

POPULATION

Arab Countries Crowded

Overpopulation is the prime problem at tables in the Arab countries, U. N. investigators report. Pressure aggravated by refugees.

► FAMILIES NUMBERING 120,000 crowded onto land where there is food for the stomachs of only 68,000. That is the picture of the jostling boarders at Arab country tables painted by Drs. Charles Issawi and Carlos Dabezies, of the U.N. Department of Economic Affairs, for the Milbank Memorial Fund.

It is the situation in Lebanon, where hungry mouths outnumber available food most seriously of all the Arab countries.

But the population pressure throughout the Arab countries is aggravated by a horde of about 750,000 Arabs who have taken refuge from the recent fighting in Palestine. Although the greatest proportion of these, 39%, have sought sanctuary in Northern Palestine, the burden has been greater for the Gaza Strip where the inrush has resulted in a 240% addition to the original population.

The situation in Syria at first glance looks better. The cultivated area there is just about adequate to support the present farming population and refugees have added only about two percent to the population. But the very uneven distribution of landed property and the high level of rents paid to absentee landlords reduces by about two-fifths the amount of income left in the hands of the farmers.

Lebanese farmers can eke out their means of support by income from the tourist trade, work in non-agricultural activities and remittances from abroad. Syrian farmers do not have this opportunity. The result is a very low level of living.

If all cultivable lands were brought into cultivation and all irrigable lands were provided with the essential water, Lebanon would still be unable to support all the present rural population. In Syria, such extension of cultivated lands would make it possible to absorb a population about twice as large as the present combined farming and nomadic populations of the country.

In Jordan, enough land is now worked to just about maintain the present farming population. With the extension of irrigation in the Jordan valley, all the nomadic and semi-nomadic people of that country could be fed, including the 17% addition to the population from refugees.

Prospects for Iraq are very good, the survey by these United Nations experts indicates. Its fertile soil and abundant water, they found, if properly used, can support a population far larger than the present 5,000,000. The irrigation and flood control

works required for this purpose are not very expensive, relative to the areas to be brought under cultivation, and could easily be financed out of the country's rapidly increasing oil royalties.

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PHYSICS

Tornadoes Predicted by Static in Radio Reception

► TORNADOES MAY be predicted and tracked because of the different kind of static they produce in a radio receiver.

This is the conclusion of Dr. Herbert L. Jones, professor of electrical engineering at Oklahoma A. and M. College, Stillwater. He attached a radio receiver to an oscilloscope—similar to a television receiving tube—and a camera to record the static received from both ordinary thunderstorms and from tornadoes.

"The available energy in an incipient tornado type of cumulus cloud," he said,



HYDROCARBON RESEARCH — *By use of a platinum resistance thermometer and an extremely accurate resistance bridge, an accuracy within two one-thousandths of a degree Centigrade in freezing point comparisons of hydrocarbons is obtained at the American Petroleum Institute Laboratories in Pittsburgh.*

"must be considerably greater than that for an ordinary type of cumulus cloud from which a thunderstorm develops."

What he received and recorded in the way of static from two tornadoes and several thunderstorms seems to bear this out. Recorded on the film were distinct types of patterns of static, made visible on the oscilloscope screen, for the two types of storms.

The equipment picked up occasional high-frequency static, typical of tornadoes, several hours before one tornado was seen 60 miles from the recording equipment. By the time the tornado was seen, the distinctive static was being picked up almost continuously, Dr. Jones said.

He reported his experiments in the BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY (Dec. 1951).

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PHYSICS

Light Travels Slightly Faster Than Believed Decade Ago

► LIGHT TRAVELS 8 to 12 miles per second faster than was indicated by the accepted measurements of about a decade ago.

This has been indicated anew by a room-sized apparatus measuring the velocity of electromagnetic radiation in the form of microwaves by interferometry. Dr. K. D. Froome of the Britain's National Physical Laboratory at Teddington made the new determinations which are in accord with other recent new measurements.

It is still possible to consider the speed of light to be 186,000 miles per second in round numbers, however.

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On This Week's Cover

► BUTTERFLIES ARE among the world's greatest explorers and one of the most famous of the explorers is the painted lady, shown on the cover of this week's SCIENCE NEWS LETTER.

This butterfly, frequently found in the United States, can be recognized by its brownish-black and orange color with white dots on its fore wings and blue ones on its hind wings. Blended shades of color gave it the name of painted lady.

The painted lady has spread around the world. It occurs in nearly all environments, so long as they are open and brightly lighted, even on Alpine summits. It has been seen as far north as Hudson Bay. It is a frequent visitor to Iceland, which has no native butterflies. The painted lady is abundant in Africa from where it frequently migrates in great numbers across the Mediterranean Sea into Europe reaching England and the Scandinavian countries.

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