

Multifoliolate Leaf Expression (Leaves With Greater Than 3 Leaflets/Leaf)

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FIELD ESTABLISHMENT

Seeding Plants should be established in rows using transplants (8-12 week old) or by direct seeding and thinning. Procedures for greenhouse culture of plants for transplanting are provided in the procedures for fall dormancy determination (see fall dormancy testing procedures, Ref 1.).

Spacing 30 cm between plants in rows 0.6 to 1.0 m apart.

No. of plants 25 per replication

No. of reps 4 minimum

Culture Maintain a high soil fertility, a soil pH of 6.5 to 7.5, and adequate soil moisture. Minimize weed and insect interference. Inoculate with *Rhizobium meliloti*.

RATING

Clip herbage using locally accepted schedules and rate plants were vegetative in late summer. Multifoliolate leaf (MF) expression on a per plant basis is visually scored. The multifoliolate leaf expression score per plant is based on an average of individual stems and on number of MF leaves per stem:

Score		Description
0	=	all trifoliolate leaves
1	=	1 MF leaf/stem
2	=	2-3 MF leaves/stem
3	=	4-5 MF leaves/stem
4	=	6-7 MF leaves/stem
5	=	8+ MF leaves/stem

CALCULATIONS

MF Expression Index A MF expression index (MFI) is calculated as the sum of the product of the number (N*) of plants which are in each MF category over the total number of plants in a population:

$$MFI = \frac{\sum[(\text{No. } 1 \times 1) + (\text{No. } 2 \times 2) + (\text{No. } 3 \times 3) + (\text{No. } 4 \times 4) + (\text{No. } 5 \times 5)]}{\text{Total No. plants in population}}$$

Total No. plants in population

Both the MFI value and the percentage of plants with MF expression (those plants scoring 1 to 5) should be provided when describing experimental germplasm and cultivars.

CHECK CULTIVARS

Category	Cultivar	MFI	Acceptable Range
Trifoliolate	Vernal	1.00	1.00-1.05
Low MF	Legend	1.86	1.40-2.40
Moderate MF	MultiKing I	2.55	2.00-3.00
High MF	Proof	3.35	2.80-3.80

SCIENTISTS WITH EXPERTISE

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