NUTRITION—AGRICULTURE

Food for Europe

Food shortage in war-stricken countries is not so black as it has been painted, but bad enough. Food there has declined in quality as well as quantity.

By DR. FRANK THONE

➤ EUROPE under the Nazi heel is not the black famine area it has often been pictured. Everybody on the continent has to do without things, millions are habitually hungry, but not everybody is starving. When our relief fleets at last steam over the sunken wrecks of the last of the U-boats into the liberated harbors of the Continent, they will not have to restock a bare-swept pantry, but only replenish a badly depleted one. It may mean the difference between accomplishing a difficult task and recoiling before an impossible one.

That, at any rate, seems the prospect offered by a careful statistical study of Europe's wartime food economy, made by Dr. J. H. Richter of the U. S. Department of Agriculture, and recently made public by the Department's Office of Foreign Agricultural Relations.

Dr. Richter's study actually covered all of Europe west of Russia; but since the Fascist grip extends over all that area with the relatively small exceptions of Sweden, Switzerland, Spain and Portugal, the figures may be taken at face value. The more so, because the pinch is felt even in the unoccupied and neutral countries—lightly in Sweden, tightly in Spain, which has not yet recovered from the fever of civil war.

Large Cereal Imports

Western Europe's annual food imports in pre-war time included cereals enough to make about 3,000,000 tons of flour, 500,000 tons of sugar, 1,600,000 tons of food oils and fats, and some fruit. Great quantities of feed for dairy and meat animals were also imported, sufficient to produce about 1,300,000 tons of meat, 700,000 tons of food fats, and 100,000 tons each of eggs and cheese. There were relatively small food exports—approximately 100,000 tons each of eggs, cheese and meat.

To get some kind of an integrated figure, Dr. Richter has converted all classes of foods into their caloric equivalents and struck a total, which comes out at 37 trillions—30 trillions for imported plant foodstuffs, 7 trillions for foods of animal origin.

This seems tremendous until it is compared with Europe's total food consumption, calculated as the equivalent of 360 trillion calories a year. Foodstuffs of extra-Continental origin therefore amounted to only about 10% of the total: Europe was much closer to being self-sufficient in peacetime than we Americans were accustomed to think.

There has of course been a decline in European farm production since war broke out. Relatively little of this, in the area under consideration, has been due to actual "havoc of war"; principal factors have been manpower and horsepower shortage, unfavorable weather, lack of fertilizers. About five-sixths of the former imports of foodstuffs and feedstuffs have also been cut off, so that there is probably a total wartime supply of about 319 trillion calories, as against the over-all pre-war total of 360 trillion.

Fighters Need More

But there are some 14 million men under arms in wartime Continental Europe, and they must have more food than their peacetime requirements, rather than less. As Dr. Richter figures it, the average European gets perhaps 84% as much to eat, measured in calories, as he did before the New Order conferred its choicest blessing, war, upon an unappreciative world.

The trouble with this kind of a figure, as Dr. Richter takes care to point out, is that there isn't any "average" European, any more than there is an actual "average" person of any kind. The 84% of civilian-available supplies are most unevenly distributed. The relatively well-fed, meat-eating Swede in the North is far better provisioned than the chronically malnourished Sardinian in the South at any time, and the contrast becomes sharper when one is still at peace and the other embroiled in an exhausting war.

Even within the bounds of any given country, maldistribution makes itself strongly felt. This may be due to a poor transportation system backed by a weak national economy, as in Italy, or it may be simply the result of the farmer's stubborn refusal to turn over his produce to city populations which have nothing to give him in return. This was decidedly the case in Germany during the Kaiser's war; it is probably as true there today, in Hitler's war.

When rotund Herman Goering offered the German people guns instead of butter, he did not actually make the substitution altogether so inedible. Since there was to be less butter, fewer cows would be needed. The people might dip into Bossy's abandoned bran-bucket to fill their porridge-bowls. Some such sour parable as this might be taken to illustrate one aspect of the searching study of Continental Europe's wartime food balance carried out by Dr. Richter. The diet of people in war-bound Europe has suffered qualitatively as well as quantitatively. It is coarser as well as scantier, and there has been an even sharper cut in the flitch of bacon than in the size of the brown loaf.

Stated in round, integrated totals, European food in general, before the war, was about 78% of vegetable and 22% of animal origin. As of 1941-42, the last crop year for which any kind of figures are available, the proportions are 83% vegetable, 17% animal. And be it not forgotten that the total quantity of food is less, so that the 17% of meat and butter and eggs and cheese is 17% of very little indeed.

Italian Diet Skimpy

Even this skimpy proportion is ill-balanced, for the peoples of the harder-climated North, like the Scandinavians and the Dutch, have always been heavy meat-eaters, while the poorer folk of some of the Mediterranean and Balkan countries got along with very little food of animal origin. So the "average" figure of 17%, skimpy as it is, must be further trimmed to give an accurate idea of how often the peasants of Italy see meat on the table nowadays.

Of course, in all these calculations, one has to leave out of account the horror-spots that the Nazis have deliberately created, like Poland and Greece, where whole peoples seem to have been condemned to death by starvation for the crime of having defended their homes. Better omitted, too, were pictures

of Party members in both Germany and Italy who remain sleek and well-nourished while even their own compatriots are on strict war rations.

Even leaving obvious and gross inequities like this out of the discussion, Dr. Richter sees perhaps 60% of Europe's people having to subsist on three-fourths of their normal diets—remembering always that the "normal" diets of many millions of these people have been far from what dietitians would call normal for anybody.

What will our task be when Europe is cleared of its present nightmare and begins its terrific task of getting back on something like a normal basis?

First of all, Dr. Richter holds, we should think of helping European peoples to help themselves. Supplies of seed and farm machinery, of draft animals and livestock, are the greatest benefits that can be offered. Some of the countries, most notably Denmark, have been permitted to keep a good nucleus of breeding animals; they will need mainly a resumption of shipments of oil-cake, grain and other feeds. Others may need help in getting destroyed dairy and stock industries rebuilt from the ground up.

But for immediate needs, especially in the sorest famine spots, prompt shipment of all kinds of foodstuffs will be imperative. These, as Dr. Richter sees it, will have to be given priority over livestock feedstuffs, into certain areas at least.

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MEDICINE

War Disease Problems

Deaths from wounds likely to be many fewer than the deaths from war diseases, bacteriologist points out. Malaria an important problem.

➤ DISEASE AND INFECTION present gigantic problems to our armies fighting a global war, Prof. K. F. Meyer, head of the department of bacteriology at the University of California, told the Western Section of the American Chemical Society meeting in San Francisco. In wars, Prof. Meyer pointed out, there has often been a much higher mortality rate from disease than from wounds. In the Crimean war, for example, there were 50 deaths from wounds to 192 from disease, while in the 1914-1918 World War the relation was 138 due to wounds and 115 from disease.

Not only is there the question of the health of the troops during the war, but of contacts among the home population when peace comes. When all these men come back, Prof. Meyer said, we shall have carriers of all sorts of diseases. We must be prepared in civilian set-ups for possible eventualities. We remember that 1000 people died of cholera in one month in Sacramento, Calif., during the '49 gold rush. The Army and Navy Medical Corps, working in conjunction with committees of the National Research Council, are developing every possible means of reducing the impact of these diseases to a minimum.

In the offices of the Division of Medical Intelligence there are on the walls maps of the world showing last minute data on the location of the various communicable diseases. Extensive outlines of the diseases likely to be met are prepared and given to medical officers before embarkation to the battle front.

In North Africa, diphtheria appears in the form of skin ulcers which do not heal. In the caves of Tobruk there were sandflies and ticks that transmit fever. In Trinidad there are vampire bats. About 4% of these bats carry the rabies virus in their saliva. They bite the peoples' toes at night and the rabies appears as an ascending paralysis that looks in many ways like infantile paralysis. It was necessary that the bat population be reduced. This campaign and one against the mosquitoes in that region were planned by the Medical Intelligence.

"Among the so-called 'filth' diseases, typhoid is licked since all troops get immunization," Prof. Meyer said. "But when our boys come home they may bring back dysentery in various forms."

Dysentery vaccines are being studied but they are still in an experimental state. Sulfaguanidine has revolutionized the treatment. This disease will have to be controlled by environment, such as suppression of flies and proper disposal of excreta. This means continual vigilance.

We shall also have contact with cholera, Prof. Meyer pointed out, since we are going close to the birthplace of cholera in the Ganges delta. There is a vaccine but the degree of protection afforded is not definitely known. The Japs have used cholera vaccine since 1904. In fact, the best strain is a Japanese strain. The disadvantage is that revaccination is necessary every three months.

Among the insect-borne diseases we find malaria, which is more frequent in the tropics. This disease is not conquered. We need a real prophylactic. We now have only a suppressive, and a person may carry malaria for years in his blood. The control of this disease will have to be through control of mosquitoes. But how can any one prevent them from breeding in the hills, for example, of the Owen Stanley Mountains, or in West Africa? The medical officer can only see that the men sleep under mosquito nets and charge the atmosphere of the tents with insecticidal spray.

Against yellow fever the army has a vaccine which gives 100% protection.

Bubonic plague is always a possibility. This scourge has played an important role in many previous wars. It is insect-borne but once started may be passed from man to man in the pneumonic form. Both a vaccine and sulfa drugs may help fight plague.

Typhus is an ever-present threat. The British found typhus in Egypt. It is apt to be in any country where the population is louse-infested.

"Some believe this can be handled by vaccination," Prof. Meyer said, "but I have yet to be convinced."

In New Guinea, Sumatra, Burma, and Thailand there are mites that transmit a type of spotted fever similar to the swamp fever of Japan. In North Africa troops will probably experience similar diseases carried by ticks. In Central Africa we find sleeping sickness. To combat this we have a prophylactic, Bayer 205, which gives protection for three months.

There are also many other medical problems in a global war. In desert warfare heat-stroke must be dealt with, and sinus infections that tend to flare up. In the swampy battlegrounds there are liver flukes. In our army of eleven or twelve million men we shall find only the particularly fit individuals can be sent into certain regions. A great many who have been sent will have to be returned and replaced by others.

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The *population* of the world has increased from an estimated 500,000,000 in 1740 to 2,000,000,000 in 1940.