Kombyne yielded 11% more than 'UC 566' in 6 station-years of testing (1976-77) and 21% more than Briggs in 3 station-years of testing (1976-77) under irrigation in the San Joaquin and Sacramento Valleys of California, respectively. In Arizona, Kombyne yielded 16% more than 'Arivat' in 6 station-years of testing (1974, 1975, and 1977). Kombyne is recommended for irrigated culture in California and Arizona.

Breeder and foundation seed will be maintained by Northrup King Co., P. O. Box 1406, Woodland, CA 95695. Application has been made to the USDA for a Plant Variety Protection Certificate.

REGISTRATION OF OTANA OATS
(Reg. No. 289)

V. R. Stewart, D. M. Wesenberg, R. M. Hayes, and F. C. Petri

'OTANA' spring oats (Avena sativa L.), CI 9252, was developed cooperatively by ARS-USDA and the Montana and Idaho Agricultural Experiment Stations. It was released in April 1978 by the Montana Agricultural Experiment Station and ARS-USDA.

The cross of CI 5345/'Zanster', from which Otana was selected, was made at Aberdeen, Idaho in 1961. CI 5345 is a sister selection of 'Basin'. CI 5346; both were selected from the cross of 'Clinton'/2* 'Overland'. Zanster originated in Holland. The F2 line that became Otana was designated 63AAb280-7 and was initially selected in 1965 at Aberdeen. It was first tested in replicated trials in Idaho in 1967, and entered in the Uniform Northwestern States Oat Nursery in 1970. Breeder seed of Otana is a composite of 63Ab280-7 lines that originated as F2 plant selections.

Otana is a relatively tall, midseason, spring oat with blue-green foliage and equilateral panicles. Juvenile plant growth is erect. The leaf sheath and leaf margins are glabrous. Kernels are plump, short, creamy-white, and have mid-long rachilas. Awns usually are absent. Test weight of Otana grain is higher than that of most other cultivars when grown in its area of adaptation. Otana is superior to 'Park' and 'Cayuse' in caryopsis percentage and test weight. Kernel weight is similar to that of Park, but lower than that of Cayuse. It is intermediate to these cultivars in protein percentage and lodging resistance. It is susceptible to races of crown rust (Puccinia coronata Cda. Var. avenae Fraser and Led.) that were prevalent at Madison, Wis. in 1971-72, but it is resistant to Helminthosporium victoriae Zon. Meehan & Murphy.

Otana has averaged about 4% higher in yield than Cayuse under high rainfall conditions at Kalispell, Mont., but in all Montana trials in high rainfall areas and under irrigation it has averaged about 6% less in yield than Cayuse. In Idaho trials, it averaged about 10% higher in yield than Park and Basin. Averaged over 20 station-years of dryland testing in Montana, it was 14% higher than Park and 4% lower than Cayuse for yield. In 10 station-years of irrigated testing in southern Idaho, Otana averaged about the same as Cayuse in yield and 6% higher than Park. It averaged 8% higher than Park in yield, but about 10%, lower than Cayuse in dryland trials in southern Idaho during the same test period.

Breeder and foundation seed of Otana will be maintained by the Dep. of Plant and Soil Science, Montana State Univ., Bozeman, MT 59717. Limited amounts of breeder or foundation seed may also be maintained by the Tetonia Research and Extension Center, St. Anthony, ID 83445.

REGISTRATION OF RENURMEX SAINFOIN
(Reg. No. 18)

Bill Melton

'RENURMEX' sainfoin (Onobrychis vicieaefolia Scop.) was released by the New Mexico Agricultural Experiment Station in 1977. The experimental designation was N. M. Regrowth 2.

The variety was selected from a germplasm composite obtained from the Montana Agricultural Experiment Station and from the varieties 'Eski' and 'Remont'. The breeding procedure consisted of three cycles of mass-selection followed by three cycles of phenotypic recurrent selection. Selection criteria were rate of regrowth after cutting, persistency, plant color in July and plant vigor in the spring, summer (July), and fall.

Renumex sainfoin is a regrowth type similar to Remont. Stand persistency and plant color in July were better than that of Remont or Eski in tests conducted in New Mexico. Forage yield was approximately 30% higher than Remont but significantly less than 'Zia alfalfa' (Medicago sativa L.). Seed yield of Renumex was similar to that of Eski and Remont. The probable area of adaptation is New Mexico where both hay and pasture production are desired.

Generations of seed increase will be breeder, foundation, registered and certified. Breeder seed will be maintained by the New Mexico Agricultural Experiment Station.

REGISTRATION OF GOSHEN PRARIE SANDREED
(Reg. No. 47)

J. G. Scheetz and R. G. Lohmiller

'Goshen' prairie sandreed (Calamovilla longifolia Hook.) Scrib.) was released in 1976 by the Soil Conservation Service Plant Materials Center, Bridge, Mont. in cooperation with the Montana Agricultural Experiment Station and the Wyoming Agricultural Experiment Station. It is the first officially released variety of this species. It was increased without selection from a collection made near Torrington, Wyo. in 1959. It was tested under the experimental designations WY-17 and P-15588.

Goshen is a rhizomatous, warm-season grass well adapted to sandy sites receiving more than 30 cm of annual precipitation in eastern Montana, eastern Wyoming, western Nebraska, and northeastern Colorado.

Goshen was released primarily for stabilization and range revegetation on sandy soils in its area of adaptation. Stand establishment, plant vigor, forage production, ability to spread, and winterhardiness of Goshen have been equal or superior


2 Superintendent, Northwestern Agric. Res. Ctr., Kalispell, MT 59901; research agronomist and agricultural research technician, SEA-USDA, Aberdeen Res. Ext. Ctr., Aberdeen, ID 83210; and associate professor of agronomy, Texas A&M Univ., Amarillo, TX 79105 (formerly research agronomist, ARS-USDA, Aberdeen, Idaho), respectively. The authors gratefully acknowledge the assistance of D. E. Baldrige, R. F. Estick, R. T. Harada, G. P. Hartman, H. A. R. Houlton, and G. D. Kushnak of the Montana Agric. Exp. Stn. and other Uniform Northwestern States Oat Nursery cooperators in conducting agronomic evaluations. Protein determinations were primarily courtesy of the USDA Oat Quality Laboratory, Madison, WI and the Univ. of Idaho Wheat Quality Laboratory, Aberdeen, Idaho.


5 Registered by the Crop Sci. Soc. of Am. Accepted 5 Apr. 1978.

6 Plant Materials Center Manager and Plant Materials Specialist, Soil Conservation Service, USDA, Bridge and Bozeman, Montana, respectively.