

CONSERVATION

Fight Drought Damages

► **DRASTIC DAMAGES** resulting from the drought currently hitting the northern Great Plains can be greatly reduced by long-range conservation measures.

Prolonged dry periods, dust storms, and hordes of hungry grasshoppers have been part of the Great Plains even before man set foot on the sandy soil, but improper use of the land has aggravated the problems. Such conservation programs as planting grass to anchor down sandy soil and better management of cultivated land are needed to fight the damaging effects of droughts.

Millions of acres of sandy soil unsuitable for year-to-year cultivation are currently being used by Great Plains farmers for planting wheat. During long dry periods the fields become "dust bowls" with deep erosion scars and dust storms dotting the area.

Soil conservationists have already made a big step forward in this direction when the Great Plains Soil Conservation Program was created in 1956. U.S. Department of Agriculture soil conservation experts work closely with Great Plains farmers in planning the proper use of each farm's acreage. Part of the cost is shared by the Government.

"More than 17,000,000 acres of farmland now come under this long-range plan," Cyril Luker, director of the program, told SCIENCE SERVICE. "Although you cannot blame the droughts on the people, its effects can be lessened by proper land management," the soil conservationist said.

No immediate relief is expected from the drought now embracing much of the Northern Great Plains and parts of Canada. Weather Bureau records dating back from last September show unusually high temperatures and little precipitation in a belt covering the Northern Great Plains states and parts of Wyoming, Montana and Minnesota.

"Some areas have witnessed the driest spring since the turn of the century," Wayne Palmer, Weather Bureau meteorologist, said. The average June temperature in one hard-hit area was the highest recorded in the last 70 years. June is considered about the most important month during the wheat growing season.

If the present trend continues, the Northern Great Plains may become another "Dust Bowl of the Thirties."

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PHARMACOLOGY

AMA Report on Drugs

► **TIMED FOR** distribution to doctors while Senate drug hearings make headlines, the Journal of the American Medical Association published a special report on therapeutic drugs, the first in an annual series, 177:14, 1961.

The question of making drugs available by nonproprietary names is discussed by Dr. Lloyd C. Miller of New York, director of revision, U.S. Pharmacopeia. He urged that the generic, or nonproprietary names be "as short and pronounceable as possible."

The use of generic names for drugs, as required in a bill introduced by Sen. Estes Kefauver (D.-Tenn.), was argued at a two-day Senate hearing on the bill. Proponents say that if doctors used generic names when prescribing drugs, the cost would be considerably reduced. Confusion would also be reduced.

Dr. Miller states that many drugs are known by four and often more than half a dozen different names, but that new laws are not needed to require use of only one name for a specific drug.

He urges the medical profession to "co-operate in the effort" to reduce confusion by using accepted nonproprietary names. No drug can be called by an official nonproprietary name until the agreed-upon name is published in U.S. Pharmacopeia.

Dr. Miller uses demethylchlortetracycline hydrochloride which is 12 syllables long, to illustrate the difficulty of shortening names. The last four syllables in the compound's name convey "indispensable information"

on the general nature of the drug, which is an antibiotic.

The AMA's Council on Drugs lists in the special report only 51 drugs evaluated by it during 1960. One of the leading drugs evaluated was griseofulvin, described as a "major breakthrough" in the treatment of superficial fungus infections. Caution in the use of this and other drugs was sounded:

"Although serious untoward reactions are infrequent," the report states, "griseofulvin is not innocuous; skin eruptions, leukopenia, allergic reaction, and headache are among the reported side effects. Thus, the drug should not be used indiscriminately, but should be reserved for use" only for certain conditions.

The AMA Council on Drugs now acts as a clearing-house for nonproprietary names. Proposals are received by the Council, and are checked against existing names. The Kefauver bill would leave the choice of drug names and their advertising to the Food and Drug Administration.

Dr. Miller suggests two plans that would improve the present system of listing generic names. First, he called for reaching an agreement within the pharmaceutical industry to use a system of code prefixes in identifying compounds during the period of laboratory and clinical trial.

The second change would call for similar industry agreement to select nonproprietary names, in cooperation with the Council on Drugs, for all new drugs before their introduction on the market, preferably at the

time new drug applications are filed with the Food and Drug Administration.

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TECHNOLOGY

Turbine Vanes Withstand Heat Oxidation

See Front Cover

► **TURBINE VANES** for J-75 jet engines are made from special materials that have been "chromallized," a patented method of diffusing chromium and other elements into steels, super-alloys and refractory metals to impart far greater resistance to oxidation at high operating temperatures. The vanes, shown on the cover of this week's SCIENCE NEWS LETTER, are being readied for shipment from the Chromalloy Corporation plant in West Nyack, N. Y.

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ENGINEERING

Fertilizer Blasts Salt, Saves Money

► **A NEW** blasting technique, utilizing ammonium nitrate mixed with fuel oil, is saving one company alone \$250,000 per year.

The use of this common fertilizer in the blasting mixture was reported by William C. Bleimeister and John L. Ryon Jr. of the International Salt Company in Clarks Summit, Pa.

The company mines at Detroit, Mich., Avery Island, La., and Retsof, N. Y., are now using this new technique and its use is planned in a new mine. The ammonium nitrate-fuel oil mixture is, pound for pound, as effective as dynamite.

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OCEANOGRAPHY

Landlocked Scientists Could Explore Oceans

► **LANDLOCKED** scientists scattered in inland colleges and universities throughout the United States should be tapped to help explore the world's oceans.

A wealth of scientific talent existing in inland research institutions could be used to support actual oceanographic work on the high seas, Dr. Arthur E. Maxwell, head of the geophysics branch of the Office of Naval Research, Washington, D. C., reported. With the increasing interest in oceanography, more capable scientists are needed to bolster the relatively small ranks of oceanographers now probing the oceans.

Extremely valuable theoretical and experimental work can be conducted inland unhampered by such headaches attached to the operation of large fleets of research vessels. Dr. Maxwell noted that scientists studying wave motion on inland lakes have a problem similar to that on the oceans.

Some of these landlocked scientists could also actually participate in ocean-going expeditions of such widely-known coastal oceanographic institutions as Scripps on the Pacific and Woods Hole on the Atlantic.

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