



APPLICATIONS UNDER EXAMINATION

CLOVER

CLOVER

(*Trifolium pratense* × *Trifolium medium*)

Proposed denomination: 'Pramedi'
Application number: 16-8938
Application date: 2016/05/27
Applicant: Agricultural Research, Ltd., Troubsko, The Czech Republic
Hana Jakesová, Hladké Zivotice, The Czech Republic
Masaryk University, Brno, The Czech Republic
Research Institute for Fodder Crops, Ltd., Troubsko, The Czech Republic
Agent in Canada: Nadezda Dohnalova, Fort Erie, Ontario
Breeder: Hana Jakesová, Hladké Zivotice, The Czech Republic
Jana Repkova, Masaryk University, Brno, The Czech Republic
Jan Nedelnik, Research Institute for Fodder Crops, Ltd., Troubsko, The Czech Republic
Jan Nedelnik, Agricultural Research, Ltd., Troubsko, The Czech Republic

Varieties used for comparison: 'Wildcat', 'Melot' and 'Tempus'

Summary: *The plants of 'Pramedi' are larger than the plants of 'Melot'. The leaf of 'Pramedi' has a medium amount of conspicuousness of markings whereas the leaf of 'Melot' has absent or very weak to weak conspicuousness of markings and 'Tempus' has strong conspicuousness of markings. The shape of the middle leaflet is ovate for 'Pramedi' whereas it is elongated for 'Melot'. The number of inflorescence of 'Pramedi' is few whereas the number for 'Wildcat' and 'Tempus' is many.*

Description:

PLANT: perennial type, tetraploid, no stolons, flowers midseason, intermediate growth habit at end of growing cycle

STEM: sparse pubescence, thick, few to medium number of internodes

FOLIAGE: medium to dense, dark green

LEAF: medium conspicuousness of markings, entire margin, medium pubescence on lower side

MIDDLE LEAFLET: ovate, medium size, small length to width ratio

PEDUNCLE: thin to medium thickness

INFLORESCENCE: medium number, globose shape

FLOWER: red

SEED COAT: yellow to brown

Origin and Breeding: The initial cross was conducted between the red clover variety (*Trifolium pratense*) 'Tetra' and an unknown zigzag clover variety (*Trifolium medium*) between 1986 to 1988. The F1 generation produced 10 plants. In the subsequent years, a population was created using the F1 progeny crossed with the *Trifolium pratense* variety 'Amos' for 5 generations. The flow cytometry method was used to select plants with higher DNA content compared to tetraploid *Trifolium pratense*. The hybrid character was verified not only via flow cytometry but also based on cytogenetic level where there were higher numbers of chromosomes observed. The resulting variety was further backcrossed with the variety 'Amos' between 1995 and 2010. Throughout the process, selections were made based on ploidy, plant height, plant vigour, and plant health. In 2012, 'Pramedi' was registered in the Czech Republic.

Tests and Trials: The comparative trial for 'Pramedi' was conducted in Minto, Manitoba during the 2022 growing season. The trial was planted in a RCB Design with 4 replicates. Each replicate consisted of one row with 22 plants spaced 30 cm apart with 40 cm between the rows. There were 88 plants per variety. Measured characteristics were based on 62 to 65 measurements per variety. Mean differences were significant at the 5% probability level based on paired Student's T-tests. Results were supported by the official technical examination report 5082339, purchased from the Central Institute for Supervising and Testing in Agriculture, Czech Republic.

Comparison table for 'Pramedi'

	'Pramedi'	'Wildcat'*	'Melot'*	'Tempus'*
<i>Plant natural height (in year of sowing) (cm)</i>				
mean	37.6	41.1	15.3	40.3
std. deviation	12.5	11.6	7.6	12.2
<i>Plant width (cm)</i>				
mean	73.1	77.4	32.4	79.7
std. deviation	25.6	25.3	17.5	30.3

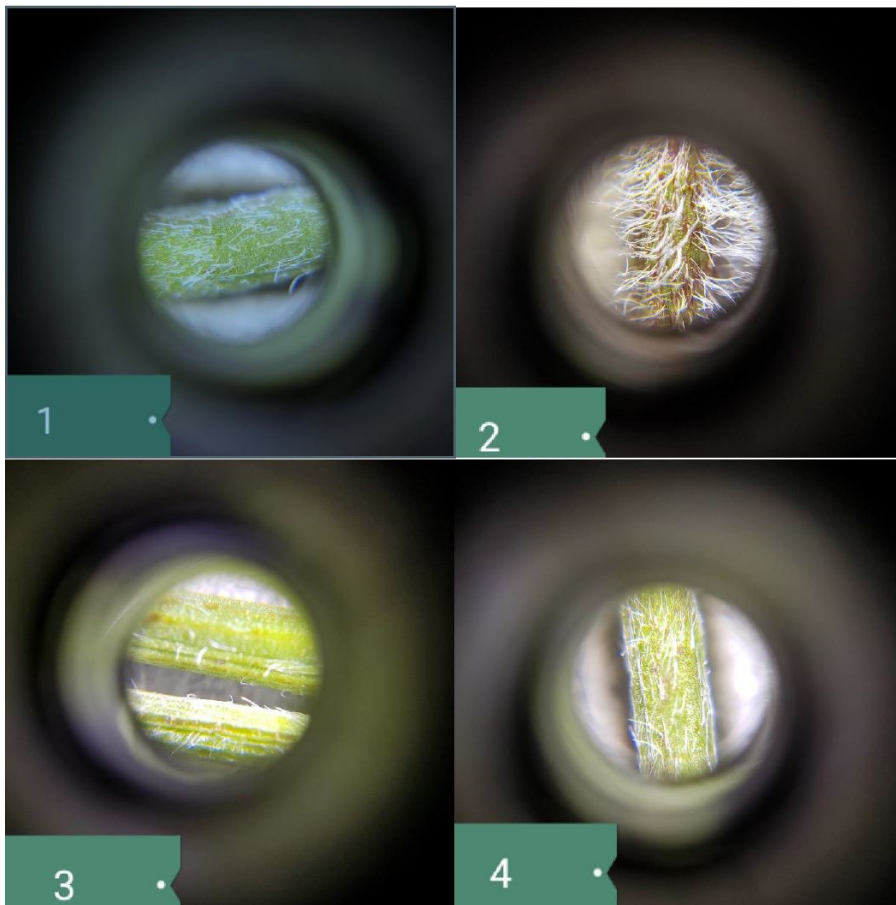
*reference varieties



Clover: 'Pramedi' (top) with reference varieties 'Wildcat' (top centre), 'Melot' (bottom centre) and 'Tempus' (bottom)



Clover: 'Pramedi' (top left) with reference varieties 'Wildcat' (top right), 'Melot' (bottom left) and 'Tempus' (bottom right)



Clover: 'Pramedi' (top left) with reference varieties 'Wildcat' (top right), 'Melot' (bottom left) and 'Tempus' (bottom right)