

## AGRICULTURE

**Winter Wheat in Good Shape, Crop Summary Shows**

**N**EXT year's bread, now in the form of winter wheat in the fields, seems to have escaped the hazards of winter and flood with less harm than had been anticipated. This is indicated by a summary of crop weather compiled by the U. S. Weather Bureau.

The winter wheat fields of the Ohio Basin show most of the wheat alive and reviving, as the water recedes. Such harm as was done was caused principally by erosion. In the upper Mississippi Valley grain region, where the fields have for weeks been sealed over with ice, there has been far less loss than observers have been fearing. In eastern Nebraska, melting snow fed the crop. Snow cover still persists in the grain fields of the Pacific Northwest.

Only in the dustbowl area of the nearer Southwest is the situation really unfavorable, as the gray dragon rises to ride the late winter winds.

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## PHYSIOLOGY-ECOLOGY

**Hayfever Victims Paying Price of Civilization**

**T**HOSE unfortunate persons who must sneeze and snuffle their way through every summer and fall, unless medical treatment or vacation resorts can give them relief from hayfever, are paying the price of civilization.

This view of a miserable ailment was recently presented by R. P. Wodehouse, scientific director of the Arlington Chemical Company, to members of the American Institute of New York City.

An enormous increase in ragweed and certain other hayfever-causing plants is a by-product of our modern civilization which has disturbed the soil and its natural balance of vegetation, Dr. Wodehouse pointed out. Ragweed plants were scarce before civilization came along to plow up large sections of land, dig ditches for sewers, level off stretches for roads and otherwise disturb the vegetation. Other plants cause hayfever, but ragweed causes more than half the cases of this ailment which afflicts three out of every hundred Americans.

Hayfever belongs in the group of diseases called allergies. An allergy is an extreme sensitiveness to some particular substance, such as pollen, which is not generally irritating.

The hayfever patient and others who suffer from allergies, however, are not invariably abnormal, Dr. Wodehouse suggested. It is their environment which is abnormal. Dr. Wodehouse said that allergy is seldom evident with respect to those things old in the experience of the human race.

Pine trees, he pointed out, produce far greater quantities of pollen than ragweed plants, but no one seems to get hayfever from pine pollen. In fact, some of the hayfever resorts are in the midst of pine forests.

"The human race," he said, "must certainly have been cradled in an atmosphere of pine pollen and has ever since been subjected to annual exposure to it. We are all immune to pine pollen and to a certain extent to the pollen of most of our deciduous forest trees."

Ragweeds cannot grow in competition with other plants, but when the ground is disturbed for any reason, the ragweed is the first to take possession of the newly denuded ground. Civilization has made a ragweed paradise of this continent, Dr. Wodehouse maintains, and the "end is not yet in sight for the ragweeds are still on the increase as more and more areas are laid open to them."

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## ORNITHOLOGY

**Stork Family Group In Field Museum**

**A** STORK family group, consisting of Father Stork, Mother Stork, and three babies (also stork—not human) will be placed on permanent display soon, at the Field Museum of Natural History. The birds are a present from the Polish-American Chamber of Commerce in Warsaw. The finished display group will be shown in its nest of sticks, against a background depicting a typical Polish village.

Storks are of considerable interest to naturalists because they are the only really large birds that have given up their former mode of dwelling in the wild to take up residence on the roofs of human habitations. It is from this circumstance, possibly, that the myth of their activities in bringing babies has arisen. Rudyerd Boulton, curator of birds at the Museum, states that the tribes of Africa, where the birds spend the winter, have no such story in their folklore. They are too sophisticated for it.

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**IN SCIENCE**

## AGRICULTURE

**Farmers in Seven States Paid \$4,500,000 for Sand**

**F**ARMERS of seven southeastern states paid \$4,488,000 for the sand and other inert material in the fertilizer they used in 1934, declares Dr. A. L. Mehring of the U.S. Bureau of Chemistry and Soils. Dr. Mehring made a study of the composition of fertilizer used in Virginia, the Carolinas, Georgia, Florida, Alabama, and Mississippi. He states:

"The filler in a ton of average mixed fertilizer costs \$2.21 delivered to the consumer in the Southern states in the 1934 season. This means that the farmers from Virginia to Mississippi, inclusive, paid \$5,482,000 in one year for filler. That part of the filler that consisted of ground limestone rock, limestone and dolomite would have cost \$894,000 if bought separately on the same delivered basis. This leaves \$4,588,000 as the total paid for sand and similar inert material."

It is pointed out that farmers pay the same bagging, handling and transportation charges for inert filler as for materials that carry valuable nutrients.

Although concentration of available plant foods in mixed fertilizers has increased consistently since the beginning of the fertilizer industry, the concentration of the materials of which the mixed fertilizers are made has increased at an even more rapid rate, it is explained; hence the great quantity of filler now used.

Dr. Mehring states that "economic conditions and the trend of developments in the industries supplying fertilizer materials indicate that, unless steps are taken to raise the average grade of fertilizers being sold, even larger amounts of filler will have to be added."

"It would seem to be the duty of all agricultural workers," he continues, "to make an effort to bring to the attention of the planters and farmers in their districts the advantages that can be obtained by using higher analysis fertilizers."

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# E FIELDS

## SAFETY ENGINEERING

## Fastest Drivers Are Those Who Have Most Accidents

**I**N CONNECTICUT, at least, the fastest motor vehicle drivers have more accidents, according to study of the Committee on Transportation of Yale University.

During a six-months' study in which the license number and the speed of individual vehicles were recorded the investigators were able to establish two groups of drivers; moderate and fast.

The fast drivers were those who traveled over 50 miles an hour and the moderate group ranged from 35 to 45 miles an hour. A checkup of the accident records of these drivers was then made through records of the state.

The investigators, C. J. Tilden, D. L. Morris, T. M. C. Martin and E. W. Russell, found that without making a distinction as to severity of accidents or responsibility for them, it appeared that 30 per cent more of the high speed drivers had accident records than those of the moderate speed group. Moreover, it was found that the high speed drivers who had accidents had more of them, so that their total exceeded that of the moderate groups by 45 per cent.

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## MINERALOGY

## Little Known Mineral To Find Wide Use

**F**EW PEOPLE ever have heard of the little-known, little-used lithium mineral called spodumene, but through a process which U.S. Bureau of Mines experts described the mineral may soon help cool your home, improve the dishes from which you eat, better the production of lithia water you may drink, help start your motor car and make a special extra tough glass.

At the annual meeting of the American Institute of Mining and Metallurgical Engineers, Oliver C. Ralston and Foster Fraas, of the Bureau's scientific staff, told of the simple method by which spodumene can be separated from other minerals with which it is associated in nature. Lack of use of the

mineral has, in the past, been due to the absence of such a separating process.

Heating the mineral in a lime kiln, it has been found, reduces the spodumene to a chalky white mass which can be crumbled in the fingers while the remaining minerals in the ore remain strong.

The fine dust resulting from this treatment is about 80 to 90 per cent pure, and from many localities this product will be of acceptable purity. It is much better adapted to use in making lithium chloride than the original hard, dense spodumene. It is also ready to be used in a glass batch, unless nature happened to put magnetic iron minerals in the ore, in which case a preliminary removal of iron minerals would be needed. The pottery makers have desired to use spodumene, but it has been unacceptable because of the fact that at the temperature of a kiln it tended to expand and tear pottery to pieces. The beta spodumene formed by the heating and now to be sifted out of the heated ore has already been expanded and does not have this disadvantage. Therefore potters are urged to forget ordinary spodumene and to try beta spodumene.

Spodumene is the most plentiful of the lithium-bearing ores. It looks much like feldspar and behaves like it. Lithium and lithium salts, heretofore extracted from less common and more expensive ores, now promise to have several important new uses. Lithium chloride solutions, for instance, should find greatly increased use in the conditioning and drying of air in the fast-growing air-conditioning industry.

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## OCEANOGRAPHY

## Green Glass Globes May Cross Pacific From Japan

**G**REEN glass globes from two to eighteen inches in diameter are frequently found along the Pacific Coast. Some of them are sold to tourists as curios. They are usually said to be net floats lost by Japanese fishermen on the other side of the ocean, states Prof. Vincent P. Gianella of the University of Nevada, in *Science* (Feb. 12). The fact that their under sides are usually crusted with adhering marine plants and animals suggests that they have been a long time adrift, but nobody seems to know. Prof. Gianella therefore suggests that an effort be made to obtain more definite knowledge of their origin.

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## ARCHAEOLOGY

## Says Mound Builders Were Not Inspired by Floods

**I**NDIAN mounds that dot the flood-swept valleys of the Mississippi basin were not built as high places of refuge from ancient floods.

This is the emphatic verdict of Prof. Warren K. Moorehead, archaeologist, of Phillips Academy, Andover.

Sheer nonsense, is Prof. Moorehead's summing up of news statements reviving this theory. The Indian did not do unnecessary labor, and mound building was slow, hard work.

Emphasizing that Indian mound builders could move easily, Prof. Moorehead said, in a statement to Science Service:

"The greatest group of earth mounds in this country, if not in the world, is called Cahokia. It is on the flood plain of the Mississippi, at East St. Louis, Illinois. I explored there from 1922 to 1924. Engineer Cowen and I discussed the old theory as to the purpose of construction.

"We were each at that time about 55 years old, yet we were able to travel on foot from the largest mound, Monks Mound, to the Collinsville Bluffs in forty minutes.

"From the center of East St. Louis to the Collinsville Bluffs is about five miles. Indians could easily travel that distance in an hour. In fact, the whole village could take down and carry its flimsy dwellings and property to the Collinsville Bluffs inside of two or three hours."

Prof. Moorehead found a similar condition at the famous Indian mound site at Etowah, on a flood plain in Georgia. In an experiment, he was able to travel from the center of the village to the high land, north—a little over a third of a mile—in six or seven minutes.

"The whole village," he concluded, "could be moved from the flood plain to the high land in one or two hours, at the most, three or four hours."

To build such enormous mounds as those at Etowah and Cahokia, Prof. Moorehead has estimated, would require hundreds of Indians for several generations, or several thousand Indians working for a short time.

"Indians, or for that matter, white people could use any kind of elevated land in case of flood," Prof. Moorehead concluded. "But I contend the mounds were not built for such purpose."

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