

We, the members of the Ornamental Crops Varietal Release Committee of the Nebraska Agricultural Experiment Station, hereby approve the naming of Purple Prairieclover (NDL-54) with the varietal or cultivar name of KANEB and recommend that breeder seed of this selection be maintained by the Nebraska Agricultural Experiment Station and the foundation seed be maintained and distributed by the U.S. Soil Conservation Service Plant Materials Center, Manhattan, Kansas. Foundation seed will be available for distribution in November, 1976.

Sotero S. Salac
Sotero S. Salac, Committee Chairman
Department of Horticulture

May 23, 1975
(date)

Arthur
ber
North Platte Experiment Station

(date)

M. G. Boosalis
M. G. Boosalis, Committee Member
Chairman, Department of Plant Pathology

May 29, 1975
(date)

K.P. P
s, Committee Member
Department of Entomology

5/23/75
(date)

D. P. Cooney (by M. L. Schuster)
Chairman, Department of Horticulture
Ex Officio

June 2, 1975
(date)

Sponsoring Agencies:

Robert E. Williams
Director, Plant Sciences Division
U.S. Soil Conservation Service

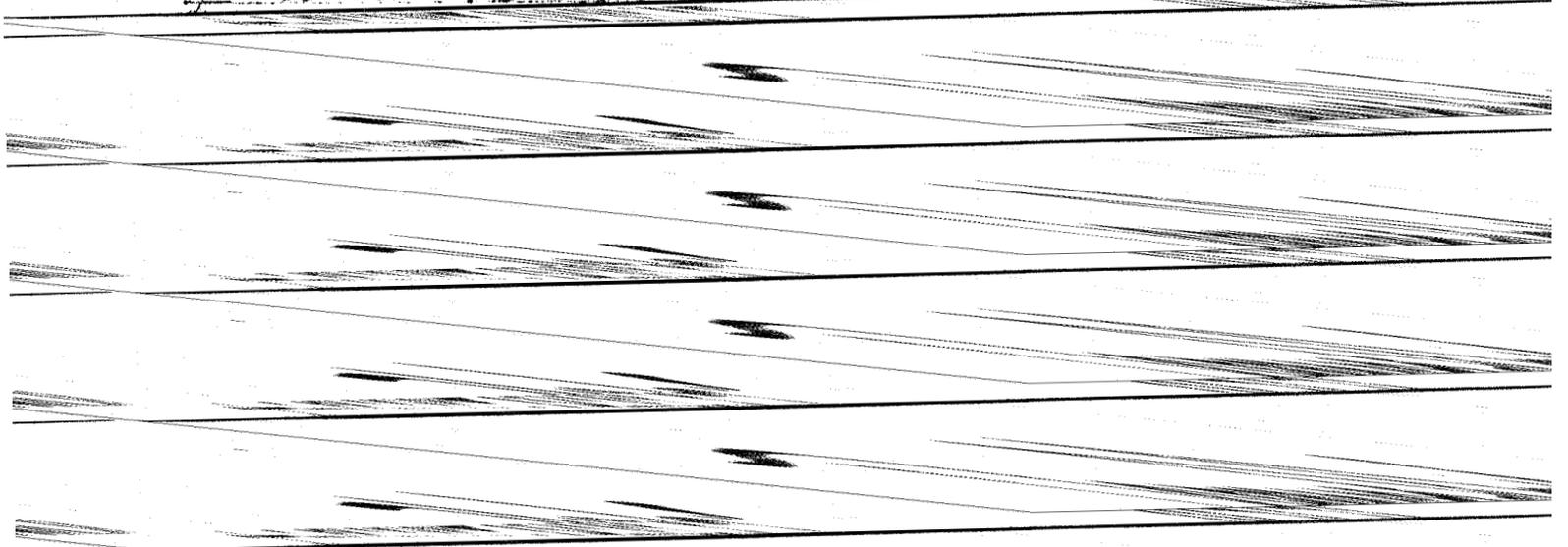
JUN 1 1975
(date)

Lloyd W. Smith
Director, Kansas Agricultural
Experiment Station

JUN 30 1975
(date)

Thomas

7/12/75



The production and distribution of foundation seed of Purple Prairieclover (NDL-54) and its naming and release with varietal or cultivar name of KANE8 is hereby approved:



H. O. Ottoson, Director
Nebraska Agricultural Experiment Station
Institute of Agriculture and Natural Resources
University of Nebraska

7-21-75
(date)

Request For The Release Of Purple Prairieclover
Cultivar 'Kaneb' (NDL-54)

S. S. Salac, P. N. Jensen, and R. D. Lippert

Department of Horticulture
Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln
and
United States Department of Agriculture
Soil Conservation Service

May, 1975

I. Suggested Name: Purple Prairieclover 'Kaneb'

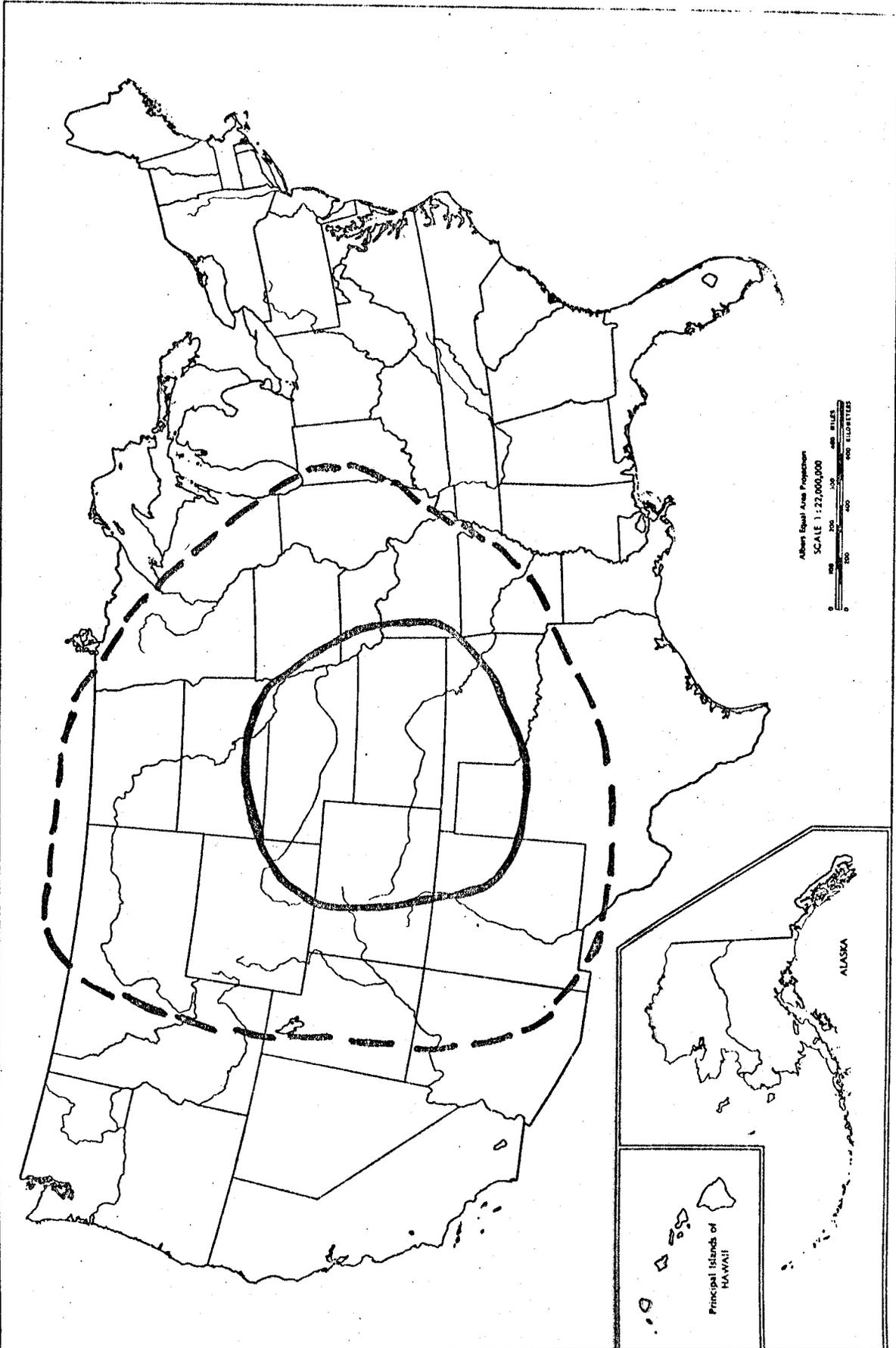
11. Species Description: Purple prairieclover, Petalostemum purpureum (Vent., Rydb.), is a herbaceous perennial with woody taproots, single to a few erect to ascending stems 75-85 cm. tall, branched or simple, striate, glabrous to sparsely villous; leaves odd-pinnate petiolate, with 3-7 leaflets, mostly 5, 8-20 mm. long 1-2 mm. wide, linear, mostly folded, glabrous to villous, glandular - punctate below; inflorescence of dense terminal spikes short - peduncled, globose - ovoid, becoming short cylindric, 1-5 cm. long; bracts equalling or exceeding calyx abruptly acuminate, villous at base, glabrate near middle and sparingly villous on tip; calyx campanulate, 2.5-4 mm. long, with lobes shorter than the tube, silky - villous; corolla rose - purple, indistinctly papilionaceous, blade of banner cordate, about 2 mm. long, its claw about 3 mm. long; other petals with oblong blades and shorter claws; fruit 1-2 seeded thin-walled pod about 3 mm. long, pubescent.

III. Natural Distribution, Adaptation Range, and Associated Plant Community.

- A. Distribution of Species - Prairies and plains from Indiana to Saskatchewan, south to Texas and Arizona (Figure 1).
- B. Adaptation Range of Cultivar - Central Great Plains States of Nebraska, Kansas, Oklahoma, *New Mexico*, Colorado, Wyoming and portions of Iowa and Missouri (Figure 1).

Figure 1. Map showing the natural distribution of purple prairieclover (area enclosed by broken lines) and adaptation range of cv. 'Kaneb' (area enclosed by solid line).

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- C. Associated Plant Community - Purple prairieclover is associated with plant communities of the ~~true~~ and mixed prairies. The native legume may be found growing on the uplands and on moderately deep water table bottom lands. The soil texture may vary from clay loams to sandy loams. The plant is usually found growing with mid - and tall - growing grasses, including big bluestem, switchgrass, indiagrass, sideoats grama, prairie dropseed, and western wheatgrass.

IV. Procedures Used in Developing the Cultivar: NDL-54(KL-42) was one of the original field collections of purple prairieclover seed which were collected from a native grassland area 5 1/2 miles southwest of the SCS Plant Materials Center at Manhattan, Kansas, on August 28, 1948. These collections were assigned accession numbers KG-29-45, KL-42, and KL-194 and established in single rod-row plantings, at the SCS nursery for observation and evaluation.

Data collected showed that KL-42 was the most promising among the 3 accessions. A small seed increase planting of KL-42 was established in 1948. Some seed of this accession was also sent to the SCS Nursery at Mandan, North Dakota for test plot planting where it was assigned accession number NDL-54. The Mandan SCS Nursery also sent seed of this accession to the SCS Plant Materials Center at Los Lunas, New Mexico where a seed increase field planting was established.

In 1967, the SCS Manhattan Plant Materials Center received 50 lbs. of NDL-54 from the Los Lunas Plant Materials Center. A 0.17 acre seed increase field planting was established. In 1971 and 1972, field evaluation rows (20 ft.) of NDL-54 and other accessions collected by SCS and the University of Nebraska were established at the SCS Plant Materials Center at Manhattan, Kansas and at the University of Nebraska Field Laboratory at Mead, Nebraska. These plantings were used for evaluating and comparing the performances of the different accessions of purple prairieclover.

V. Field Performance of Purple Prairieclover 'Kanab':

- Table 1 summarizes the overall field performance of 3 accessions of purple prairieclover which were collected from Nebraska and Kansas. As indicated by the

Table 1. Field performance of purple prairieclover 'Kaneb' (NDL-54) and other selections over a period of three years.

ACCESSION NO.	ORIGIN OR SOURCE	YEAR	PERFORMANCE RATING ^{1/}		GROWTH (cm.)		BLOOMING PERIOD		
			Stand	Vigor	Height	Spread	Start	Full	End
PM-K-1622	Sheridan Co. Nebraska	1972	3	1	6-24	3	8-4	8-28	10-11
		1973	1	3	40-52	6	6-14	6-29	9-10
		1974	3	3	55-70	9	6-9	6-28	8-5
UN-2300	University of Nebraska Lincoln, Nebraska	1972	5	3	43-64	12	6-17	6-29	10-23
		1973	3	1	61-76	9	6-13	6-30	7-20
		1974	5	1	61-73	9	6-17	6-28	7-23
NDL-54 'Kaneb'	USDA-SCS-PPC Manhattan, Kansas	1972	3	1	18-34	3	8-4	3-30	10-10
		1973	1	1	73-82	6	6-18	6-28	10-20
		1974	1	1	70-85	9	6-17	7-1	8-5

^{1/} Performance rating for stand and vigor where 1 is excellent, 5 is medium, and 10 is failure or very poor.

data collected over a period of 3 years on stand, vigor, and height of plants, NDL-54 (Kaneb) was decidedly superior to accessions PM-K-1622 and UN-2300. However, no appreciable differences were exhibited by the accessions when plant spread and blooming period data were compared. Blooming lasted from mid - June to mid - October.

All 3 accessions had rose - purple flowers which were borne on a showy terminal inflorescence called spike.

VI. Seed Production and Other Related Data of Purple Prairieclover 'Kaneb'.

Table 2 includes data on seed production and other information pertinent to seed handling. All data presented were based on sampling of seeds which were hand cleaned.

Yield of seed per acre ranged from 153 to 188 lbs/acre. This yield can probably be increased substantially on a commercial scale by employing intensive culture such as irrigation and fertilization. The seed increase plots did not receive any fertilization and were irrigated only sparingly.

Germination ranged from 78.0 to 88.9%. The germination data were obtained by planting seeds in seed flats containing commercial jiffy mix as growing medium and keeping the seed flats in a greenhouse where the temperature was 26 ± 3 C. All trials were replicated 3 times and lots of 100 seeds were used per replicate.

The method of seed processing employed will affect seed purity and number of seed per pound. With the hand cleaning method used, it will be noted that purity was 97% or better and the number of seeds ranged from 271,000 to 275,279/lb.

VI. Seed Increase and Distribution: Foundation seed will be produced and distributed by the U. S. Soil Conservation Service Plant Materials Center at Manhattan, Kansas. Breeder seed will be maintained by the University of Nebraska Field Laboratory at Mead, Nebraska.

Foundation seed will be available for distribution in November, 1976.

Table 2. Data on seed production, germination, number of seed per pound, and purity of purple prairieclover 'Kancb'.

Year	Yield/Acre lb.	Germination %	Purity %	Number Per Pound
1972	177	88.9	99.9	271,100
1973	188	85.6	97.9	275,279
1974	153	78.0	99.9	275,209