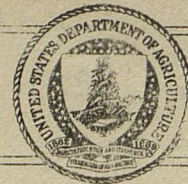


U. S. DEPARTMENT OF AGRICULTURE  
Office of Information  
Press Service



WASHINGTON, D. C.

Release --- Immediate

June 27, 1935.

ROERICH SEARCHES ARID ASIA  
FOR DROUTH RESISTING PLANTS

Botanical Explorers from U. S. Department of Agriculture  
Seek Plants To Hold Soils of Dry Areas in West

From the most desolate parts of Asia may come the plants which will keep the American landscape firmly in place when the next drouth comes along.

More than 1,800 lots of seed from drouth-resistant plants brought back from Turkestan by plant hunters of the U. S. Department of Agriculture, are now growing in the plant reserve stations established last year by the Department. Additional lots of seed have recently arrived from Manchuria and Mongolia, and still other valuable shipments are expected after the expedition now working on the edge of the Gobi Desert has had an opportunity to harvest the seeds which will ripen this fall.

In a recent report to Henry A. Wallace, Secretary of Agriculture, the head of the present Asiatic expedition, Prof. Nicholas Roerich, described some of the consequences of erosion.

"In the completely dead sands of Asia," he wrote, "it was enlightening to unearth the roots of age-old forests. Strangely enough, precisely on these sites one may find excellent dwelling-sites and bits of woven grasses



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"In the dead deserts of Asia one may often hear the murmur of underground streams, which at times give rise to the beliefs in subterranean life. Not seldom, these streams have been driven under stones and pebbles by human hands which have rapaciously destroyed the vegetation."

Despite human exploitation extending over centuries, and despite adverse natural conditions, some vegetation remains in these Asiatic sands, and it is this tenacious vegetation that the explorers from America are after.

"Upon these sand dunes, upon these endless mounds," Prof. Roerich writes, "one still finds remnants of the great forests; there still are found great quantities of feathergrass, and other steppe grasses at once strongly resistant and useful for forage. Crossing the endless desert spaces, I always realize the countless possibilities still preserved in these virgin steppes. I do not even venture to speak here of the vast store of medical plants scattered throughout these regions, and still utilized so little by men, since science has only now begun to pay attention to these treasures which have been known for centuries but which have been forgotten in the bustle of life."

In years past, introduction of soybeans, various lespedezas, Chinese elm, and crested wheat grass have been of untold value to American agriculture. The hope is that Asia will once more provide the plants which may, after the necessary adaptation, resist drouth in the American Great Plains and help control erosion.



The expedition headed by Professor Roerich was sent to the areas bordering the Gobi Desert because of the great pasture areas which apparently withstand the terrific heat of summer and cold of winter, and scanty rainfall. Through centuries of natural selection strains of grasses and legumes which are able to cope with these conditions have developed and increased. Also, the origin of many plants has been traced to the old world centers in Asia and it is reasonable to expect that there are already in existence grasses, legumes, shrubs and trees of value under similar conditions in the United States. In fact, no region in the world offers more promise of obtaining economic plants which are drought-resistant, soil-binding and otherwise peculiarly important at this time. The discovery of just one desirable plant species would repay the costs of the expeditions many-fold.

One of the best fodder plants of this agricultural region just east of the Gobi is a species of the wheat grass known by the scientific name, Agropyron pseudoagropyrum, and also known as Elymus pseudoagropyrum. The plant is somewhat similar to the valuable wheat grasses now grown in America, such as slender wheat grass and crested wheat grass. One of the outstanding contributions of the 1935 expeditions was the collection of a limited supply of seed of this valuable plant species.

The semi-desert, the reports state, has the appearance of a large plain with an altitude of approximately 2,000 feet. The climate of the region is characterized by a "snowless, rigorously cold winter, a cold and rather rainless spring and autumn, and a hot dry summer, for although there is more rain in the summer, the water quickly evaporates, owing to the heat which sometimes reaches over 100° F." In this region were recorded species of important plants such as wheat grass, brome grass, blue grass, rye grass, fescue, alfalfa, lespedeza, and other lesser known species of possible value. About twenty



different grasses and four species of shrubs were reported, but no trees were recorded in this section.

In addition to the plains region, considerable areas of unstable and in some places movable sand dunes were encountered. The greater part of the sand dunes were more or less covered with turf. Various species of wheat grass including Agropyron pseudoagropyrum, blue-joint, June grass, foxtail, alfalfa, clovers and other lesser known grasses, shrubs and trees were reported in this region.

The bench lands in the river valleys are covered with perennial grasses, shrubs and trees which are "able to withstand, without any failure, the desiccating winds of the spring, the heat of the summer and the cold of the winter." Various species of Spodiopogon, Arundinella, Digitaria, Stipa, Calamagrostis, Koeleria, Melica, Festuca, Bromus, Salix, Quercus, Ulmus, Rosa, Armeniaca, Medicago, Astragalus, Vicia, Securinega, and Thymus were reported.

Seeds of the plant species already obtained from the Roerich expedition and now being grown in the Department's experimental greenhouses include Stipa or needlegrass, Agropyron or wheat grass, including the species pseudoagropyrum, lespedeza, trifolium, and elymus or rye grass. Professor Roerich and his botanists consider these the most important drought-resistant forage plants of this region.



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The expedition headed by Professor Roerich was sent to the areas bordering the Gobi Desert because of the great pasture areas which apparently withstand the terrific heat of summer and cold of winter, and scanty rainfall. Through centuries of natural selection strains of grasses and legumes which are able to cope with these conditions have developed and increased. Also, the origin of many plants has been traced to the old world centers in Asia and it is reasonable to expect that there are already in existence grasses, legumes, shrubs and trees of value under similar conditions in the United States. In fact, no region in the world offers more promise of obtaining economic plants which are drought-resistant, soil-binding and otherwise peculiarly important at this time. The discovery of just one desirable plant species would repay the costs of the expeditions many-fold.

One of the best fodder plants of this agricultural region just east of the Gobi is a species of the wheat grass known by the scientific name, Agropyron pseudoagropyrum, and also known as Elymus pseudoagropyrum. The plant is somewhat similar to the valuable wheat grasses grown in America, such as slender wheat grass and crested wheat grass. One of the outstanding contributions of the 1935 expedition was the collection of a limited supply of seed of this valuable plant species.

The semi-desert, the reports state, has the appearance of a large plain with an altitude of approximately 2,000 feet. The climate of the region is characterized by a "snowless, rigorously cold winter, a cold and rather rainless spring and autumn, and a hot dry summer, for although there is more rain in the summer, the water quickly evaporates, owing to the heat which sometimes reaches over 100°F." In this region were recorded species of important plants such as wheat grass, brome grass, blue grass, rye grass, fescue, alfalfa, lespedeza, and other lesser known species of possible value. About twenty different grasses and four species of shrubs were reported, but no trees were recorded in this section.

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