

A. NOTICE OF NAMING AND RELEASE  
OF  
'TIMP' UTAH SWEETVETCH (HEDYSARUM BOREALE Nutt.)

FOR

SOIL IMPROVEMENT AND EARLY SPRING FORAGE FOR BOTH WILDLIFE  
AND LIVESTOCK

BY THE:

UPPER COLORADO ENVIRONMENTAL PLANT CENTER; Meeker, Colorado  
and the  
UTAH DIVISION OF WILDLIFE RESOURCES; Ephraim, Utah  
and the  
COLORADO AGRICULTURAL EXPERIMENT STATION-COLORADO STATE  
UNIVERSITY; Fort Collins, Colorado  
and the  
UTAH AGRICULTURAL EXPERIMENT STATION-UTAH STATE UNIVERSITY;  
Logan, Utah  
and the  
UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE-INTERMOUNTAIN RESEARCH STATION; Ogden, Utah  
AGRICULTURAL RESEARCH SERVICE-FORAGE AND RANGE RESEARCH  
LABORATORY; Logan, Utah  
and the  
SOIL CONSERVATION SERVICE-ECOLOGICAL SCIENCES DIVISION;  
Washington, DC

The groups listed above announce the naming and release of  
'TIMP' Utah sweetvetch (Hedysarum boreale) for commercial  
production and marketing of seed and plants based on results  
of coordinated and independent study of native Utah  
sweetvetch collections by the sponsors.

'TIMP' Utah sweetvetch is a seed-propagated cultivar  
recommended for use on rangelands, upland wildlife habitat  
improvements, and critical areas within its historically  
recognized natural range. This area is generally described  
as the Intermountain Region of Utah, Colorado, Wyoming and  
Idaho (Major Land Resource Areas 47-Wasatch/Uinta Mountains,  
34-Central desertic basin, mountains, and plateaus. 48A-  
Southern Rocky Mountains).

Utah sweetvetch grows in areas with 12 to 18 inches of  
annual precipitation preferring well-drained, basic sites.  
It is found on soils ranging from sands to heavy clay with  
wide pH variations.

'TIMP' Utah sweetvetch is a cool-season perennial,  
herbaceous legume. This variety is upright (1-2 ft.),  
multiple branched, leafy, with abundant attractive pink  
flowers producing long lomented seedpods (chainpod) forming  
in clusters on multiple seed stalks. Once established it is  
persistent, relatively long lived, more tolerant to other

species than competitive i.e. established acceptable stands under dense Russian thistle.

The foliage of Utah sweetvetch is palatable to big game and livestock. 'Timp' produces limited basal green foliage during winter. 'Timp' provides best forage in early spring to mid summer.

'Timp' has a long tap root. Through breeding and selection it has enhanced nitrogen fixing capability. A specific commercial inoculum is available to improve chances for nodulation and nitrogen fixation. 'Timp' when properly treated with commercial Rhizobium and established will improve soil nutrients, complementing diversity and biomass production of companion species. It is not a strongly competitive species at any stage of its life cycle.

'Timp' is highly susceptible to browsing/grazing damage during establishment because of its desirability.

#### ORIGIN

The genetic material originated from a site at the base of the Wasatch Mountains and east of Orem, Utah Co., Utah and 0.5 mile north of the mouth of Provo Canyon. The collection site ranges from 4800 to 5200 feet in elevation and has an annual precipitation of 14 to 16 inches. Soils at the site are well-drained, stony loam. Associated native vegetation consists of scattered Gambels oak and cliff rose, mountain big sagebrush, bluebunch wheatgrass, needle and thread and arrowleaf balsamroot.

Fifty per cent of the seed in 'Timp' came directly from this site (9040975).

The other 50 per cent came from plants grown from seed originating from the Orem site. However, these plants were grown and individuals selected based on two important traits, seed production and dinitrogen fixation. This select group of plants was considered improved and unified as 9024375 (Cuany Documentation attached). 9024375 was increased in a separate block. Seed produced was blended at the 50 per cent level with 9040975.

The breeders block for 'Timp' was established using 50 per cent 9040975 and 50 per cent 9024375. The progeny called 'Timp' is numbered T9024808. (A Plant Introductory Number will be assigned).

There are no released varieties of Utah sweetvetch for comparison.

## DESCRIPTION

Multiple stems, 1 to 2 feet tall, emerging from a woody crown. Leaves alternate, odd-pinnate, 11 to 31 elliptic leaflets, glanddotted and highly variable in size, shape, and hairiness. Inflorescence an elongated, loosely arranged raceme with few to several showy pink flowers. Blooms late June, continuing through the summer season. Fruit matures into a flattened, constricted, chainlike pod.

## ADAPTATION

'Timp' Utah sweetvetch is best adapted to well-drained rocky, gravelly, sand clay loam soils. It has proven acceptable performance where the annual precipitation ranges from 12 to 18 inches.

## PERFORMANCE

Extensive initial evaluation trials, seed production trials, seed processing/conditioning trials, germination trials, laboratory trials, and field trials across the Upper Colorado Region have been conducted over the last 20 years on this species by the releasing agencies. Over 100 sources of sweetvetch (Hedysarum), representing both native and introduced species, have been compared in this evaluation/selection process.

'Timp' was selected based on its seedling vigor, site adaptability, persistence, seed production, dinitrogen fixation, and establishability.

## CLASSES OF MATERIALS AVAILABLE

Breeder, Foundation, Registered, and Certified Classes of seed will be recognized. Criteria for all classes of seed will be included in the Utah and Colorado Seed Certification Standards.

## MATERIAL DISTRIBUTION

The Upper Colorado Environmental Plant Center, Meeker, Colorado, 81641, will maintain 1).9024375 a component of the Breeders block, 2).the Breeders block (a 50:50 combination of 9024375 and 9040975), and 3). 'TIMP' (9024808) Foundation seed supplies. Distribution of Foundation seed from requests by commercial growers will be received by Cooperating Agencies and coordinated by the State Crop Improvement Association.

The Colorado Varietal Release Committee reviewed 'Timp' Utah sweetvetch January 19, 1994 and recommend it for release to commercial growers and users.

## Approval Signatures:

Charles Laughlin,  
Dr. Charles Laughlin, Director  
Colorado Agricultural Experiment Station  
Fort Collins, Colorado

Date: 4/20/94

H. Paul Rasmussen,  
Dr. H. Paul Rasmussen, Director  
Utah Agricultural Experiment Station  
Logan, Utah

Date: 5-10-94

Duane L. Johnson,  
Duane L. Johnson, State Conservationist  
USDA Soil Conservation Service  
Lakewood, Colorado

Date: 3/1/94

John E. Beckwith for  
Norman W. Priest, Acting State Conservationist  
USDA Soil Conservation Service  
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Date: 7/7/94

ET Hinney,  
Administrator,  
for Agricultural Research Service  
U. S. Department of Agriculture

Date: JUN 09 1994

Keith E. Evans,  
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USDA Forest Service, Intermountain Research Station  
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Date: 7/11/94

E. Durant McArthur,  
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USDA Forest Service, Shrub Sciences Laboratory  
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Date: 8 July 1994

Robert G. Valentine,  
Robert G. Valentine, Director  
Utah State Division of Wildlife Resources  
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Date: 7 JUN 94

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Scott Robertson, President/Administrative Board  
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Date: 7/21/94

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Date: 8-25-94