



**SALT FROM THE SEA**—Natives of Araure, Venezuela, are shown gathering salt from flats that lie below the level of the sea. Sea water is constantly admitted through a system of canals to a depth of about two and one-half feet, at a rate determined by the evaporation. Salt in the water settles and crystallizes in layers that workers break with their feet, then toss by hand into barges.

## AERONAUTICS

## Sieve Cuts Jet Noise

► A SIEVE-LIKE silencer for jet engines, among the noisiest machines that man has yet devised, may make operation of jet transports from domestic fields more desirable.

The silencer, which can be turned on or off at will by the pilot, changes the low roar of the exhaust to a high pitched hiss. This seems less noisy because much of the sound is transferred beyond the range of human hearing. Pitch is raised by forcing the gases through many tiny holes instead of one large opening.

When the muffler is working, the engine delivers less thrust, but the device is designed so it can be turned on while landing, taking off and idling, and shut off in high flight where noise is less objectionable.

For cruising, the silencer is stowed like sections of a collapsible drinking cup around the tailcone with the nozzle open. For take-off and climb, the device can be extended rearward, exposing the sieve holes.

Penalties in weight, loss of take-off thrust and added gadgetry are involved, but some compromise may reduce the ear-splitting roar of present-day jets.

The experiments on the jet exhaust silencer were reported by John Tyler and

George Towle of Pratt & Whitney Aircraft Division of United Aircraft Corporation, East Hartford, Conn.

### Screen Muffles Roar

► THE EAR-SPLITTING roar, most of which is directed rearward, has also been reduced by a screen placed behind the tail. The thrust loss is prohibitively large for flight, but the screen could be used in air-field operations.

Noise reduction from the screen, Edmund C. Callaghan and Willard D. Coles of the Lewis Flight Propulsion Laboratory reported, largely results from reduced speed of the jet stream.

Screens close to the jet exit lowered the sound level as much as 7.5 decibels, they found, and at optimum position reached a 12 to 14 decibel reduction but noise levels in the forward direction increased.

When placed farther than 12 inches downstream from a 5,000-pound static-thrust jet, some of the test screens produced strong resonant noises themselves, vibrating so vigorously that the finer screens were seriously damaged.

At proper distance, the fine mesh screens were much more effective mufflers than the coarser ones.

The scientists' report, published by the National Advisory Committee for Aeronautics, said the method might be improved by using properly shaped airfoils instead of wires in the screens.

A major advantage of the screen muffler is that it would probably be portable, small and lightweight, the researchers said.

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## NUTRITION

## Army, Navy Men Drink More Pints—of Milk

► SERVICEMEN consumed 50,000,000 extra pints of milk during the first five months of a program to increase the use of dairy foods by the Armed Forces.

In March, milk-drinking increased 40% over the same month of last year. Extra amounts of fluid milk are supplied to troop and hospital messes. The U. S. Department of Agriculture pays for a large percentage of this additional milk.

The Agriculture Department would have to buy up the milk as surplus if the Services did not drink it, so it pays the equivalent of the cost of buying, handling and storing an equal amount of surplus milk.

Science News Letter, July 16, 1955

## ENTOMOLOGY

## Insects Put Bite On U.S. Corn Crop

► AN UNDESIRABLE alien, the European corn borer, is putting the bite on corn crops across the nation.

The Department of Agriculture's report on insect pest conditions showed that the European corn borer is out in force from the east coast to South Dakota. Infestation in southwestern counties in Kentucky is highest in five years, with 94% to 100% of corn planted about the first of May being attacked by the borer.

In South Dakota, adult moths are reaching the peak of egg-laying in areas where corn is at its critical stage. Heavy infestation is expected. Damage to early corn is reported from Delaware.

The destructive European corn borer, *Pyrausta nubilalis*, was discovered in the United States in 1917 near Boston. It was brought into the country from Italy or Hungary in a shipment of broomcorn imported for use in a New Bedford broom factory.

Since then, the insect pest has spread over 37 states east of the Rockies. Losses it caused to field corn in 1949 alone were estimated at 314,000,000 bushels.

Grasshopper damage is increasing in Missouri and continues to be a major problem in New Mexico. An outbreak over 30,000 acres of crop and rangelands is reported from Utah.

Among orchard pests, first-brood codling moth activity is declining in most areas, while apple maggot flies and the European red mite are building up.

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