Do You Know?

Lanolin used in cosmetics is refined wool grease.

Peanuts yield more *oil* per acre than cottonseed.

Wisconsin and Minnesota run a neck-and-neck race for honor as the *"hay-makingest"* state.

The adult clothes *moth* lives only a few weeks, but during that time lays from 100 to 300 eggs.

One-eleventh of the total amount of *food* grown in the United States last year came from Victory Gardens.

Old females—not males—are usually the leaders among all herds of African *antelopes;* the females also stand guard when a herd is resting or feeding.

When the war is over *camouflage in reverse* will be used to make factory and other roofs conspicuous and attractive to the airplane-travelling public.

Sunflower seed, now one of Argentina's principal crops, will yield some 1,200,000 tons this year, which will produce a large surplus of edible oil for export.

Wheat *cereal* is reported used in Mexico in a sand-blasting machine to clean airplane engine parts; the starch is removed by boiling and the residue ground with steel cutters which leave sharp corners on the particles.

During 1943, in industries in the United States, 18,400 *workers* were killed, 1,700 totally and permanently disabled, 108,000 permanently crippled, and 2,225,000 others temporarily laid up an average of 15 days each.

The *population* of Russia was reported as about 170,000,000 in 1939, an increase of 55% since 1900 in spite of wars and revolutions; it may reach 250,000,000 by 1970, according to a new study of the League of Nations.

Nearly 5,000 workers from the *Bahama islands* helped on American farms in 12 states last year; about three-fourths of them remained for winter work on Florida truck farms, and additional workers are now arriving.

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belly tanks in which they ordinarily carry extra gasoline for long-range missions. As they struck the ground, a patch of red flame, about as long as a small cargo ship or a big warehouse, leaped up to treetop height, and burned away furiously for several minutes.

This particular flame weapon represents an improvisation that has been turned into a regular means of attack. At first, pilots would simply jettison their detachable belly tanks on any target that seemed worth the attention, then circle round and ignite it with incendiary bullets or small-caliber cannon shell. Now, each tank carries a detonator to ignite it, making the return trip unnecessary.

Another new trick with flame was demonstrated that would have earned an approving nod from Callinicus, who used Greek fire to stop the Moslems at the walls of Byzantium. One form of fuel used in flame-throwers now includes some kind of solid incendiary particles, which make denser snowflakes of fire within the general sheet of flame. These persist in their burning after the rest of the flame has gone out.

Still another fire-weapon, repeatedly demonstrated, has been white phosphorus. This is used in artillery shells, airplane bombs, mortar missiles and hand grenades. The bursting charge is not very large, so that fragments of the flaming stuff fall in an arcing shower, dropping vertically into slit trenches and foxholes. A man with a phosphorus burn in his flesh is as thoroughly disabled as if he had been hit with a shell fragment.

With Breath of Evil

Tales of birds with breath of evil that slew men by merely flying over them would be dismissed nowadays as fables belonging to the Arabian Nights. Added stories of cloaks that can protect against the peril would only increase the feeling of fantasy.

Yet this is one thing that the touring group of writers saw with twentieth century eyes when a plane roared low over a body of troops on a roadside. From the rear of the plane issued a cloud of brown mist that settled quickly towards the ground.

Each of the soldiers did what looked like a brief dervish dance. At the end of about five seconds they all stopped abruptly, crouching partly down to the ground.

Closer inspection showed that each

FOILS BLISTER-MAKERS—Every American soldier in the fighting zones carries, along with his gas mask, two of these covers, which are built exactly like enormous waxed-paper envelopes with transparent ends to see through. A properly trained man can whip his envelope out, expand it, and cover himself with it in five seconds.

man had whipped out of his gas-mask carrier a kind of personal envelope, spread it open with two swift swings of his arms, and then slipped it over himself. The top part consisted of transparent plastic sheeting and the rest of the garment of an impervious brown paper. Having served its purpose in warding off one cloud of blister-gas spray the whole thing is cast aside. It is cheap and easily replaced.

While crouching under the shelter of this protecting envelope the soldier adjusts his gas mask.

Of course the spray used in the demonstration was not mustard gas or any of the war blisters. It was just a convincing-looking imitation. But the protection would have worked as well had the game been "for keeps."

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ENGINEERING

"Dream" Refrigerator Has Almost Everything

➤ ONE OF THOSE "dream" gadgets for the post-war household seems to be embodied in patent 2,347,985, granted to C. G. Beersman of Evanston, Ill., It has just about everything. The door is

touch-controlled, the food compartment is circular and the height-adjustable shelves rotate, and the ice-cube compartment has trays with cam-lifting devices for easier removal. If anything liquid is spilled, it doesn't make a mess on the botttom, but runs into a gutter and is drained off. There is a capacious vegetable-storage bin. About the only thing it doesn't do is go out and do its own shopping.

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AGRICULTURE

German Food Situation

Due to change for the worse this year because of shortages of manpower, fertilizers and other factors, U. S. Department of Agriculture official states.

➤ THE GERMAN FOOD situation may change for the worse soon because of shortages in manpower, fertilizers and other production factors. Production in 1944 may be considerably below that of the preceding years, and the 1945 food supply will probably be drastically curtailed.

This is the opinion of Dr. J. H. Richter of the Office of Foreign Agricultural Relations, U. S. Department of Agriculture, expressed in the official publication, entitled *Foreign Agriculture*. Germany's production and consumption of food thus far in this war have been at a level far above those of 1914-18, he says.

"In contrast to the situation in 1914, Germany's food economy in 1939 was well prepared for war," he declared. "Following a period of sustained expansion, agricultural production had reached a high level. Over 85% of the nation's food supply was produced from domestic resources, the only substantial deficit being in fats and oils. From 1937 until the outbreak of war, stocks of grain, fats and sugar had been accumulated in considerable quantities."

In the years just prior to World War I, German livestock was dependent upon the importation of feed to the extent of about 38% of the total output of livestock products. In 1939 the dependence on imported feeds was not more than 10% with the result that livestock production has been considerably less affected in the past four years than during the 1914-18 period.

An important factor in the high level of farm production was the relatively large supply, up to 1943, of commercial fertilizers other than phosphates. Especially important was the availability of nitrogen in quantities six or seven times as great as in the previous war.

"This excess, even after allowance has been made for the drastic reduction in phosphates, may still be estimated as accounting for an annual crop production of over 6,000,000 tons in terms of grain," Dr. Richter states.

In his opinion, Germany's own production has remained the backbone of its wartime food supply, despite the importation of substantial quantities requisitioned in other parts of continental Europe under German control.

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SAFETY

Reducing Accidents

➤ A RAINBOW of industrial colors to protect war workers, with high spots picked out as Alert Orange, Precaution Blue, and High Visibility Yellow, is the home-front safety scheme advanced by Matt Denning, of E. I. du Pont de Nemours and Company, before the 15th Annual Convention of the Greater New York Safety Council.

In line with the Safety Council's foremost objective—"to reduce accidents in our homes, on our streets, in our industries and elsewhere"—new spring safety colors were exhibited that add "three-dimensional seeing" to safety precautions, on the theory that the human eye quickly recognizes colors and the brain learns to associate colors with certain equipment.

Alert Orange, a "loud shouting color," was recommended for application to such industrial danger spots as electrical switch boxes, machinery guards, pulleys and gears. Fire protection equipment and locations were to be designated by a "noisy" red, while Precaution Blue was to identify equipment not to be used, moved or started.

High Visibility Yellow was suggested for trucks, hoists, steps, edges, and railings; Safety Green for first aid rooms, stretchers and locations of medical equipment; and Traffic White, Gray or Black were offered for setting of traffic lanes, aisles, storage areas and corners.

For the benefit of the 4% of the population who are color-blind, Mr. Denning urged use of safety symbols in connection with safety colors—triangles or arrow with orange, cross with green, square with red, and disk with blue.

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Safer Future Promised

➤ A SHINING and safer future, with materials visible in the dark, was predicted by Dr. G. F. A. Stutz, of the New Jersey Zinc Company.

Fluorescent pigments visible in ultraviolet light and phosphorescent materials that glow in the dark, he said, serve many war uses and will illuminate the post-war road to safety.

Aviators in planes forced down at sea release fluorescent dye powders that tint a large area of water, making it visible to rescue planes, and dyed panels of silk are used by ground troops to signal planes.

Fluorescent pigments are being used in plastics, paper, paints, printing inks, and powders, and in coatings for instrument boards and panels of ships, planes, and control rooms where darkness is desirable but visibility must be maintained.

A fluorescent plastic envelope, activated by ultraviolet light, permits read-