



Roger's Memorial Farm, Lincoln

2023 Summer Cover Crop Variety Trial (Rainfed)

UNIVERSITY of NEBRASKA
LINCOLN

Type	Species	Variety	Stand count (2ft ²)	Std err	Ground cover (%)	Std err	Height (H1) (cm)	Std err	Height (H2) (cm)	Std err	Biomass (Mg/ha)	Std err	Total C (%)	Std err	N (%)	Std err	C:N ratio	Std err
Grasses																		
1	Sorghum-sudan	Queen	27	1	26.5	1.5	16.0	0.6	202	10	13.4	2.1	44.3	0.21	1.04	0.14	45	7
2	Sorghum-sudan	WS902	29	4	17.6	2.0	15.1	0.4	159	9	16.7	0.4	44.3	0.29	0.81	0.10	57	7
3	Sorghum-sudan	Sugar	33	5	22.3	1.0	16.9	0.6	210	12	16.1	1.3	44.2	0.20	0.51	0.08	95	18
4	Sudan-grass	Piper	45	5	24.8	2.0	16.0	1.0	215	7	12.6	0.7	44.9	0.41	0.90	0.13	53	7
5	Forage-sorghum	WS404	24	3	13.1	1.5	12.8	0.8	160	17	12.6	2.8	44.7	0.31	0.96	0.09	48	5
6	Forage-sorghum	Viking	21	1	9.7	0.5	11.6	1.1	184	10	17.8	3.1	45.0	0.25	0.81	0.09	58	7
7	Pearl-millet	Tifleaf	52	3	27.0	2.0	15.7	1.0	143	7	14.8	2.1	43.6	0.34	0.52	0.09	89	11
8	Foxtail-millet	German	151	7	21.3	1.7	10.6	0.4	67	5	5.8	0.7	43.0	0.29	1.05	0.06	41	2
9	Corn	BMR grazing	11	1	12.0	1.4	16.2	1.5	134	4	9.7	1.3	45.0	0.49	1.11	0.16	43	6
Legumes																		
10	Sunnhemp	-	27	5	13.7	1.1	12.5	0.6	177	6	12.8	0.8	45.7	0.13	1.72	0.17	27	3
11	Cowpea	Iron	15	2	9.9	0.3	11.9	0.9	78	3	4.4	0.9	43.8	0.37	2.48	0.19	18	1
Broadleaves																		
12	Buckwheat	Mancan	40	2	25.2	2.8	10.0	0.4	91	3	7.1	0.1	41.8	0.53	0.83	0.07	51	4
13	Sunflower	Black oil	7	1	6.3	0.8	8.5	0.3	141	4	19.5	2.6	43.3	0.58	1.01	0.28	56	17
Mixes																		
14	Simple mix	4-species	30	3	27.9	1.5	14.3	0.8	191	7	10.7	1.1	43.8	0.30	0.94	0.17	51	8
15	Grazing mix	5-species	15	2	11.4	0.8	13.7	0.8	123	1	13.0	1.9	43.5	0.49	1.13	0.09	39	3
16	Soil builder	5-species	25	2	21.0	1.2	15.9	1.2	195	8	11.6	2.6	43.9	0.31	1.03	0.12	44	5
17	Pollinator	5-species	22	2	16.5	2.0	10.6	0.4	173	4	11.5	1.9	45.3	0.38	1.42	0.09	32	2
18	High diversity	10-species	31	3	16.9	1.3	14.1	0.5	202	6	17.4	1.3	43.9	0.11	0.89	0.09	51	6

†H: Height; Std err: Standard error; C: Carbon; N: nitrogen. The stand error value (n = 4) is for each corresponding parameter on the left column.

- ❖ Simple mix: sorghum-sudan (queen), sunnhemp, buckwheat, and sunflower
- ❖ Grazing mix: sudan-grass, pearl-millet, BMR corn, cowpea, and sunflower
- ❖ Soil builder: sorghum-sudan (queen), forage sorghum (WS404), sunnhemp, cowpea, and sunflower
- ❖ Pollinator: forage sorghum (WS404), sunnhemp, cowpea, buckwheat, and sunflower
- ❖ High diversity: sorghum-sudan (queen), sudan-grass, forage sorghum (WS404), pearl millet, foxtail millet, BMR corn, sunnhemp, cowpea, buckwheat, and sunflower
- ❖ Stand count was recorded two weeks after planting on July 24, 2023
- ❖ H1: Cover crop height recorded at the time of stand count (i.e., two weeks after planting on July 24, 2023)
- ❖ H2: Cover crop height recorded thirteen weeks after planting on October 05, 2023

Management details

Cooperator/site:	RMF/Lancaster County
Soil type:	Silty clay loam
Planting date:	July 10, 2023
Seeding depth:	1.5"
Soil moisture at planting:	Adequate
Implement/tools:	DCS research drill
Rows/plot:	6
Row spacing:	10"
Plot length:	50'
Plot width:	15'
Tillage:	No-till
Previous crop:	Wheat
Pre-plant herbicide:	None
Fertilizer at planting:	None
Irrigation:	None
Fertilizer N	None
Total precipitation during growing period:	5.8"
Termination date:	October 05, 2023