



**PRODUCTION-LINE PIGLETS**—Instead of Mama Sow's milk, these one-week-old piglets drank Terralac from troughs built in poultry batteries in the laboratory of Chas. Pfizer & Co., and they thrived and grew on this man-made diet.

## NUTRITION

## Pigs Raised Like Chicks

Synthetic milk for pigs, with antibiotic terramycin, may make possible the raising of piglets on a mass production basis such as now used for chicks.

➤ "AND THIS little pig was raised on synthetic milk and grew and grew and grew."

This is the story of the motherless pigs who were happier (if getting fat faster is an index of pig happiness) than piglets who were fed by Mamma Sow in the old-fashioned suckling way.

A synthetic sow's milk has been made possible by use of the antibiotic, terramycin, Herbert G. Luther, of Chas. Pfizer & Co., Brooklyn, N. Y., reported to an animal nutrition seminar.

This new product forecasts the raising of piglets in converted chick brooders on a mass-production basis on the same scale as chick hatcheries. The little pigs would be taken away from the sow when two days old. Even the runt who loses out in competition for the sow's milk makes good progress on the growth-stimulating synthetic milk. When weaned from the synthetic milk diet, at eight weeks of age, the pigs are 10% to 35% heavier than sow-fed animals.

The mother pig, relieved of her family, can get into production again, with two and

a half to three litters a year instead of the customary one or two.

The ability of an antibiotic, or germ-fighting substance, to promote growth in some animals, notably pigs and poultry, was used in making the new synthetic sow's milk. The artificial milk is made of dry skim milk, lard, fish solubles, vitamins, and minerals, fortified with terramycin, which is one of the new wonder drugs now finding wide medical use. This stimulates growth and gives protection against disease.

In one test, a litter of 16 pigs, more than a sow could have handled, weighed some two tons at the age of five months.

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## INVENTION

## Magnetic Fluid Clutch—Force Transmitting Device

➤ THE SO-CALLED magnetic fluid clutch for the transmission of power, developed at the National Bureau of Standards some four years ago, has now been granted a

patent. This type of clutch, using oil containing fine particles of soft iron, is already in use in delicate instruments and experimentally in automobiles.

Patent 2,575,360 was issued to Jacob Rabinow of the National Bureau of Standards for this invention. Rights are assigned to the Secretary of the Army because the development was carried out at the Bureau under contract with the Army.

This type of clutch is electromagnetically controlled. Basically, it consists of two parallel disks of metals capable of being magnetized between which is oil containing iron particles. When the disks are magnetized the magnetic field set up between them magnetizes the iron particles, holding them in rigid position so that the oil and iron mixture locks the disks together.

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## MEDICINE

## First Crystal Virus From Growth on Animal

➤ FOR THE first time, a crystalline virus-like material has been obtained from an animal growth. The material was obtained from warts growing on human skin.

This material, consisting of spherical particles, is not only virus in nature but is responsible for the appearance and growth of the wart, Dr. Joseph L. Melnick of Yale University School of Medicine declared at the conference on viruses and cancer held under the auspices of the New York Academy of Sciences.

The crystals which apparently are the virus cause of warts were obtained in research by Dr. Melnick and Drs. Henry Bunting, William G. Banfield and Maurice J. Strauss, also of Yale School of Medicine.

Science News Letter, December 1, 1951

## METEOROLOGY

## Rain Detection by Radar More Difficult Than Hoped

➤ MEASURING RAINFALL and locating rainstorms with radar is turning out to be more difficult than hopeful weathermen thought.

David Atlas and Harold C. Banks, scientists at the Air Force Cambridge Research Laboratories, Cambridge, Mass., have discovered that three factors distort the picture of rain as seen on a radar's screen, or oscilloscope.

The three factors involved are: how reflective is the rain, how much loss in the reflected beam is there due to intervening storms, and how much loss is there because of the way the beam spreads as it gets farther and farther from the radar. The scientists presented analyses of these factors as they applied to several storms, in the JOURNAL OF METEOROLOGY (Oct.).

Science News Letter, December 1, 1951