UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE AND SOIL CONSERVATION SERVICE
WASHINGTON, D. C.

AND

THE UTAH AGRICULTURAL EXPERIMENT STATION
LOGAN, UTAH

# NOTICE OF RELEASE OF ARS-2678 KURA CLOVER

The Agricultural Research Service and Soil Conservation Service, U. S. Department of Agriculture, and the Utah Agricultural Experiment Station announce the release of an improved Kura clover (Trifolium ambiguum Bieb.) germplasm population, ARS-2678, ARS-2678 is winterhardy in the Intermountain Region of the United States, tolerant of drought and high temperatures, spreads extensively by means of rhizomes, and exhibits superior forage and seed yields in non-irrigated environments. ARS-2678 also was selected for increased nodulation and nitrogen fixation activity when inoculated with Rhizobium leguminosarum-biovar trifolii.

The original spaced-plant source nursery established in 1978 consisted of 255 plants of Kura clover representing 5 plants of each of 51 seed accessions collected by D. R. Dewey and A. P. Plummer in the Soviet Union. Most of the accessions were obtained from the Stavropol Botanical Garden but originated in the Caucasus Mountain area. On the basis of aboveground biomass, lateral rhizome extension, and seed yield measured in 1980 and 1981, 27 individual plants from 20 accessions were selected and moved to an isolated seed increase block. Five to 35 plants of open-pollination progenies of each of 23 of the selected maternal plants were established by transplanting in a spaced-plant nursery in the spring of 1981. Plants of a previous Kura clover germplasm release, C-2 (Crop Sci. 15:738. 1975), were used as a check. Visually superior plants were excavated in June 1983, and shoot, root, and nodule weight data obtained. Fifty-four plants chssen on the basis of superior shoot and root weights were transplanted to the parental isolated seed increase block. Following measurement of nitrogen fixation activity (u moles acetylene reduced /hour/plant), 17 previously selected plants were removed from the seed increase block. Combined within and among progeny selection was used to maintain a broad germplasm base in the synthetic. No plants of the C-2 germplasm source were included in the seed increase block.

Syn-1 seed was produced from 1984 to 1987 and has been pooled and designated as ARS-2678. Five grams of ARS-2678 seed are available to each applicant upon written request and agreement to make appropriate recognition of its source as a matter of open record when this germplasm contributes to the development of a new cultivar or hybrid. Request seed from M. C. Rumbaugh or D. A. Johnson, USDA-Agricultural Research Service, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300.

T. B. Kenney — MAR 4
Administrator, Agricultural Research Service, U. S. Department of Agriculture — Date

[illegible] — 2-7-88
Director, Utah Agricultural Experiment Station, Logan, Utah — Date

W. Curtis Ebaugh for — 2-25-88
Director, Ecological Sciences division, Soil Conservation Service, USDA — Date