

THE
UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

AND

UTAH AGRICULTURAL EXPERIMENT STATION
UTAH STATE UNIVERSITY
LOGAN, UTAH

ANNOUNCE THE RELEASE OF
ROADCREST CRESTED WHEATGRASS

ROADCREST crested wheatgrass (*Agropyron cristatum* (L.) Gaertn.) was derived from two accessions originally collected from Dikmen Ankara and Güvercinlik Ankara, Turkey and provided to the USDA-ARS Forage and Range Research Unit at Utah State University by Dr. Esvet Acikgoz. Rhizomatous plants, observed in these accessions during their initial evaluation on a semiarid range site in central Utah, were selected and established in a crossing block to develop the parental germplasm. These plant materials were then subjected to two cycles of selection based largely on progeny evaluation for increased rhizome development, finer leaf texture, shorter growth stature, and improved seedling vigor. Breeder seed was compounded from selected polycross seedlots in the final breeding cycle.

RoadCrest, originally designated as CWG-Rhizome, has been evaluated on roadsides and in turf trials in Utah, Colorado, and Washington. It is a long-lived perennial, and is significantly more rhizomatous than any other crested wheatgrass included in evaluation trials, including the cultivar Ephraim, which is the only other rhizomatous cultivar of crested wheatgrass to be released. Seedling vigor of RoadCrest compares favorably with other crested wheatgrasses, including 'Hycrest', 'CD-II', 'Fairway', and 'Nordan'. RoadCrest is significantly easier to establish and initiates growth earlier in the spring than other turf and low-maintenance turf grasses including Kentucky bluegrass (*Poa pratensis*), 'Sodar' thickspike wheatgrass (*Elymus lanceolatus*), tall fescue (*Festuca arundinacea*), and hard fescue (*Festuca ovina*). However, it is not as easy to establish on extremely dry, sandy soils as the Siberian crested wheatgrass (*Agropyron fragile*) cultivar 'Vavilov'. Color intensity and turf quality of RoadCrest are not as good as Kentucky bluegrass, tall fescue, and perennial ryegrass when the latter grasses are grown under optimum conditions.

The new cultivar is recommended for use along roadsides or similar low-maintenance turf applications in temperate, semiarid regions receiving from 250 to 500 millimeters (10 to 20 inches) of annual precipitation. Seeding rates should be substantially less than those recommended for typical turf grasses such as Kentucky bluegrass, ryegrass, or tall fescue. When this or other cultivars of crested wheatgrass are seeded at more than 35 to 40 kilograms/hectare (30 to 35 pounds per acre), seedling diseases are likely to occur resulting in substantial thinning of the stand. However, the remaining seedlings readily establish, and excellent stands are usually obtained. As is the case with other crested wheatgrass cultivars, supplemental irrigation can actually be a detriment if total water

Printed for N Jerry Chatterton <njchatt@cc.usu.edu>

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No Recipient, No Subject

application (precipitation + irrigation) exceeds 650 centimeters (25 inches) annually.

RoadCrest greens up early in the spring and remains green until mid summer at Logan, Utah. Plants then go dormant until temperatures decline in the fall. This characteristic varies according to altitude and annual precipitation. Summer dormancy is much less of a problem at higher elevations ranging from 1,500 to 2,300 meters (5,000 to 7,500 feet).

RoadCrest is a natural tetraploid ($2n=4x=28$) and is fully interfertile with cultivars of Standard crested wheatgrass (*Agropyron desertorum*), Siberian crested wheatgrass (*Agropyron fragile*) and the crested wheatgrass hybrid cultivars Hycrest and CD-II. Established isolation distances from these cultivars must be maintained in Foundation and Certified seed fields. The cultivar produced 560 kilograms of seed/hectare (500 pounds/acre) when grown in rows 0.9 meters (3 feet) apart on a dryland site that receives 430 millimeters (17 inches) of annual precipitation. Moderate supplemental irrigation likely would increase seed yields from 25 to 50%. At 100% percent purity, there are approximately 530,000 seeds/kilogram (240,000 seeds/pound).

Breeder, Foundation, and Certified seed classes will be recognized. Breeder seed will be maintained by the USDA-ARS Forage and Range Research Laboratory at Logan, UT. Foundation seed will be produced by the USDA-ARS at Logan and distributed to seed growers by the Utah Crop Improvement Association. Protection has been applied for under the Plant Variety Protection Act of 1970. Conditions of this license specify that seed of the cultivar ROADCREST can be marketed only as a class of certified seed. For information regarding supplies of foundation seed, contact:

Stanford Young
Utah Crop Improvement Association
Plants, Soils, and Biometeorology Department
Utah State University
Logan, UT 84322-4820

(435) 797 2082 Release date for publicity purposes shall be effective on the date of the final signature on the release notice.