



Roger's Memorial Farm, Lincoln

2022 Summer Cover Crop Variety Trial (Rainfed)

UNIVERSITY of NEBRASKA
LINCOLN

Type	Species	Variety	Stand count (2ft ²)	Std err	Height (H1) (ft)	Std err	Height (H2) (ft)	Std err	Biomass (tons/acre)	Std err	CN ratio	Std err	CP (%)	Std err	TDN (%)	Std err	RFQ (%)	Std err
Grasses																		
1	Sorghum-sudan	Queen	3	0	2.0	0.11	4.1	0.11	2.1	0.6	53	6.1	4	0.5	68	0.5	142	5
2	Sorghum-sudan	WS902	4	1	1.8	0.10	2.7	0.18	1.0	0.2	32	3.2	9	0.9	71	1.5	193	11
3	Sorghum-sudan	Sugar	4	1	2.3	0.14	5.7	0.22	2.7	0.8	49	7.2	6	1.1	68	0.8	137	7
4	Sudan-grass	Piper	5	1	2.3	0.20	6.2	0.22	1.6	0.2	56	4.4	4	0.4	63	1.0	109	6
5	Forage-sorghum	WS404	4	2	1.8	0.15	4.3	0.21	1.8	0.6	46	9.7	8	2.4	72	1.8	180	23
6	Forage-sorghum	Viking	4	1	1.9	0.06	4.3	0.17	1.6	0.4	47	6.0	5	1.1	71	1.5	184	16
7	Pearl-millet	Tifleaf	3	0	1.6	0.12	3.2	0.09	1.8	0.3	27	2.0	9	0.6	69	1.2	160	8
8	Foxtail-millet	German	1	0	1.8	0.09	1.9	0.24	0.5	0.4	27	4.0	11	1.4	70	2.3	145	16
9	Corn	BMR grazing	11	2	2.3	0.07	2.8	0.08	1.2	0.2	49	2.1	6	0.3	71	1.8	163	8
10	Teff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legumes																		
11	Sunnhemp	-	5	1	0.8	0.04	3.3	0.50	0.8	0.3	18	2.0	-	-	-	-	-	-
12	Cowpea	Iron	8	2	1.0	0.07	1.5	0.16	0.7	0.1	22	1.5	-	-	-	-	-	-
Broadleaves																		
13	Buckwheat	Mancan	27	1	0.8	0.05	1.5	0.15	0.5	0.1	24	1.4	-	-	-	-	-	-
14	Sunflower	Black oil	2	1	0.9	0.05	2.2	0.25	0.8	0.2	23	2.7	-	-	-	-	-	-
15	African cabbage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mixes																		
16	Simple mix	4-species	13	1	-	-	-	-	1.5	0.3	43	5.3	-	-	-	-	-	-
17	Grazing mix	5-species	17	4	-	-	-	-	1.4	0.2	49	7.7	5	1.1	63	1.4	114	8
18	Soil builder	6-species	15	2	-	-	-	-	1.5	0.2	43	5.4	-	-	-	-	-	-
19	Pollinator	5-species	16	2	-	-	-	-	1.4	0.3	28	2.1	-	-	-	-	-	-
20	High diversity	12-species	16	1	-	-	-	-	1.4	0.1	39	6.5	-	-	-	-	-	-

†H: Height; Std err: Standard error; C: Carbon; N: nitrogen; CP: Crude Protein; TDN: Total Digestible Nutrients; RFQ: Relative Forage Quality. 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-grasses, pearl-millet, BMR corn, cowpea, and African cabbage
- ❖ Soil builder: sorghum-sudan (queen), forage sorghum (WS404), sunnhemp, cowpea, sunflower, and African cabbage
- ❖ 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, teff, sunnhemp, cowpea, buckwheat, sunflower, and African cabbage
- ❖ Stand count was recorded five weeks after planting on August 17, 2022
- ❖ Heights were recorded only in sole cover crops
- ❖ H1: Cover crop height recorded at the time of stand count (i.e., five weeks after planting on August 17, 2022)
- ❖ H2: Cover crop height recorded thirteen weeks after planting on October 11, 2022
- ❖ Only 10 treatments focusing grass species were selected to assess forage potential of summer cover crops

Management details

Cooperator/site:	RMF/Lancaster County
Soil type:	Silty clay loam
Planting date:	July 12, 2022
Seeding depth:	1.5"
Soil moisture at planting:	Fairly dry
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:	2.4"
Termination date:	October 11, 2022