Westside Dust Test Plots

third year of trials in Fresno, Kings, Kern counties to find effective plants for dust control program

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A firmly rooted grass—*Schismus arabicus*—is being tested in southern San Joaquin Valley trials designed to find or develop forage plants resistant to winds.

Seed of the new grass was collected for trial plantings this winter—the third season of dust control studies in Fresno, Kings, and Kern counties.

Schismus arabicus is a native plant of the Mediterranean region and first noticed on the Westside Plains by stockmen six or seven years ago. No extensive stands were noted but apparently it is scattered over much of the Westside area. The plants appear to be firmly rooted in the soil and consequently are resistant to wind action. Stockmen claim that stock like it, and it is a good feed.

In the spring of 1952 an area of several hundred acres a few miles north of Blackwells Corners blew out. Subsequently schismus arabicus with Russian thistle and Turkey mullin, produced a good cover.

The blow area—the Westside Plains—is the narrow western margin of the San Joaquin Valley between the Merced-Fresno line and McKittrick and includes almost a million acres. It is bounded on the East by irrigated areas and on the West by the foothills. When ultimately brought under irrigation, it will compare favorably in production with the best soils in San Joaquin Valley.

Three parcels of land of about 500 acres each were leased for trial plantings—one each in Fresno, Kings, and Kern counties—and fenced to exclude livestock. The areas are used for trial plantings to find new plants superior to those now growing in the area and to develop some system of grazing management that will leave a more effective dust control cover on the land.

Schismus arabicus—a promising grass for dust control. These plants are about four inches high, average for the species.

After the 1951-season tests produced poor growth because of lack of rainfall, plantings for the 1952 season were made in November, 1951. The rows were about 1,300 feet long and about three feet apart. A mixture of a legume and a grass was planted in two adjacent rows, one of which was fertilized with ammo-phos—16-20-0—applied at the rate of about 44 pounds per acre. Rose clover was used with all the grasses except smilo, with which bur clover was planted. The following grasses were planted:

Indian rice grass—*Oryzopsis hymenoides*
Stipa cernua
Smilo—*Oryzopsis miliacea*
Tall wheat—*Agropyron elongatum*
Pubescent wheat—*Agropyron trichophorm*
Cucamonga brome—*Bromus carinatus*
Harlan brome—*Bromus stamineus*
Annual rye—*Lolium multiflorum*
Wild oats—*Avena fatua*
Soft chess—*Bromus mollis*

Rows of Club Mariat barley were planted as windbreaks.

Because rainfall was about normal the plants made a good growth. The two perennials—tall wheat and pubescent wheat—made a nice spring growth. The annuals—ryegrass, Cucamonga brome, and Harlan brome—also made excellent growth. The rose clover and bur clover made good growth. The fertilized rows grew much better than the unfertilized, especially in Fresno and Kings counties.

Small bare spots occur in many areas on the Westside on which vegetation does not grow. A chemical examination of the soil discloses that these bare areas contain excessive amounts of salts. An area 100 feet square was laid out in Kings County and a detailed map was made to show the extent of these bare spots. A map will be made each year to note any changes. When cultivated and put under irrigation, these spots do not persist in the crops grown. However, they do contribute in some degree, to the dust problem and feed production on the ranges.

Light grazing was permitted on all three areas in the spring of 1952 because of the good growth of feed.

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Fresno County Plots—March 21, 1952. The two rows on the right are Harlan brome and the two on the left are annual ryegrass. The right rows of each pair were fertilized.