

VETERINARY MEDICINE

Scale Tells Which Calf Will Produce Most Milk

► MEASUREMENTS of young calves' milk glands are good indications of their future milk production, tests over a 25-year period by the U.S. Department of Agriculture have shown. (See p. 76.)

The dairyman rates his calves by feeling their internal milk glands through the udder, and estimating the glands' front to rear measurement. Prior to this rating system's development, dairymen could not determine a cow's abilities until she was producing milk when about two years old.

The system is now undergoing tests on 40 herds in 15 states.

The Agriculture Department's dairy husbandmen reported that Jersey calves in the top third of the mammary-gland scale produced 20% more milk and butterfat when they grew up than those scoring in the bottom third.

Dairymen using the grading system will have to be sure that retardation of mammary-gland growth is not caused by sickness or other remediable conditions. When the calf is cured, her development may come back to normal.

Each year, 6,000,000 cows must be replaced in U.S. herds. Dairy husbandmen estimate that one-third of the replacements are unprofitable producers. The new tests may make cattle replacement more efficient.

Mammary-gland development begins when a calf is about 30 days old, long before puberty.

Science News Letter, July 30, 1955

PHYSICS

Elements of Universe Five Billion Years Old

► ALL ELEMENTS of the universe were formed about five billion years ago. Based on analysis of meteorites, this age estimate agrees with those made by other means.

Dr. G. J. Wasserburg of the University of Chicago's Institute of Nuclear Studies and Dr. R. J. Hayden of Argonne National Laboratory reported the lower limit of five billion years in *Nature* (July 16).

To estimate elements' age, they measured the amount of radioactive argon 40 present in the Beardsley meteorite.

Earth and the meteorites may have been formed at the same time, they suggested. If this is true, the two scientists pointed out, then all the radioactive elements with half-lives (the time required for half the radioactivity to disappear) considerably shorter than 400,000,000 years would have decayed in the time between the formation of the elements and the earth's appearance. These radioactive elements could not, therefore, contribute to the earth's heating in its early stages.

Drs. Wasserburg and Hayden also examined the Beardsley meteorite for presence of xenon 129 produced by the radioactive decay of iodine 129.

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ANCIENT TUB—This ancient remnant in a farmyard in Sicily's interior, now a family washtub, led Princeton University archaeologists to discover the site of a nameless, 2,500-year-old Greek town. Sometime between the fifth and third centuries B.C., the stone was a sarcophagus.

ARCHAEOLOGY

Greek Town in Sicily

► ARCHAEOLOGIST Erik Sjoqvist of Princeton University discovered remains of a large 80-acre town occupied by Greek colonists from about 600 to 200 years before the birth of Christ.

Clues leading to the discovery were a farmer's wife doing family washing in a "tub" that had once been a Greek stone coffin, and a farmyard wall which its Sicilian farmer owner had braced with a column from an ancient Greek temple.

Prof. Sjoqvist is in Italy directing excavation of the unnamed town, which lies about 125 miles northwest and inland from the coastal city of Syracuse. Because the town was an inland outpost in non-Greek territory, it offers, Prof. Sjoqvist said, "unusual opportunities for studying the interactions between Greek civilization and the indigenous Sicilian culture."

Maps of the site have been made and aerial photographs are being taken. The town was surrounded by a fortification wall, sections of which are still visible above ground. The town's graveyards, situated outside the walls, can also be localized and are at least partially intact.

Digging is proceeding with extreme care. The earth is being carefully sifted and removed in baskets. In some cases, digging is done with tools the size of dentist's instruments.

"Excavations," Prof. Sjoqvist explained, "have actually been the principal means of

reconstructing and reinterpreting the past. Without excavations, archaeology and scholarship in the art, history and language of antiquity will become unproductive, stereotyped and superficial."

Exploration of the ancient town is expected to continue for the next five years. Sharing the expedition's leadership with Prof. Sjoqvist will be Prof. Richard Stillwell, also of Princeton University. They will be assisted by Princeton graduate students and approximately 80 Italian technicians and workmen.

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NUTRITION

Child May Refuse Food Because of Reputation

► IF JUNIOR refuses to eat squash, it may be because he has "a reputation as a squash hater to live up to."

Parents can avoid this situation with regard to squash or any other food by giving children some freedom of choice and not forcing them to eat disliked foods. Sometimes the dislike is temporary and will disappear if parents do not make it an issue.

This advice comes from a government publication, "Nutrition and Healthy Growth." (See p. 76.)

Science News Letter, July 30, 1955