

Table 1. Biomass yields of different legumes from demonstration sites at CARC near Moccasin, organic farm near Stanford, and conventional farm at Boyes, MT.

Year	CARC (kg ha ⁻¹)				Organic farm (kg ha ⁻¹)				Conv. farm (kg ha ⁻¹)
	Winter lentil	Winter pea	Medic	Trefoil	Winter lentil	Winter pea	Medic	Trefoil	Winter pea
2008	1140	1233	226	0	2246	2982	0	0	2515
2009	1204	1260	--	--	2798	2379	--	--	4528
2010	1229	1484	--	--	--	--	--	--	--

Table 2. Biomass and grain yield of pea and lentil and spring wheat in 2007, and the 2008 grain yield of winter wheat following pea, lentil, and spring wheat under conventional tillage at CARC, Moccasin, MT

Cropping system	Biomass yield (kg ha ⁻¹)		Grain yield (kg ha ⁻¹)			Grain yield (kg ha ⁻¹)
	2007		2007			2008
	Winter pea	Winter lentil	Spring wheat	Spring pea	Winter lentil	Winter wheat
SF-WW*						2146
SP(g)-WW				999		1551
WP(h)-WW	2076					1842
WL(g)-WW					1025	1598
WL(m)-WW		1351				1993
SW-WW			1244			1034
LSD0.05						331.72

*SF-WW, summer fallow-winter wheat; SP(g)-WW, spring pea for grain-winter wheat; WP(h)-WW, winter pea for hay-winter wheat; WL(g)-WW, winter lentil for grain-winter wheat; winter lentil for green manure-winter wheat; SW-WW, spring wheat-winter wheat.

Table 3. Protein content of biomass and grain of pea and lentil and spring wheat in 2007, and the 2008 grain of winter wheat following pea, lentil, and spring wheat under conventional tillage at CARC near Moccasin, MT

Cropping system	Biomass protein (%)		Grain protein (%)			
	2007		2007			2008
	Winter pea	Winter lentil	Spring Wheat	Spring pea	Winter lentil	Winter wheat
SF-WW						11.21
SP(g)-WW				18.35		10.75
WP(h)-WW	14.18					11.42
WL(g)-WW					17.82	10.95
WL(m)-WW		17.82				11.26
SW-WW			14.55			11.14
LSD 0.05						0.46

*SF-WW, summer fallow-winter wheat; SP(g)-WW, spring pea for grain-winter wheat; WP(h)-WW, winter pea for hay-winter wheat; WL(g)-WW, winter lentil for grain-winter wheat; winter lentil for green manure-winter wheat; SW-WW, spring wheat-winter wheat.

Table 4. Biomass, grain yield and protein of pea, lentil and oat in 2007, and the 2008 winter wheat yield following different crops under organic farming near Stanford, MT.

Cropping system	2007				2008
	Biomass (kg ha ⁻¹)		Grain yield (kg ha ⁻¹)		Grain yield (kg ha ⁻¹)
	Winter pea	Winter lentil	Winter pea	Oat	Winter wheat
WP (grz)-WW*	2727				1482
WL(m) – WW		2055			1415
WP(g) -WW			566		970
Oat - WW				359	808
	Protein (%)				
WP (grz)-WW	14.0				13.2
WL(m) – WW		18.0			12.2
WP(g) -WW			-		12.2
Oat - WW				16.0	12.2

*WP(grz)-WW, winter pea (grazing)-winter wheat; WL(m)-WW, winter lentil (manure)-winter wheat; WP(g)-WW, winter pea(grain)-winter wheat; Oat-WW, Oat-winter wheat.