

BIOLOGY

## Sex Control Accomplished

Breeding experiments at Iowa State College have resulted in offspring of a strain of fruit flies all of which are males.

► PRENATAL CONTROL of the sex of animals, most elusive of all goals of experimental biology, has now been accomplished in the case of fruit-flies, those favorite insect "guinea pigs" of genetical research. Results of breeding experiments at Iowa State College, in which all offspring of a strain of the flies are males, are announced (*Science*, Dec. 18) by Dr. John W. Gowen and Dr. Ronald H. Nelson. Previous work by another researcher had already succeeded in producing a nearly all-female progeny in the same insects.

The method used was entirely that of the modern Mendelian geneticist, and did not involve the use of chemicals, X-rays or any of the other drastic means

resorted to in attempts to predetermine the sex of larger animals and human beings. It consisted in selecting strains of fruit-flies in which the sex-determining chromosomes also carried a lethal gene, or genetic factor that would kill the individual bearing it before it reached maturity. Thus a lethal gene attached to the chromosome setup for femaleness would eliminate all females, leaving only male offspring to grow up.

Since this method involves the absolute control of mating for a number of generations it is obviously not applicable to human beings. It may eventually become useful in livestock breeding; but this has not yet been done.

*Science News Letter, January 2, 1943*

NUTRITION

## Horse Meat Won't Hurt

If it is passed by Federal inspectors, it is safe and nourishing. But even if you want it, you probably can't get much. It's scarce.

► A TEMPEST in the frying pan, if not the teapot, seems to have been stirred up over the use of horse meat as a substitute for now scarce beef. Reports are that the use of horse meat is being urged in some places, while in at least one state its sale for human consumption is banned.

Actually, the supply of horse meat is so small that whether you like to eat it or not, you probably will not be able to get much if any, nor is there enough to help reduce the meat scarcity situation.

Latest figures from the U. S. Bureau of Animal Industry show that in the last year, when more than 50,000,000 swine were slaughtered under federal meat inspection, more than 18,500,000 sheep and lambs, and about 17,000,000 cattle and calves, only 30,000 horses were slaughtered.

If federally inspected horse meat is for sale at your butcher's, you can buy and eat it with confidence that it is safe just as is the other federally in-

spected meat you have been used to eating. Look for a green hexagonal (six-sided) stamp on federally inspected horse meat. The round purple federal inspection stamp is not used for horse meat.

The nourishing quality of horse meat is probably about the same as that of other meats. Few studies have been made on this subject, but one authority states that horse meat does not differ materially in composition from beef except that it contains a relatively high amount of glycogen, the carbohydrate stored in animal tissues.

Horse meat is said to have a sweetish flavor and to be rather tough. The toughness is due to the fact that the supply comes chiefly from wild horses on western ranges, slaughtered to prevent their using up valuable cattle and sheep pasturage, and from worn-out work horses. Beef from old draught cattle, it is known, is not nearly so tender and good as that from young steers raised specially for food.

Horse meat is no novelty on the dinner tables of European countries, but in the United States its chief use has been for feeding animals in zoos, menageries, silver fox farms and in dog food. Some American horse meat formerly was shipped to France where the people are accustomed to eating this kind of meat.

Reluctance on the part of most Americans to eat horse meat, despite shortage in other kinds of meat, may be basically a religious prejudice, stemming from an old, nearly-forgotten need on the part of recently converted Christians in north European lands to distinguish themselves from their still-heathen neighbors.

In pre-Christian days the horse was a sacred animal in northern European countries. The legendary heroes or demigods of the pagan Saxons, Hengist and Horsa, were anthropomorphized horses. (The meaning of "Horsa" is obvious enough, and "Hengst" is still the modern German word for stallion.) The two names have persisted in isolated seaboard parts of Germany near the re-



*FOR TEST—A rivet, a screw and an extruded part are prepared for microscope inspection by being embedded in bakelite, polished to mirror finish and etched with acid to bring out the grain. A faulty grain structure, as revealed in this way, will betray low-grade material or faulty processing methods so important to reject in airplane manufacture. This is an official photograph of the Office of War Information.*