

BIOLOGY

Beef Cattle for Year-Round Use in Hot Areas Sought

► THE BEST breed of beef cattle for year-round use in hot areas is being sought through tests at the University of California's Imperial Valley Field Station at El Centro. It may be necessary to develop a new strain of cattle.

Collecting data on established breeds is the initial phase of the project. A small herd of Brown Swiss, a type known to stand heat reasonably well, is now under test for adaptability to the region.

Milk records are being taken on part of the herd to compare production with that made under favorable climatic conditions. Other young cows in the herd are being used as foster mothers for raising veal calves.

"If the milk production proves sufficient to justify a calf-raising program, the income from one animal may be greatly increased," said Prof. Harold Guilbert, in charge of the investigation. "It may be possible to rear 6 to 10 calves to veal stage on a single mother."

Year round production of beef cattle is relatively new in the Imperial Valley. Large operators generally bring their cattle into the Valley during the fall and market them in the spring while the climate is still favorable. With the rapid expansion of irrigated pastures—particularly on marginal land—a few of the smaller producers have been maintaining herds throughout the year and doing some breeding.

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PUBLIC HEALTH

Two-Point Program For Fighting Colds

► AS THE season for colds opens, you might consider a two-point personal program for handling these annoying and sometimes dangerous afflictions.

Point One: Take care of yourself and your cold. If the cold is really severe, particularly if you have fever with it, better see your physician. The illness may be something more serious than a cold. You may be developing pneumonia. This disease is not the menace it once was, thanks to sulfa drugs, penicillin and other antibiotics. But it is always serious, and the sooner treatment is started, the better.

Rest is still the best treatment doctors can advise for a cold, gripe, 'flu or similar ailment. There are various drugs, such as nose drops and sprays, cough medicines, and the much-advertised anti-histamines, some of which may make you more comfortable while you have a cold. If you are going to take any of these, by all means consult your physician first. Let him tell you what to take and how much. The remedy that is safe and helpful for one person may not be for another. Your doctor is the best person to tell you what is good for you.

Point Two in your personal cold program: Keep your cold to yourself. As you know, colds come from a virus which is breathed, sneezed, and coughed into the air by the cold victim. If you can avoid giving your cold to someone else, you will not only be doing the other fellow a good deed. You may even be saving yourself another cold by interrupting the chain of infection that travels from one person to another and sooner or later back to you.

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PSYCHOLOGY

Change Self View to Meet Opinion of Others

► YOU DO try to see yourself as others see you. Research at Emory University in Atlanta, Ga., indicates that people tend to adjust their own pictures of themselves to fit the opinions of others.

Graduate student James Patterson Daniel first asked his subjects to "rate" themselves as to whether they were "secure," "neutral," or "insecure."

After rating themselves the students took a test designed to show objectively whether they were "secure," "neutral," or "insecure."

Then Mr. Daniel returned the papers some days later, explaining to those who had rated themselves as "insecure" that the test showed them to be as secure as the average. He asked them to rate themselves a second time, and take another test. Those who had thought themselves "neutral" or "secure" were told they were mistaken.

On the second self ratings about half of the "secure" obligingly shifted their opinions of themselves; two-thirds of the "neutral" changed; and nearly all of the "insecure." However, the changes in scores on the objective test were negligible, showing them to be unchanged in spite of their opinions of themselves.

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INVENTION

Aluminum on Iron Forms Flake-Resistant Coating

► MOLTEN ALUMINUM applied by the hot-dip process to objects of iron will form a coating highly resistant to flaking or peeling by a discovery that brought Daniel O. Gittings, Pittsburgh, Pa., patent 2,565,768. Rights are assigned to the United States Steel Company.

His discovery is that a high-quality aluminum coating will result if a very small amount of beryllium is added to the aluminum coating bath. The amount of beryllium may vary from less than one-tenth of one percent up to two percent. In the finished article there is a thin, relatively soft beryllium-containing iron-aluminum alloy layer between the iron object and the outer aluminum coat that prevents the coating from cracking even under severe bending tests.

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IN SCIENCE

ASTRONOMY

Radio Stars Constant—In Heavens, That Is

► THE STARS visible to the eye are in many cases not constant but variable, but the radio stars are remarkably constant.

These radio stars are actual bodies in the heavens that emit radio waves which create noise in very sensitive radio receivers.

One of the great discoveries of recent years has been these radio stars, of which over a hundred are known, most of them at points in the heavens from which no visible or photographic light comes.

At the University of Cambridge's Cavendish Laboratory, Drs. M. Ryle and B. Elsmore have followed radio stars for long periods of time, receiving their output of 3.7 meters wavelength with special aerials.

Over 18 months of observation the variation of signal intensity from these stars was not greater than 10% and for the most intense ones probably was less than 5%. This means that the radio stars do not vary by more than a tenth magnitude, in terms the astronomer uses, with any period shorter than a thousand days.

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GENERAL SCIENCE

Alcoholics Anonymous Gets 1951 Lasker Award

► ALCOHOLICS ANONYMOUS, which in 16 years of existence has brought recovery to 120,000 chronic drinkers, will receive one of the 1951 Lasker Awards at the meeting of the American Public Health Association in San Francisco on Oct. 30.

The Health Insurance Plan of Greater New York will receive the other of the two awards made to institutional groups.

Individual awards of \$1,000 and a gold statuette of the Winged Victory of Samothrace will be given to the following: Dr. Florence R. Sabin of Denver for her leadership in rejuvenating her state's public health services; Dr. Elise L'Esperance of New York and Dr. Catherine MacFarlane of Philadelphia, a joint award for their role in establishing cancer detection clinics; Dr. Karl F. Meyer of San Francisco, bacteriologist whose work has made possible control of various kinds of food poisoning and the development of modern food technology; and Dr. William G. Lennox of Boston and Dr. Frederic A. Gibbs of Chicago, jointly, for rescuing hosts of epilepsy sufferers from their misery.

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E FIELDS

TECHNOLOGY

Silicone Resins Make Masonry Water-Repellent

➤ SILICONE RESINS are the basis for a high-quality water repellent surface treatment for exterior and above-ground brick and masonry. A new silicone resin developed by Dow Corning Corporation in Midland, Mich., is particularly suitable because it develops a very high order of water repellency, and does so within 24 hours of application.

Finishes made with this resin are easy to apply with brush or spray. They have little effect on the color or texture of a wide variety of masonry surfaces. They penetrate deeply into the surface, combining chemically to some extent with the masonry itself.

They do not plug pores but form a lining within them that repels water trying to enter. The resin is highly resistant to oxidation and to ultraviolet light. The service life of finishes using the silicone resins is not known but laboratory tests indicate that it may be about ten years.

Dow Corning does not manufacture water-repellents for masonry. It makes the silicone resins which manufacturers of water-repellents can use. Finishes made with these resins are not intended to cure leaks in masonry due to faulty construction or cracking. Holes and cracks opened by settling or aging must be filled with mortar before the silicone resin finish is applied.

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MEDICINE

Swab Throat to Block Polio When Tonsils Cut

➤ SOME CASES of poliomyelitis might be prevented by swabbing the throat with two percent tincture of iodine, it appears from experiments by scientists at Stanford University School of Medicine in San Francisco.

The method would only be useful in cases of persons needing to have their tonsils removed at a time when they might have been exposed to the polio virus and have the virus in their throats. The swabbing with iodine would be done by the surgeon just before removal of the tonsils.

Another if: The antiseptic would be effective only if it worked as well in humans as in the six monkeys in the Stanford studies.

This suggestion of a polio preventive under certain conditions turned up in studies showing that the chances of the serious bulbar type of polio developing are much greater when tonsils have been re-

moved within a month or less of onset of poliomyelitis. Statistical studies of human cases have indicated this, but the Stanford studies are the first monkey studies showing that this is the case.

The stress of the operation itself, the monkey experiments also showed, may make the attack of polio more severe in the rare cases where the operation is performed after the disease has already started.

These experiments may strengthen advice doctors have been giving for several years to avoid tonsil operations during the polio season. They are reported by Drs. Harold K. Faber, Robert C. McNaught, Rosalie J. Silverberg and Luther Dong in the PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE (July).

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PUBLIC HEALTH

Consider Safety in Clothes for Children

➤ PRICE, STYLISHNESS and wearing quality are items generally considered by most mothers when outfitting their children.

They should think also of safety in connection with a child's clothes, urges Clarice Scott, clothing specialist of the U. S. Department of Agriculture. And the fit of a child's clothes is important, too.

Clothes that fit, Miss Scott says, look better, wear longer, are safer and more comfortable than those too big or too small.

An oversize playsuit or snowsuit, for example, is awkward and uncomfortable, may catch on anything in the way and jerk a running child to a dangerous stop. Straps that continually slip off the shoulders may restrict a child's arms just when he needs to make a rapid reach to save a fall. Too long trousers dragging over shoes are stumble hazards.

Check children's shoes often to be sure they fit and are in good repair, Miss Scott urges. "Trip" hazards include shoe straps that come unfastened, missing buckles, untied strings, flapping soles. A double tie makes shoe strings secure. As for the slippery soles of new shoes, especially hazardous to the toddler just learning to walk, rub them with light sandpaper to rough them up for safety.

Play clothes probably need first attention for safety, but even best clothes can be hazardous, Miss Scott says, citing sashes on dresses that easily come untied and drag, and party shoes with buckles on the side that may catch and cause an accident.

The cowboy outfits, so popular with the youngest generation, need safety consideration, too. If they include fuzzy "chaps", be sure the fabric is nonflammable. High-heel hazards often have been pointed out to women, but how about those tall-heeled boots on which many young cowboys are teetering? Such heels are designed for stirrups, not for the lad on foot.

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ENTOMOLOGY

Ladybirds Dine on "Hot" Aphids, Become Radioactive

*"Ladybird, Ladybird, fly away home!
The aphids are 'hot,' so leave them alone."*

➤ THE OLD nursery rhyme might be revised this way as a warning to the bright little beetles that aphids on melons at the University of California's Citrus Experiment Station at Riverside are "hot" with radioactivity.

Some aphid-hungry ladybirds have already gotten into trouble and turned up radioactive after a feast on "hot" aphids.

In tests on control of the citrus area's costly quick decline virus disease, Dr. Robert C. Dickson, assistant entomologist in the station's division of entomology, set out to check on dispersal flights of the virus-carrying melon aphid. His objective is to see if aphid control by insecticides can be used as a check on spread of quick decline.

By feeding radioactive phosphorus to melon plants, he was able to mark colonies of aphids feeding on the plants. They could be identified by a Geiger counter wherever they flew.

Sticky traps were hung around a selected and fenced citrus orchard, and the potted, aphid-covered melon plants were set in the center. Then the experiment struck a snag, said Dr. Dickson. Few radioactive aphids showed up in the traps.

But some ladybirds did. The sputtering Geiger counter told the entomologist what had happened. Aphids and the radioactive phosphorus were inside a flock of hungry ladybirds. The more aphids eaten, the hotter the ladybirds tested.

Ladybird control will precede the next aphid flight check.

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INVENTION

Cut Short Time Needed to Coat Nickel with Mercury

➤ THE VERY long time required in the past to coat nickel with mercury, important in the electrical industry, is cut to a very short time with a method which brought Theodore M. Burkholder, Newton, Mass., patent 2,567,762 with rights assigned to Raytheon Manufacturing Company of the same city.

In the process, the nickel to be coated is immersed first in a solution of one part water and seven parts nitric acid for one to two minutes. After washing, it is first immersed in concentrated hydrochloric acid for up to 30 seconds, then stuck into a bath of mercury which has dilute hydrochloric acid floating on top. It is agitated in the acid for about ten seconds, then dipped into the mercury for another period of the same length. By this process it has acquired a coating of mercury.

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