

NUTRITION

# Beefsteak Shortage Foretaste Of Post-War Meat Hunger

## Our Shortage Due to Price and Shipping Problems But It's Really Scarce in Europe; They'll Want Ours

**T**HE present beefsteak shortage and the change in Fido's prepared food is giving Americans a foretaste of a world-wide meat hunger that will become acute when war is over.

Fido and other less aristocratic pooches are already turning up their noses at the new dog foods which, though nourishing, are low in appetite appeal even to a hungry dog. Fido's master and mistress, now worried over a beefsteak and pork chop shortage, may when the war is over, be glad for the horsemeat which used to go into Fido's food.

The present meat shortage in the United States, especially in eastern states, is a matter of price adjustment and only temporary. No one needs to suffer from it, because fish and chicken or other poultry can be substituted for meat without any sacrifice of diet essentials. But in most of Europe poultry and probably fish are more scarce than beef, pork and veal are here today. In fact they are almost non-existent.

Our present meat shortage is due to price and shipping problems. In European countries the cattle have long since been slaughtered, the precious grain has gone to feed humans rather than chickens and geese, and when the war is over there will be a world raid on the Ameri-

can meat market that may put us all on very short rations.

Meat means steaks, chops and roasts to most people. To the nutritionist, meat means protein, and he knows that protein is a "must" ingredient of human diets. Proteins are found not only in meat, fish and poultry, but also in cheese, milk, eggs, grains, nuts and some vegetables, especially beans and peas. Not all of these protein foods, however, are equally nourishing for humans.

Proteins in foods and man's body tissues are built up from chemicals called amino acids. Certain of these acids are "essential" and must be supplied preformed in the diet, whereas others can be manufactured by the body from simpler substances. The proteins from meat, cheese, eggs and other animal sources are called "first class" proteins because they supply all the essential amino acids. Vegetable, grain and nut proteins are not considered "first class" proteins because they lack one or more of the essential amino acids.

In Germany during the last war a dropsical condition known as war edema or famine swelling occurred because, it is believed, the sufferers did not get enough first class protein food. Victims of the famine in Russia in 1923 were found to have striking wasting of the sex glands, a condition which recent experiments suggest was probably also due to lack of first class protein. This same lack may be the reason for the

low fertility among famine or near-famine victims.

The recent experiments showing a relation between protein lack and human reproductive ability are part of a big study which it is hoped will aid in solving the post-war feeding problem. The scientists, working at the Johns Hopkins Hospital and Medical School, are investigating, one by one, each of the ten essential amino acids to find just what happens when one of them is missing from man's diet. The one called arginine is suspected of being a paternity chemical, required for production of the male reproductive cells, the spermatozoa.

Hitherto human need for arginine and the other essential amino acids has been assumed from the fact that young laboratory rats require them. Knowledge of the growing rat's need for amino acids came from research initiated by the late Professors Thomas B. Osborne and Lafayette B. Mendel and recently completed by Prof. W. C. Rose of the University of Illinois.

Now the job is to find how many and which of these amino acids are really essential in the diet of man and of his domestic animals such as cattle and chickens, and what happens to the man or cow or chicken that does not get a particular amino acid. With this knowledge, scientists hope they can put together, for a meat-hungry world after the war, a combination of vegetables and grains which, even if not as tasty as beefsteak, will supply the nourishment of the beefsteak or other animal protein.

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*Rust-proofing oils* must be used on countless metal items, from tank engines to the tiniest bearings in radio transmitters.

*Petroleum alcohol* was discovered during World War I.

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