

NOTICE OF THE NAMING AND RELEASE  
OF  
'RINCON' FOURWING SALTBUSH (ATRIPLEX CANESCENS)  
FOR  
WILDLIFE AND LIVESTOCK RANGE  
AND  
DISTURBED LAND RECLAMATION

BY THE

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE INTERMOUNTAIN FOREST AND  
RANGE EXPERIMENT STATION

AND THE

UTAH STATE DIVISION OF WILDLIFE RESOURCES

AND THE

UPPER COLORADO ENVIRONMENTAL PLANT CENTER

AND THE

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

AND THE

COLORADO STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATIONS

AND THE

UTAH STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATIONS

The Agricultural Experiment Stations of Colorado State University and Utah State University, the Utah State Division of Wildlife Resources<sup>1</sup>, U.S. Department of Agriculture, Forest Service Intermountain Forest and Range Experiment Station, Upper Colorado Environmental Plant Center and the U.S. Department of Agriculture, Soil Conservation Service announce the naming and release of 'Rincon' fourwing saltbush [Atriplex canescens (Pursh) Nutt.] for commercial production and marketing of seed and plants.

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<sup>1</sup> Pitman Robertson Project W82R.

Origin: Fourwing saltbush is also commonly known as wingscale, chamiza, and white greasewood. 'Rincon' fourwing saltbush originated from a seed collection made by Paul E. Hansen and Homer D. Stapley at Rincon Blanco near Canjilon, Rio Arriba County, New Mexico in the fall of 1957. The natural stand at Rinco Blanco was recollected in 1960. Rincon Blanco is located on the Arroyo Blanco about 3 miles (4.8 km) northwest of Canjilon. The site is at 7800 ft. (2380 m) elevation. The average annual precipitation is 15.0 inches (38.1 cm) at Canjilon. The mean annual temperature is about 45°F (7°C). Winter temperatures regularly get as low as a -15°F (-26°C). Summer high temperatures may reach 90°F (32°C) or higher. The following identification numbers have been used for seed accessions used in the process of selecting 'Rincon' fourwing saltbush: U33, U58, U92, U103, U103p, T-30609, EPC-1363.

Description: 'Rincon' fourwing saltbush is a facultative evergreen shrub, woody throughout, 1-2 m tall, much branched, often globular in habit; stems stout, terete, gray-scurfy, old bark gray and splitting at the surface; leaves alternate, sessile or subsessile, narrowly oblong to linear, cuneate at base, obtuse at the apex, 1-5 cm long, 0.2-1 cm wide, entire, thick, gray scurfy, 1-nerved; plants trioecious with an expressed sex ratio of approximately 55 female; 35 male; 10 [male-female], staminate flowers in dense spikes of glomerules in long terminal panicles, these leafy below; pistillate flowers in dense leafy and bracted spikes and panicles; staminate perianth 4- or 5-cleft, pistillate wanting; fruiting bracts sessile or short stalked, the body little compressed, united to apex, the free tips project as flat wings, 4-12 (20) mm long, conspicuously four-winged from the sides and back of the bracts but occasionally wings are missing; the wings usually entire; the faces usually smooth or sometimes with small tubercles between the wings; seeds 1.5-2.5 mm long, brown, radicle superior.

Development and Use: 'Rincon' fourwing saltbush was selected from a half-sib population of some 700 plants based on sustained annual biomass production, an erect uniform leafy growth habitat, and a tendency toward evergreenness or early spring greenup. 'Rincon' fourwing saltbush may become a valuable forage shrub for arid rangelands because of its adaptation, palatability, size, evergreen habit, nutritive value, rate of growth, and large volume of foliage. In common with other fourwing saltbushes, its leaves, stems, and utricles provide browse in all seasons for livestock and wildlife. Crude protein content measured 17.9, in August, and 21.4% , in November, in the leaves with intermediate value for other seasons. The crude protein of stems vary seasonally from 6.9 to 8.0%. In addition to providing forage and cover, 'Rincon' is valuable for rehabilitation of depleted rangelands and for soil stabilization projects. It has potential for extensive use in mineland reclamation on arid and semiarid land of the Intermountain region. Its globular, leafy growth form make 'Rincon' an outstanding conservation plant for soil stability and forage production. 'Rincon' may be propagated easily by direct seeding, by transplants, and by stem cuttings. It has estimated seed yields of 350 lbs clean seed per acre (393 kg/ha) with specified orchard design.

Area of Adaptation: Fourwing saltbush is one of the most widespread and adaptable of western shrubs. It grows in a variety of soil types from the Great Plains to the coast ranges and from Canada to Mexico at elevations from below sea level to 8000 ft (2440 m). 'Rincon' fourwing saltbush is well adapted to a wide range of soil textures from sandy areas and gravelly washes to loamy soils. Moreover, vigorous plants occur also on heavy clay soils and on moderately saline soils. 'Rincon' fourwing saltbush is best adapted to big sagebrush and pinyon-juniper zones, but it also does well in the more mesic portions of salt desert shrub areas. It appears to have salt tolerance similar to other fourwing saltbush ecotypes. Because of its high elevation origin, 'Rincon' has shown adaptation in more northern climates than might be expected (fig. 1). It has performed well at 3000 to 8000 ft (915-2440 m) elevation and with average annual precipitation of 9 to 23 inches (23-58 cm).

It is more cold tolerant than 'Marana' fourwing saltbush from California. 'Marana' is recommended for Mediterranean-type climates below 5000 ft (152 m) elevation. 'Wytana', the only other cultivar, is low growing and recommended for eastern Montana and Wyoming (fig. 1).

'Rincon' fourwing saltbush is relatively free of disease and insect problems. However, a low incidence of vascular wilt symptoms and some mortality have been noted on plants grown on former agricultural ground at the Snow and Nephi Field Stations in Utah. Suspected causal agents are Rhizoctonia and Verticillium. The case-bearing bagworm, Colephora atriplicivora, is a defoliating pest that causes only minor problems on natural stands but can be a serious problem in closed stand plantations. It can be easily controlled with the application of Malathion.

Plant Source: Parent plants will be maintained by the Intermountain Forest and Range Experiment Station, Utah State Division of Wildlife Resources, and the Aberdeen, Idaho Plant Materials Center. Breeder plants will be maintained at the Upper Colorado Environmental Plant Center (UCEPC) Meeker, Colorado. Recognized classes of plants will be Breeders, Foundation, and Certified. All Certified seed will be produced from Foundation vegetative cuttings. The UCEPC will provide Foundation cuttings to establish Certified seed orchards. Certified containerized plants can be produced from certified seed. Request for Foundation vegetative material should be directed to the Colorado Seed Growers Association or the Utah Crop Improvement Association.

This notice was prepared by E. Durant McArthur of the Intermountain Forest and Range Experiment Station with the assistance of Wendell G. Hassell of the Soil Conservation Service; Richard Stevens and James N. Davis of the Utah State Division of Wildlife Resources; Sam E. Stranathan and Gary L. Noller of the Upper Colorado Environmental Plant Center; and Arthur R. Tiedemann and Sherel K. Goodrich of the Intermountain Forest and Range Experiment Station.

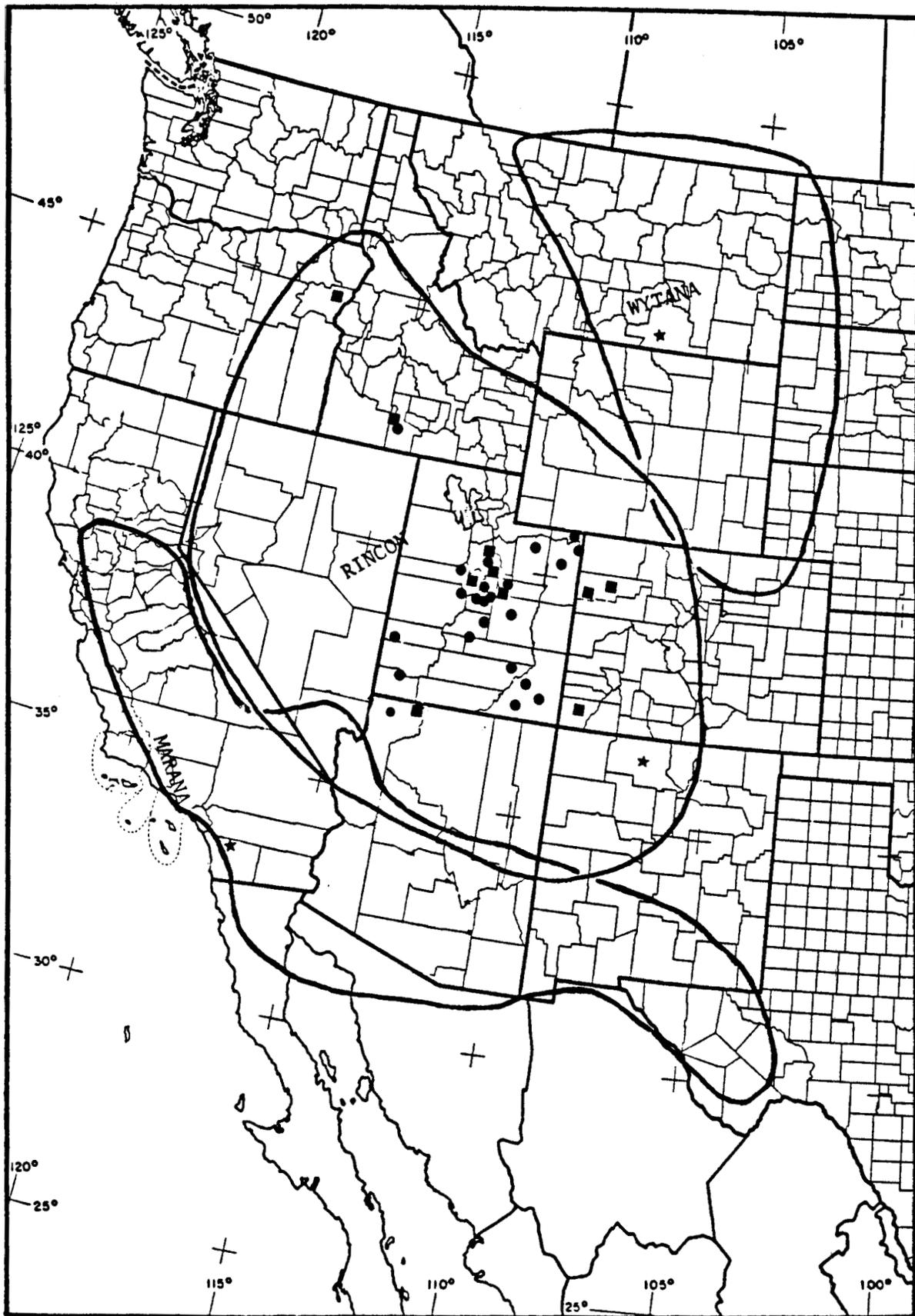


Figure 1.--Map showing adaptation of 'Rincon' fourwing saltbush. Successful 'Rincon' plantings: ● seedings, ■ transplants. Original collection site: + Areas recommended for planting cultivars are outlined.

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