cordage was cut off by the war, American farmers, in Iowa, Illinois, Indiana, Wisconsin and Minnesota particularly, were urged to increase their acreage of hemp. They did so, jumping a prewar average of 14,000 acres up to 165,000 acres. With the liberation of the Philippines the mills are being closed.

Hemp is a tall plant, related to the mulberry tree. It produces the strongest known vegetable fiber. It was used in both World Wars to supplement stocks of the hard fibers, jute, sisal, and Manila.

Although hemp is the strongest fiber known, its qualities as a soft spinning thread make it more suitable for textile, rug, and specialty uses, the article states, than for rope and cordage where the cheaper hard materials are predominant.

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CHEMISTRY

Wax Emulsion Makes Clothing Water-Resistant

➤ EVERYBODY will be able to have water-resistant clothing, as soon as a new war-born emulsion, used in large quantities in the armed services, becomes available in civilian markets. Expert treatment of the clothing will be unnecessary; the emulsion is applied simply by adding it to the rinse water in the family wash.

The emulsion can be applied to many types of fabrics as well as to clothing, such as awnings, tenting, window shades and drapes. It makes the material not only water-resistant but less liable to wrinkle and to spot. Pressed garments will keep their shape longer.

This milky-looking wax emulsion, a petroleum product of the Socony-Vacuum Company, is non-toxic and non-inflammable. It is made up of tiny particles of paraffin wax suspended in a solution of an aluminum salt and water. It is superior to former wax emulsions in which soap is used to emulsify the wax, it is claimed, because such solutions deposit both a soap film and the wax on the cloth.

In laundering, the wax emulsion can be used in conjunction with starch, and it can be used also with mothproofing and mildew-proofing processes if desired. However used, the wax is invisible on the clothing, does not make the material stiff, and does not fill the spaces between fibers. Clothing that has been treated retains its porous qualities, and summer clothing, therefore, remains ventilated and cool.

Science News Letter, September 8, 1945

WILDLIFE

Restrictions on Shooting Pigeons as Source of Meat

➤ GETTING free meat by shooting pigeons of the ownerless flocks that infest most cities, an idea that has suggested itself to more than one red-point-lacking citizen lately, is not as simple as it seems at first thought, the U. S. Fish and Wildlife Service warns. In most municipalities there are rather sharp restrictions on the use of firearms within

city limits. However, police permission can often be obtained on the plea that the birds are a pest.

Ordinary 12- and 16-gage shotguns are too heavy weapons for killing pigeons, especially at short range. The Fish and Wildlife Service recommends the .410-caliber shotgun, or even a .22-caliber rifle with shot cartridges. A high-powered air rifle can also be used effectively.

Trapping is practicable in some sites and where it can be carried on is preferable to shooting. It at least has the advantage of enabling one to release, unharmed, stray carrier or fancy pigeons that have wandered into dubious society and been adopted as flock-mates by their "hobohemian" companions. Initialed and numbered leg bands usually identify these valued strays.

Getting rid of pigeons as pests, with no idea of using them for food, can also be done by using poison; but this carries with it the risk of having the dead birds picked up and eaten by somebody's pet cat or dog, which will be poisoned in its turn. Poison gas has been suggested, but is not practicable except in the hands of professionals. It is too risky to be attempted by amateurs.

Pigeons can be excluded from belfries, church steeples and other favored nesting sites by nailing chicken-wire inside all openings. If the one-inch mesh is used, it will keep out starlings as well as pigeons.

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BIOCHEMISTRY

Mold from Human Hair Stops Typhoid Germs

➤ A "RED-HEADED" mold from human hair may yield a penicillin-like remedy for typhoid fever and some kinds of dysentery. Discovery that a red dye or pigment produced by the mold stops the growth of typhoid and dysentery germs in culture plates, as penicillin stops the growth of other germs, is announced by Dr. L. Rosenthal, of Israel Zion Hospital, Brooklyn, N. Y. (*Science*, Aug. 17)

Penicillin does not have any effect on the typhoid-dysentery group of germs.

The red mold pigment, if it proves effective as a remedy, could be given by mouth, Dr. Rosenthal's studies indicate.

Tests to determine whether it is poisonous or can be safely used and whether it would affect the germs in the body as well as in culture plates in the laboratory are now under way.

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• Books of the Week •

THE CONSTITUTION AND TOXIC EFFECT OF BOTANICALS AND NEW SYNTHETIC INSECTICIDES—P. Lauger, H. Martin and P. Muller—*Geigy Co.*, 43 p., paper, illus., free. Trans. of a paper read before the Basler Chemische Naturforschende und Medizinische Gesellschaft.

DIETOTHERAPY: Clinical Application of Modern Nutrition—Michael G. Wohl, ed.—*Saunders*, 1029 p., illus., $10. Foreword by Russell M. Wilder.

EDUCATORS GUIDE TO FREE FILMS—Mary Foley Horkheimer and John W. Diffor, comps.—*Educators Process Service*, 254 p., paper, $4. 5th ed., revised and enlarged.

ESSENTIAL VOCATIONAL MATHEMATICS—Claude H. Ewing and Walter W. Hart—*Heath*, 266 p., illus., $1.60. A first year course for vocational and technical high school students.

EXPERIMENTAL STRESS ANALYSIS. Proceedings of the Society for Experimental Stress Analysis, Vol. 2, No. 2—C. Lipson and W. M. Murray, eds.—*Addison-Wesley*, 166 p., illus., $5. Containing papers presented before the society's fall meeting and symposium on crankshaft stresses.

GOVERNMENT IN PUBLIC HEALTH—Harry S. Mustard—*Commonwealth Fund*, 219 p., $1.50. A study of the New York Academy of Medicine, Committee on Medicine and the Changing Order.

MUSIC AND SOUND SYSTEMS IN INDUSTRY—Barbara Elna Benson—*McGraw*, 124 p., illus., $1.50. Industrial Organization and Management Series. The organization of an industrial broadcasting system.

PIPING HANDBOOK—Sabin Crocker—*McGraw*, 1736 p., illus., $7. Fourth ed., revised and enlarged. For the engineer interested in piping design.

POLITICAL PARTIES: An American Way—*Public Affairs Committee*, 32 p., paper, illus., 10 cents. In cooperation with the National Foundation for Education in American Citizenship. Basic American Concept Series.

PREVENTIVE MEDICINE—Mark F. Boyd—*Saunders*, 591 p., illus. $5.50. 7th ed., revised and enlarged.

SOCIOLOGY APPLIED TO NURSING—Emory S. Bogardus and Alice B. Brethorst—*Saunders*, 312 p., illus., $2.50. 2nd ed., revised and enlarged.

TEXTBOOK OF BACTERIOLOGY—Edwin O. Jordan and William Burrows—*Saunders*, 909 p., illus., $7. 14th ed., revised and enlarged.

WHERE DO PEOPLE TAKE THEIR TROUBLES?—Lee R. Steiner—*Houghton*, 263 p., $3.

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Cod fish was once the mainstay of the vitamin industry of the United States, but now cod contributes only about 1% of the output of vitamin A by American manufacturers.

A 10% reduction in losses of adult *hens* by disease would increase the total production of the nation's flocks by half a billion dozen eggs.