Addendum to the Woodfield et al. report in Volume 6. Information is reported on additional diploid and tetraploid lines of M. falcata and alfalfa checks. Some of the lines were included in tests conducted by Regional Project NE 1010, 2006.

Table 1. PLANT MATERIALS.

Population	Ploidy	Description
WFAL-1	2x	Narrow based *M. falcata* synthetics bred in Wisconsin during the late 1970's.
WFAL-3	2x	
PI 258754	2x	Selected plants from the original USSR *M. falcata* PI increased by open-pollination in isolation (Veronesi et al. 1988).
2x WISFAL-1	2x	Broad-based synthetic derived from 17 *M. falcata* PI's (Bingham, 1975; Bingham, 1990).
4x WISFAL-1	4x	New tetraploid *M. falcata* developed from a backcrossing program using 2x WISFAL-1 as the recurrent parent. Contains <2% *M. sativa* germplasm after five backcrosses (Bingham, 1990; Bingham, 1993).
W2xiso-1	2x	Isogenic 2x and 4x *M. sativa* 4x populations.
W4xiso-1	2x	(Bingham, 1991; Brummer et al. 1993; Kidambi et al. 1991; Volenec, 1988)
VERNAL	4x	Standard *M. sativa* cultivar. Winterhardy and resistant to bacterial wilt (Ledingham, 1940).
ONEIDA	4x	Standard *M. sativa* cultivar highly resistant to Phytophthora root rot, resistant to bacterial and Fusarium wilts (Murphy and Lowe, 1989).
ONEIDA VR	4x	Standard *M. sativa* cultivar developed from plants of 'Oneida' and 'Vertus' with selection for improved verticillium wilt resistance (Viands et al. 1990).

Table 1. Seedling establishment count, plant height at first flower, days to 50% flower and fall regrowth height of diploid and tetraploid *Medicago falcata* and *M. sativa* populations.

Population and Species	Ploidy	Seedling establishment	Plant height at first flower	Days to 50% flower	Fall regrowth height
		no. m^{-1}	mm	d	mm
M. falcata					
Wisdfal-1	2*x*	54	410	97	70
Wisdfal-3	2*x*	74	410	88	70
PI 258754	2*x*	47	390	92	80
2*x* WISFAL-1	2*x*	81	430	93	90
4*x* WISFAL-1	4*x*	31	520	86	100
M. sativa					
W2xiso-1	2*x*	88	370	88	100
W4xiso-1	4*x*	78	500	86	190
Vernal	4*x*	49	550	88	290
Oneida	4*x*	39	560	93	330
Oneida VR	4*x*	57	600	95	350
LSD (0.05)		12	18	1.5	12
CV(%)		25.7	5.0	2.1	11.6

Table 2. Forage yields of diploid and tetraploid *Medicago sativa* and *M. falcata* populations.

Population and Species	Ploidy	Forage DM Yields			
		1989	1990	1991 §	Total
		---	g DM m^{-2}		---
M. falcata					
Wisdfal-1	2*x*	1278	1012	1377	3667
Wisdfal-3	2*x*	1010	815	556	2382
PI 258754	2*x*	1075	815	937	2827
2*x* WISFAL-1	2*x*	1187	999	927	3114
4*x* WISFAL-1	4*x*	917	1714	1411	4041
M. sativa					
W2*x*iso-1	2*x*	735	707	377	1818
W4*x*iso-1	4*x*	981	1918	1368	4267
Vernal	4*x*	764	2175	1516	4455
Oneida	4*x*	779	2225	1538	4541
Oneida VR	4*x*	755	2278	1617	4650
LSD (0.05)		120	266	297	547
CV(%)		9.8	14.1	19.9	11.9

§ Diploids harvested on two-cut regime in 1991

Table 2a. Forage yields of diploid and tetraploid *Medicago sativa* and *M. falcata* populations.

		Forage DM Yields (1989-1991)							
		1989	1990				1991§		
Population	Ploidy	August	June	July	Sept	Total	June	July	S
		—	g DM m^{-2}						
Wisdfal-1	2x	1278	743	122	146	1012	647	-	7
Wisdfal-3	2x	1010	623	85	107	815	227	-	3
PI 258754	2x	1075	589	113	113	815	395	-	5
2x WISFAL-1	2x	1187	798	109	93	999	447	-	4
4x WISFAL-1	4x	917	1009	395	310	1714	751	412	2
W2xiso-1	2x	735	478	120	109	707	215	-	1
W4xiso-1	4x	981	1001	555	362	1918	749	308	3
Vernal	4x	764	1165	691	319	2175	815	356	3
Oneida	4x	779	1149	743	333	2225	795	398	3
Oneida VR	4x	755	1210	693	375	2278	849	388	3
LSD (0.05)		120	152	135	93	266	169	61	1
CV(%)		9.8	13.5	29.0	31.9	14.1	22.3	25.6	2

§ Diploids harvested on two-cut regime in 1991

Table 3. Forage quality, adjusted using mean stage by weight as a covariate, of diploid and tetraploid *Medicago sativa* and *M. falcata* populations.

Population	Ploidy	Crude Protein	ADF	NDF
		---	g kg^{-1}	---
2x WISFAL-1	2x	155	327	405
4x WISFAL-1	4x	180	319	381
W2xiso-1	2x	172	317	390
W4xiso-1	4x	185	336	395
Vernal	4x	171	350	423
LSD (0.05)		12	23	22
CV(%)		5.3	5.2	4.2