

AGRICULTURE

North Africa Over-Peopled

French who seek to reclaim land with science face problems familiar elsewhere. Due to increased population, people are farming slopes, causing erosion.

► FRENCH agricultural administrators in North Africa are up against some tough problems, states Dr. Walter C. Lowdermilk, Berkeley, Calif., who spent some months in that region as consultant for the French colonial government, following his recent retirement from the U. S. Soil Conservation Service.

Fundamentally, the troubles of the French there have the same starting point as those of agricultural planners elsewhere in the world: too many people for the land to support, at least by present land-use methods. The native population has been increasing fairly rapidly since the French suppressed intertribal warfare. Lacking new land at lower altitudes, the people are farming higher and higher up the mountain slopes. The result, there as elsewhere, has been ruinous erosion, plus a good deal of choking of irrigation works with silt.

Grazing practices of the people, in Morocco particularly, have aggravated the situation. Sheep, goats and camels are the principal livestock animals, and all three are most destructive feeders. It is a byword among the French that "What the sheep leave the goats eat; what the goats leave the camels eat—and the camels don't leave anything." The result again is deadly erosion. And since the people are tradition-bound Moslems it is practically impossible to persuade them to anything new.

In Morocco, Dr. Lowdermilk stated, there is a good deal of potentially productive land at lower levels. It could be reclaimed for farming if irrigation water could be got onto it. There is a good water supply in the mountains. It might seem a simple matter to build dams and dig canals from the mountains to the lowlands.

However, there is an intermediate zone flanking the rock core of the mountains through which waters flow, where the native rock and its soil, an uplifted ancient sea bottom, still has a good deal of salt in it. River waters pick up some of this salt as it flows through. Evaporation in the lowlands might produce enough concentration of the salt to ruin the very soil being reclaimed. This problem is not beyond solving, Dr. Lowdermilk thinks; but solving it would require time—and the population pressure demands an immediate rather than a long-time answer.

In Algeria and Tunis, which have been longer under French occupation, there are more French settlers. The latter have been subjected to some criticism for crowding

the Arabs off their land; but this, Dr. Lowdermilk feels, is not well founded. Largest expansions in French-worked acreage, he states, have been made by draining swamps and bulldozing out big thickets of a scrub palm quite similar to the scrub palmetto of our own Southeast. The Arabs had neither the machinery nor the capital for these two types of reclamation, and the French had. So the French developed part of the new land, and demonstrate how the larger part of the land can be reclaimed for the native people, when they will accept modern agricultural methods.

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AERONAUTICS

Record Flight Conditions With New Airborne Device

► A NEW automatic instrument for installation in airplanes, which will make and keep a continuous record of flight conditions encountered, was revealed by General

Electric. Items recorded include air roughness, altitude, and the operation of the automatic pilot and of the de-icing equipment.

The actual record is made by a stylus which traces through a thin coating on a slowly moving strip of paper, leaving a black trace. These recorders will provide commercial airlines with increased information on their flight operations, and make possible greater operational control. A commercial installation will be made soon in a transport of Capital Airlines to determine its practical value in scheduled flying.

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ENGINEERING

Windchill To Be Studied In New Army Wind Tunnel

► HEAT LOSS from objects subjected to winds of various speeds is under study at the Army's Engineer Research Laboratories, Fort Belvoir, Va., and for the purpose a unique wind tunnel has been installed. Accurately controlled air speeds from one to 100 miles an hour can be obtained.

Designed for use in two already existing temperature test chambers, the new tunnel may be operated at atmospheric temperature ranging from 70 degrees below zero Fahrenheit to 150 degrees above. In addition, it can be used in humidity ranges



FLIGHT RECORDER—The device automatically records air roughness, altitude, and operation of automatic pilot and de-icing equipment on aircraft. It is being checked here in a B-29 Flying Laboratory at General Electric Flight Test Center near Schenectady, N. Y.