ISU Monarch Data Summary for NCIG

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Table ?? and ?? provide mean count of nectar plant species averaged across all data collection events. Values in table represent the specific counting unit for each species, not necessarily a whole plant. Table ?? and ?? provide nectar plant species density (per 100m2) averaged across all data collection events.

Here are some heatmaps for density of species planted with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence.

Table 1: 2016 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

Nectar Plant Species	sillat	s2llst	tarmlb	tarm2a	therla	tper3a	terela	62nubt	s&nubt	forgt	6201gt	tnknla	tnkn2a	dront	sloigt	szoigt	tprdla	tprd2a	tsut2a	tverla
black eyed susan	1	1	1	1	1	1	1	'	1	'	1	1	1	1	2.63	1	1	1	1	1
common milkweed	ı	1	1	1	1	1	1	'	1	0.01	0.02	1	1	1	1	1	1	1	1	ı
golden alexanders	1	1	1	1	0.07	1	1	'	1	1	1	1	1	1	1	1	1	1	1	1
ox eye sunflower	1	1	1	1	1	1	1	0.04	1	1	1	1	1	-1	1	1	1	1	1	1

Table 2: 2016 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

s119vt	'	1.91	1	1	1	1	1	1	1	1	1	1	1	1	3.73	1
tsut2a	١.	1	- 1	1	1	- 1	- 1	1	1	1	1	1	1	1	1	1
sSbrqt	'	1	1	1	1	0.08	1	1	1	1	1	1	1	1	1	1
slbrqt	١	1	1	1	1	0.00	1	1	1	1	1	1	1	1	1	
s2oiqt	١.	1	1	•	1	-	1	1	1	1	1	1	ı	1	1	1
sloigt	١	1	1	1	1	1	0.17	1	1	0.22	1	0.02	0.03	1	0.02	
divort	١	1	1	1	0.03	1	1	1	1	1	1	1	1	1	1	1
tnkn2a		0.67	1	1	1	1	1	1	ı	•	1	1	ı	•	1	1
tnknla		1	1	1	1	-	1	1	1	1	1	1	1	1	1	1
s2orgt	0.34	1	1	1	1	0.76	0.19	1	1	1	1	1	1	1	1	1
slorgt	4.53	1	1	1	1	1.56	1	1	ı	1	1	1	1	1	1	1
s&nubt	'	1	1	1	1	1	0.10	1	ı	1	1	1	1	1	1	1
s2nubt	١.	1	1	١	1	0.01	.33	1	1	1	1	00.0	٠	1	0.12	1
terela	'	0.10	1	1	1	'	0.03	1	1	1	1	1	•	1	0.02	1
tper3a	١	1	1	1	1	1	0.05	90.0	0.01	1	1	1	١	1	1	1
tberla	١	1	1	1	1	1	0.15	1	1	1	1	1	١	1	0.01	1
tarm2a	80.0	1	1	1	1	1	1	1	1	1	1	1	١	1	1	1
d1mrst	'	0.31	1	1	1	1	1	1	1	1	1	1	•	1	1	0.05
s2llst	١	1	0.17	1	1	0.04	1	1	0.03	1	0.04	0.02	١	20.0	1	1
sIllat	1	ı	1	0.03	ı	1	ı		0.03	1	'	0.03	1	0.02	1	1
Nectar Plant Species	alfalfa	birdsfoot trefoil	black medic	bladder campion	canada goldenrod	canada thistle	carolina horsenettle	common cinquefoil	common dandelion	common evening primrose	common mallow	common mullein	common yarrow	compass plant	eastern daisy fleabane	flowering spurge

Table 3: 2016 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

	tverla	1	1	0.04	1	0.11	0.32	1	1	1	0.72	1	1	1	1
	tsut2a	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	tprd2a	1	1	1	0.04	1	1	1	1	1	1	1	1	1	0.04
	tprdla	١.	1	1	1	-1	1	1	1	- 1	- 1	1	1	1	1
	tpio2a	1	1	1	1	1	1	1	1	-	- 1	1	1	1	1
	sloiqt	1	1	1	1	1	1	1	1	1	1	0.17	0.02	1	1
	tnorlb	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	tnkn2a	1	1	1	1	0.07	0.50	1	1	1	4.74	1	1	1	1
1	tnknla	1	1	1	1	1	0.15	1	1	1	2.09	1	1	1	1
	e£orgt	1	0.18	1	1	1	6.93	1	1	1	1	1	1	1	1
	tgrola	1	- 0.43	1	1	1	1.37	1	1	1	1	1	1	1	1
1	s&aubt	0.17	1	1	1	1	1	1	0.02	1	1	1	1	1	1
1	e2nubt	1	1	1	1	1	1	1	1	1	0.02	1	1	1	1
	tcrela	1	1	1	1	0.86	1.38	1	1	1	0.18	1	1	1	1
	tber3a	1	1	1	1	1	2.48	1	1	1	- 0.32	1	1	0.22	1
	tberla	1	0.01	1	1	1	3.77 0.01	- 0.23	1	- 0.01	1	1	1	1	1
1	e2mret	1	1	1	1	1	3.77	1	1	1	0.08	1	1	1	1
(tarmlb	1	1	1	1	1.73	0.04	1	1	1	1	1	1	1	1
	sSllst	1	1	1	1	1	1	0.03	1	1	9.47	1	1	1	1
	sIllat	1	4.63	1	1	1	0.08	0.03	1	1	7.77	1	1	1	1
	Nectar Plant Species	lanceleaf fogfruit	morning glory	plantain	prickly lettuce	queen annes lace	red clover	smartweed	stinging nettle	velvetleaf	white clover	whitestar	whorled milkweed	wild mustard	yellow sweet clover

Table 4: 2016 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

stsovi	١.	-1	-1	1	1	-1	-1	1
tvanla	1.42	1	1	1	0.61	0.35	0.05	0.39
s feitt	١.	1	1	1	1	1	1	1
tpre8a	١.	-1	1	1	1	-1	-1	1
tpre7a	١.	1	1	1	1	1	1	1
tpre6a	١.	1	1	1	1	1	1	1
tpre5a	١.	- 1	1	1	1	- 1	- 1	1
tpre4a	١.	-1	1	1	1	-1	-1	1
tpre3a	1	- 1	1	1	1	- 1	- 1	- 1
tpre2a	١.	-1	1	-1	1	-1	-1	-1
tprela	١.	- 1	- 1	1	1	- 1	- 1	1
slaint	0.05	1	1	1	1	1	1	1
tjonla	ı	1	1	0.38	1	1	1	1
tharla	'	0.04	0.01	90.0	1	1	1	1
s1sAt	١.	1	1	1	1	1	1	1
tdavla	١.	1	1	1	1	1	1	1
tpcr2a	١.	1	1	1	1	1	1	1
tpcrla	١.	- 1	1	-1	1	- 1	- 1	-1
tappla	١.	-1	1	1	1	-1	-1	1
Nectar Plant Species	black eyed susan	blue vervain	common milkweed	hoary vervain	ox eye sunflower	purple prairie clover	sawtooth sunflower	wild bergamot

Table 5: 2016 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

	sl	la	₆ 2	1a	16	ßl	เล	18	la la	82	33		5a	Sa	हर	33		18	la
Nectar Plant Species	tapp	tpcr	tpcr,	tdav	stant	thar	Inoit	[əint	tpre]	tpre	tpre:	tpre-	tpre	tpre	fpre	tpre	L9itt	tvan	SOVI
alfalfa	1	1	1	1	1	0.22	1	'	1	'	1	'	1	1	1	1	1	1	2.01
brown eyed susan	١	1	1	1	1	1	1	0.15	1	1	1	'	1	1	1	1	- 1	0.69	1
canada goldenrod	ı	1	1	1	1	1	1.07	1	1	1	1	'	1	1	1	1	1	ı	1
canada thistle	1	1	- 1	1	- 1	1.02	1	1	1	1	1		1	1	1	1	- 1	0.03	1
chicory	1	1	- 1	- 1	- 1	1	0.15	1	1	1	1	1	1	1	1	1	- 1	1	1
common dandelion	1	1	1	1	1	1	1	1	0.01	0.05	0.27	0.27 0.37	0.19	0.02	0.17	0.18	- 1	1	1
eastern daisy fleabane	1	ı	1	1	1	1	0.01	ı	1	ı	1	'	1	1	1	1	1	1	1

Table 6: 2016 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

Nectar Plant Species	s1qqst	therla	tber2a	slvsbt	slsAt	strsatt	sInoįt	sləint	tprela	tpre2a	tpre3a	tpre4a	ьдэтqt	ьдэтдэ	tpre7a	tpre8a	sləitt	tvanla	tvosla
morning glory	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.01	1
musk thistle	1	1	1	'	1	ı	0.07	- 1	1	1	1	1	•	1	1	1	1	1	1
plantain	١	1	1	'	1	0.81	1	1	1.23	0.07	1	1	1	1	0.22	0.37	1	1	1
red clover	0.33	1	1	1	- 1	0.62	1.29	- 1	1	1	1	1	1	1	1	1	1	1	1
white clover	0.07	0.84	1	1	1		1	- 1	1.46 (0.13	7.63 6.37		6.24	0.83	3.49 3.66	3.66	0.69	0.39	1
wild parsnip	1	1	- 1	0.01	- 1	1	0.23	-1	1	1	1	1	1	1	1	1	1	1.11	0.04
yellow sweet clover	1	1	1	1	1	0.14	1	1	1	1	1	1	0.01	1	1	1	1	1	1

Table 7: 2016 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

զջպերդ	0.00
terala	1
tbyd2a	1
tbydla	1
Nectar Plant Species	common milkweed

Table 8: 2016 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

Table 9: 2016 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

i i	sydla	eyd2a	stata	զջպո	
Nectar Plant Species	11	17	ot	ıı	
red clover	0.58	0.58 0.70 2.30	2.30	ı	
white clover	6.45	$6.45 \ 7.57 \ 1.92$	1.92	ı	
white sweet clover	0.03	1	0.02	ī	
wild parsnip	0.00	1	1	ı	
yellow sweet clover	1	0.01	0.01 0.03	1	

Table 10: 2017 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

tverla	0.01	1	1	1	1	1	1	1	1	1
eStuet	0.01 0.00 0.02 0.00 0.01	ı	1	1	ı	1	1	0.03	1	ı
tprd2a	0.02	1	1	1	1	1	1	0.03	1	1
tprdla	0.00	1	1	1	1	1	1	1	1	ı
s2oiq3	0.01	1	1	1	1	1	1	0.05	1	ı
sloiqt	'	ı	1	1	ı	1	1	0.07	1	ı
tnorlb	0.06	10.02	1	1	0.01	1	1	0.16	1	1
спкпга			1	1	0.04	1	1	0.04	1	0.03
tnknla	- 0.02 0.02 0.15 0.37	ı	1	1	ı	1	1	0.01 0	1	ı
tgro2a	0.02	1	0.01	- 0.01	1	1	0.01	1	1	1
tgrola	0.02	1	1	1	1	1	0.01	1	1	1
s&aub3	. 1	ı	1	1	ı	1	1	0.00	1	ı
tdun2a	0.01	ı	1	1	ı	1	1	0.03	1	ı
terela	- 0.02 0.01	ı	1	1	ı	0.01	1	1	1	ı
грегЗа	. 1	1	1	- 1	1	1	1	1	1	- 1
tberla		1	1	1	1	1	1	1	0.07	1
tarm2a	0.01	0.00	1	1	1	1	1	0.03	1	1
tarmlb	'	ı	1	1	ı	1	1	0.02	1	ı
tall2a	. 1	1	-1	- 1	1	1	- 1	-1	1	- 1
tallla	0.02	ı	1	1	ı	1	1	1	1	ı
Nectar Plant Species	black eyed susan	blue vervain	culvers root	foxglove beardtongue	hoary vervain	ironweed	ox eye sunflower	partridge pea	prairie cinquefoil	vellow coneflower

Table 11: 2017 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

verla	1	1	1	0.70	ı	1	0.00	1	1	ı	1	0.00	0.00	1	ı	1	1	1	1	0.20	1	1
sut2a	ı	1	1	1	1	1	1	1	1	1	1	1	0.30	1	1	1	1	1	1	1	0.07	1
prd2a	ı l	1	1	1	1	1	0.01	1	1	1	1	1	0.02	1	1	1	1	0.04	1	1	1	1
prdla	ı	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.00	1	1	1
sSoiq	ı	1	5.36	1	2.55	1	1	1	1	1	90.0	1	1	1	1	1	1	1	1	0.24	1	1
ьloiq	ı	1	1	1	0.01	1	0.07	1	1	1	1	1	1	1	1	1	1	1	0.01	0.01	1	1
norlb	J	1	1	1	0.33	1	1	1	0.02	1	1	0.03	0.01	0.01	1	0.02	1	1	1	1	1	1
пкп2а	ı	1	1	1.84	1	1	1	1	1	0.03	1	0.04	0.21	1	1	1	0.89	1	1	1	1	1
ոևովո	ı	ı	1	5.74	ı	1	1	1	1	0.18	1	0.00	0.20	1	ı	1	0.02	1	1	1	0.01	1
gro2a	ı	1	1	1	ı	ı	1	1	0.04	1	1	1	0.02	1	ı	1	1	1	1	1	0.02	1
grola	ı	0.34	1	1	ı	1	1	1	1	ı	1	1	0.02	1	ı	1	1	1	1	1	0.33	1
e£aub	ı	1	1	1	1.64	1	0.02	1	1	1	1	1	1	1	0.00	1	1	0.01	1	0.74	1	0.00
dun2a	ı	1	1	1	2.98	1	0.01	1	1	ı	1	1	0.02	1	0.00	1	1	1	0.07	90.0	1	1
crela	ı	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.50	1	1
регЗа	ı	1	1	1	0.01	1	1	1	1	ı	1	0.01	0.12	1	ı	1	1	1	1	0.26	1	1
perla	ı	ı	1	1	0.01	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.23	1	1
srm2a	ı	0.16	1	1	ı	1	1	1	1	ı	1	1	0.11	1	ı	1	1	1	0.02	1	1	1
armlb		1	1	0.18	ı	1	0.01	1	1	ı	1	1	0.01	1	ı	1	1	1	1	1	1	1
all2a	ı	1	1	1	ı	1	0.01	0.03	1	ı	1	1	1	1	ı	1	1	1	1	1	1	1
allla	ı	1	1	1	0.03	89.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Notes Discharge	nectar Flant Species	alfalfa	bedstraw	birdsfoot trefoil	black medic	bladder campion	brown eyed susan	buffalobur nightshade	canada thistle	chicory	clasping venus looking glass	common cinquefoil	common dandelion	common mallow	common mullein	common purslane	common yarrow	compass plant	eastern black nightshade	eastern daisy fleabane	field pennycress	groundcherry

Table 12: 2017 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

tverla	'	1	١	1	1	ı	•	09.1	0.16	1	1	ı	ı	ı	1.85	1	1	ı	1
tsut2a	١.	1	1	1	1	1	1	1	'	0.00	98.0	1	1	1		1	1	1	0.02
sSbrqt	١.	1	١	1	0.01	1	0.02	1	1	1	0.00	٠	1	1	1	1	1	1	1
tprdla	١.	1	1	1	0.00	0.00	1	1	1	1	0.21	1	ı	1	1	1	1	1	1
ьSoiqt	١.	1	1	1	1	1	1	0.00	0.17	1	1	1	1	1	1	1	0.01	1	0.02
sloigt	١	1	1	ı	1	1	1	1	0.01	1	1	1	1	1	1	1	ı	0.02	1
diront	١.	1	1	1	1	1	1	0.07	0.01	1	1	•	1	1	0.18	1	1	1	0.40
tnkn2a	١	1	1	1	1	1	1	0.68	3.96	1	0.03	•	2.57	1	1.74	1	1	1	1
tnknla	1.07	1	0.01	1	1	1	1	0.43	3.60	1	0.04	1	7.83	0.00	0.75	1	0.01	1	1
s201gt	'	1	1	1	1	1	1	1	8.98	1	0.53	1	0.17	1	1	1	0.11	1	1
slorgt	'	1	1	1	1	1	1	1	8.44	1	0.04	'	0.08	1	0.03	1	0.31	1	1
seanbt	'	1	0.00	0.01	1	1	1	0.08	0.09	1	1	0.15	0.11	1	90.9	1	1	0.02	0.32
e2nubt	'	1	0.13	0.03	1	1	1	0.02	0.08	1	1	1	0.02	1	0.75	1	1	1	0.10
terela	'	1	1	1	1	1	1	0.97	0.12	1	1	1	0.07	1	0.01	1	1	1	1
tper3a	١	1	1	1	1	1	1	1	7.13	1	1	1	0.95	1	0.67	1	1	1	1
tberla	١	1	1	1	1	1	1	1	1.35	1	1	1	4.37	1	1	1	1	1	1
e2mret	١	1	0.02	1	1	1	1	1	1.30	1	0.09	1	0.03	1	0.87	1	1	1	1
d1mrst	١	1	1	1	1	1	1	4.49	0.49	1	0.02	1	0.02	1	0.04	1	1	1	1
e2llet	'	1	1	1	1	0.07	1	1	1	1	1	1	0.29	1	1	0.05	1	1	1
sIllat	1	0.05	1	0.27	1	1	240.00	1	0.05	1	1	1	0.03	1	1	1	1	1	1
Nectar Plant Species	hawkweed	morning glory	musk thistle	pineapple weed	prickly sowthistle	prostrate knotweed	prostrate vervain	queen annes lace	red clover	rough avens	shepherds purse	shortstalk chickweed	smartweed	venice mallow	white clover	white sweet clover	wild mustard	yellow sweet clover	yellow wood sorrel

Table 13: 2017 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

	tvosla	0.01	1	1	1	0.02	1	1	
	tvanla	1	0.04	1	1	0.49	0.01	0.01	1
	sləitt	0.01	1	1	0.01	0.04 0.49 (1	1	
	tbre8a	١.	-1	1	1	1	1	1	1
	tpre7a	0.00	1	1	1	1	1	1	
	ьдэгдэ	- 0.03	1	1	1	0.01	1	1	
	tpre5a	١.	- 1	1	1	1	1	1	1
	tpre4a	0.01	1	1	1	1	1	1	١
	tpre3a	0.02	1	1	1	0.00	1	1	0.02
	tpre2a	0.02	1	1	1	1	1	1	١
	tprela	0.00	1	1	1	1	1	1	
	tniela	0.03	1	1	1	0.03	1	1	1
	tjonla	0.01 0.03 0.00 0.02 0.02	1	0.28	1	0.03	1	1	1
	tharla	١	1	0.01	1	1	1	1	1
	sfsit	١.	1	1	1	1	1	1	1
	stvsbt	0.03	1	1	1	1	1	1	1
	tber2a	1	1	1	1	80.0	1	1	1
	tberla	١	1	1	1	0.10 0.08	1	1	1
,	tappla	0.21	0.02	1	1	0.02	1	1	1
	Nectar Plant Species	black eyed susan	blue vervain	hoary vervain	ox eye sunflower	partridge pea	purple prairie clover	wild bergamot	vellow coneflower

Table 14: 2017 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

Dlant Spacing	slqqs	pcrla	рст2а	slvsb:	sfsh.	harla	sInoį	sləin	prela	pre2a	pre3a	pre4a	pre5a	pre6a	syre7a	bre8a	sleit	sinsv:	slsov
		1 23))	t '))	t 1	ı '	ļ '	ļ) '	ļ '	ı '	ı ')) t	ı ı
0.02		2.04	04 0.03 0.	0.22	1	0.52	1	1	0.13	1	0.08	0.01	0.07	0.01	1	- 0.02	1	0.67	- 1
1		1	1	0.03	- 1	1	1	- 1	1	1	1	'	1	1	- 1	1	1	1	- 1
1		1	1	1	- 1	1	0.04	- 1	1	1	1	'	1	1	- 1	1	1		- 1
ı		1	1	1	1	1	'	1	1	1	1	0.11	1	1	1	0.00	1	1	- 1
_		0.11	0.03	1	1	1	1	1	0.01	90.0	90.0	0.03	0.02	1	1	1	0.03		- 1
0.01		1	1	1	- 1	1	1	1	1	1	1	'	1	1	1	1	1	1	- 1
ı		1	1	1	1	1	1	1	1	0.33	1	1	1	1	1	1	1	'	1

Table 15: 2017 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

tvosla	0.13	1	1	1	1	1	1	1	1	1	0.34	1	1	1	1	1
sInsvt	1	1	1	0.01	1	1	1	1	1	1	1	1	1	1	0.05	0.07
sleitt	'	1	1	1	1	1	1	1	1	1	0.12	1	1	1	1	1
tpre8a	'	1	1	1	1	1	1.55	1	1	1	0.07	1	0.22	1	1	1
tpre7a	'	1	1	1	1	1	1	1	1	0.46	1	1	0.14	1	1	1
tpre6a	'	1	1	1	1	1	1	1	1	1	2.38	1	90.0	1	1	1
tpre5a	'	1	1	1	1	1	1	1	1	1	0.11	1	0.49	1	1	1
tpre4a	١	1	1	1	1	1	1	1	1	1	0.18	1	0.65	1	1	1
tpre3a	1	1	1	1	1	1	1	0.01	1	'	0.15	1	0.18	1	1	-
tpre2a	'	1	1	1	0.01	0.11	1	1	1	1	1.51	1	0.03	1	1	1
tprela	1	1	1	1	1	1	1	1	1	1	1	1	0.11	1	1	1
sləint	1	1	1	15.23	1	1	1	1	0.41	0.01	1.09	1	1	1	1	1
tionla	1	1	1	1	1	1	1	1	0.04	1	1	1	1	0.09	0.08	1
tharla	١	0.49	1	0.26	1	1	1	1	1.82	1	0.08	1	0.21	1	1	1
slsht	1	1	1	1	1	1	1	1	1	1	28.25	1	ı	1	1	1
tdavla	١,	1	1	1	1	1	ī	1	1	1	1	1	ı	1	1	1
tber2a	١.	1	1	1	1	1	1	1	1	1	0.79	1	1	1	1	1
tpcrla	١.	1	1	1	1	1	1.40	1	1	1	0.35	1	0.67	1	1	1
s1qqst	ı	1	0.41	1	1	1	1	1	2.11	1	1.68	0.01	4.98	1	1	1
Nectar Plant Species	hawkweed	hoary alyssum	marestail	morning glory	musk thistle	pineapple weed	prostrate vervain	queen annes lace	red clover	shepherds purse	smartweed	velvetleaf	white clover	whorled milkweed	wild parsnip	yellow sweet clover

Table 16: 2017 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

tcrala tuth3b	0.05 0.00 0.01 0.17	- 0.01	1	0.08 0.05 0.15 0.05
tbyd2a	0.00	ı	ı	0.050
tbydla	0.05	1	0.00	0.08
Nectar Plant Species	black eyed susan	common milkweed	hoary vervain	partridge pea

Table 17: 2017 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

Nectar Plant Species	tbydla	tbyd2a	terala	զջպու
alfalfa	1.13	1.13 0.54 0.10	0.10	'
black medic	0.52	0.52 3.77	1	'
brown eyed susan	1	1	0.01	'
canada thistle	1	1	1	0.01
common cinquefoil	1	1	0.14	1
common dandelion	0.27	0.27 - 0.55	1	0.01
common evening primrose	1	1	0.17	1
eastern daisy fleabane	1	1	0.35	1

Table 18: 2017 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

	stby	yd2a	sisi	d£dt1
Nectar Plant Species	q1	q1	ot	na
hawkweed	1	1	1	1.28
musk thistle	1	1	1	0.00
prickly sowthistle	0.04	0.04 0.05	1	1
prostrate vervain	1	1	0.02	1
red clover	0.68	0.68 0.15	2.60	1
shepherds purse	0.23	0.41	1	1
smartweed	1	1	0.54	1
white clover	4.50	$4.50 \ 4.03$	2.81	1
wild mustard	1	0.07	1	1

Table 19: 2018 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

tverla	0.05	1	1	1	1	1	1	1	1	1	0.08	1	0.04	1	1	1	1	1	1	0.02
tsut2a	1	1	0.02	0.25	1	1	0.04	1	1	0.07	1.72	0.01	1	1	1	1	1	0.03	0.70	15.93
tprd2a	1.27	0.08	1	0.08	1	1	0.04	1	1	1	0.34	1	0.10	1	1	0.01	1	1	0.11	1.65
tprdla	0.15	0.02	1	0.27	1	ı	0.05	1	1	1	0.04	1	0.03	1	0.07	1	1	1	0.73	1.83
s2oiqt	0.72	0.17	1	0.04	1	0.01	0.09	0.00	0.00	1	1.83	1	0.08	1	1	1	1	0.08	0.22	3.41
sloigt	0.88	1	1	1	1	1	1	1	1	1	0.20	0.02	0.16	1	1	1	1	1	1	0.30
dlront	1	45.77	1	0.89	0.02	1	0.88	1	1	1	2.91	1	0.02	0.01	1	1	1	0.04	1.15	4.40
спкпга	0.02	1.03	1	0.19	1	ı	1	ı	1	ı	1.25	1	1	ı	0.00	1	1	1	0.98	5.20
tnknla	1	0.62	1	1	0.02	1	1	1	1	1	0.81	1	1	1	1	1	1	0.07	0.56	5.03
tgro2a	1	1	1	1	1	1	1	1	1	1	0.20	1	1	1	1	1	1	1	0.21	1.05
tgrola	1	1	1	1	0.01	1	0.17	1	1	1	1.28	1	1	1	1	1	0.03	1	2.08	2.76
s&aubt	0.04	0.35	1	1	1	1	1.28	0.01	1	1	0.49	1	1	1	0.01	1	1	1	1	06.0
e2nubt	0.07	1	1	1	1	1	0.10	1	1	1	0.83	1	0.01	1	1	1	1	1	1	09.0
terela	1.11	1	1	1	1	1	1	1	1	1	0.15	1	1	1	1	1	1	1	0.02	0.10
ther3a	1	ı	1	0.01	1	ı	ı	1	1	ı	0.03	1	1	1	1	1	1	1	0.01	0.13
therla	1	0.19	1	1	1	1	1	1	1	1	0.14	1	1	1	1	1	1	1	1	0.16
tarm2a	1	1	1	00.0	0.02	1	1	1	1	1	99.0	1	1	1	1	1	90.0	1	0.02	1.55
d1mrst	0.03	ı	1	0.08	0.01	ı	ı	1	1	ı	0.10	1	1	1	1	1	1	1	1	0.49
s2llst).11	1	1	1	•	1	1	1	1	0.03	0.03	1	1	1	1	1	1	1).12	0.78
sillat	1	0.02	1	1	1	ı	0.01	ı	1	1	0.10	1	1	ı	1	1	1	1	0.06	1.13
Nectar Plant Species	black eyed susan	blue vervain	canada milk vetch	foxglove beardtongue	golden alexanders	great blue lobelia	hoary vervain	ironweed	leadplant	new england aster	ox eye sunflower	pale purple coneflower	partridge pea	rairie blazing star	prairie cinquefoil	purple prairie clover	swamp milkweed	virginia mountain mint	wild bergamot	yellow coneflower
	b.	þ	$\ddot{\circ}$	$_{\rm g}$	<u>ത</u>	50	ď	ir	le	ŭ	ô	ä	ğ	ū	ď	ď	\mathbf{s}	>	B	,

Table 20: 2018 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

Nectar Plant Species	sillat	s2llst	d1mrst	tarm2a	therla	tber3a	terela	£dun2a	tdun3a	alorgt	tgro2a	tnknla	tnkn2a	tnorlb	stoiqt	s2oiqt	tprdla	tprd2a	tsut2a	tverla
alfalfa	ı	1	'	2.47	١.	١	1	'	1	0.26	١.	١.	'	'		'	,	,	1	1
american bellflower	1	1	1	1	1	1	1	1	1	1	1	1	'	0.03	1	1	1	1	1	1
birdsfoot trefoil	1	1	0.42	1	1	1	0.03	0.01	1.12	1	1	9.73	10.25	1	1	1	1	1	1	3.32
black medic	0.10	0.03	1	1	1	1	1	1.35	1	١	1	1	1	1	0.38	0.02	ı	'	01.0	'
bladder campion	2.47	0.53	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
bull thistle	1	1	1	1	1	1	0.01	1	1	1	1	0.02	0.01	1	1	1	0	.02	1	1
canada goldenrod	1	1	1	1	1	1	1	1	1	١	1	1	1	0.15	1	1	1	1	1	1
canada thistle	1	0.23	1	0.03	1	1	1	١	1	0.15	0.02	0.13	1	0.39	١	1	ı	ì	1.40	1
carolina horsenettle	1	1	1	1	0.11	0.02	1	90.0	0.05	1	0.04	1	1	1	0.00	1	ı	ı	1	1
catnip	1	1	1	1	1	1	1	0.16	1	0.33	1	1	1	1	1	1	1	1	2.21	1
chicory	1	1	1	1	1	1	1	1	1	1	1	1.07	1	1	ı	1	1	ı	1	1
common cinquefoil	2.53	0.42	0.01	1	0.01	1	0.01	1	0.01	١	1	0.18	0.13	0.08	١	1	ı	ı	1	1
common dandelion	0.01	0.01	1	ı	1	0.01	ı	0.00	0.01	1	1	ı	1	0.01	1	1	1	'	0.01	ı
common evening primrose	1	1	1	1		0.02	1	1	1	1	1	1	1	0.02	0.02	1	0	.01	0.03	1
common mullein	1	1	1	1	0.01	1	1	0.18	0.19	1	1	1	1	1	0.00	0.01	ı	ı	1	1
common selfheal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	ı	ı	1	0.30
common sneezeweed	1	1	1	1	1	1	1	1	1	1	1	1	'	1	1	0.12	ı	ı	1	1
common yarrow	1	1	1	1	1	1	0.03	1	1	1	1	1	0.24	1	0.26	1	ı	ı	1	1
compass plant	1	1	0.03	1	1	1	1	1	1	1	1	1	1	1	ı	1	ı	ı	1	1
deptford pink	1	1	1	1	1	1	0.80	1	1	1	1	1	1	1	1	1	ı	ı	1	1
eastern daisy fleabane	1	1	3.26	1	1.87	3.95	9.28	0.52	3.02	1	1	0.01	0.04	0.02	1.27	17.02	0	.05	1	10.25
field pennycress	1	1	1	•	١	١	1	0.04	1	٠	١	١	1	•	ı	ı	ı	ı	1	1
field thistle	1	1	1	1	1	1	1	1	1	1	1	1	1	0.31	1	1	ī	1	1	0.10
flowering spurge	'	1	90.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Table 21: 2018 Nectar plant species density: average density (count / m2) across all rounds for NCIG grant transects

tverla	1	,	,	,	ı		1	1	ı	,	26	14	,	ı	ı	1	1	88		,	,	ı	,	1	ı	
tsut2a		1	18	,	ı		1	1	ı	,	.5	14 4.	03	13		1	1	0.31 4.8	00.	,	,	ı	,	ı	0.02	1
s2b1qt	,	,	39 0.	,	1	1	1)1	1	0]	1	- 0.14	-0.03	- 0	1	1	1	- 0.	- 0.0	,		ı	,	1		1
tprdla		,	- 0.39	,	1		1	- 0.0		- 0.1	1	1	,	ı		1	1	1				ı	,	1	-0.12	1
sSoigt albagt	ı	,	,	,	0.01	ı	ı	1	ı	ı	ı	66.9	ı	ı	ı	ı	ı	.01	ı	ı	ı	ı	ı	ı	1.59	ı
ьloiqt		1		1	0.02 0	ı	ı	1	•	1	0.98	1.99 6.	1	ı	ı	ı	ı	- 0	ı	2.41	ı	ı	ı	ı	0.20	1
divont	ı	1	,	,	'	,	1	1	,	ı	'	0.09	0.01	,	ı	,	ı	90:	0.50	. 1	,	ı	.03	.01	0.13 (,
tnkn2a		1	,	,	1		1	1	,	ı	0.33	1.84 0.	- 0	,	ı	1	ı	.95 1.	.0	ı	ı	ı	.0	- 0	0.17 0.	,
tnknla	ı	1	,	1	ı	,	0.02	1	ı	1	0.19 0	13.32 11	1	,	ı	1	ı	97 4	0.01	,	,	,	,	ı	0.29 0	,
n=0.791		_		~ 1			. 0.							•				4.	. 0.							
s2o1gt		0.01		0.02	•		•	•			0.01	51.36		0.49			•					•			0.14	·
slorgt	1	1	1	0.03	1	1	1	0.19	1	1	1	13.05	1	3.17	1	1	1	1	0.11	1	0.84	1.94	1	1	0.08	1
s&nubt	0.04	1	1	1	0.18	1	0.01	0.03	ı	ı	0.37	1.03	ı	0.10	0.02	1	1	17.47	1	1	1	1	1	1	1	1
62 aubt		1	1	1	0.41	1	1	0.17	1	ı	90.0	0.54	ı	0.02	0.23	1	1	4.32	1	1	1	ı	0.20	1	0.13	0.32
terela	ı	1	20.0	ı	1	20.0	ı	1.18	٠	1	9.43	0.56	1	٠	ı	90.0	0.01	- 1	٠	ı	ı	ı	80.0	ı	1.93	•
tber3a		1	'	0.04	ı	'	ı	1	ı	ı	1	17.79	ı	0.40	ı	'	'	2.45	0.37	ı	ı	ı	0.52 (ı	,	,
tberla		1	,	0.08 0	1		1	1	1	,	1	_	,		10	1	1	_,,	0	,	,	9.18	_	1	35	1
szmrst	ı	1	0.31	- 0.0	ı	,	0.17	1	,	ı	1	44 3.95	ı	- 3.40	- 0	,	ı	2.40 0.24	,	,	,	- 0	0.02 0.71	ı	0.06 0.05	1
d1mrst	,	1	.0	,	2		- 0.	1	,	,	4	8 32.44	,	1			1		Π		,	1	. 0.	1		1
					0.0						5.84	17.38				0.01		0.12	0.9						0.39	
s2llst	'	'	'	'	0.03 0.22	0.01	1	'	0.02	'	1	1.37 0.57	'	1.17 0.19	1	1	1	5.20	1			'	'	'	0.13 0.26	1
sillst	'	1	1	0.01	0.03	1	0.09	0.01	1	1	1	1.37	1	1.17	1	1	1	13.97 5.20	0.03	1	1	1	'	1	0.13	1
Nectar Plant Species	lanceleaf fogfruit	lesser burdock	marestail	morning glory	musk thistle	ox eye daisy	plantain	prickly lettuce	prickly sowthistle	prostrate vervain	queen annes lace	red clover	rough avens	smartweed	stinging nettle	tall thistle	venice mallow	white clover	white sweet clover	whorled milkweed	wild cucumber	wild mustard	wild parsnip	yellow salsify	yellow sweet clover	yellow wood sorrel

Table 22: 2018 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

tvosla	2.88	1	1	1	0.63	0.14	1	1	0.77	1	1	1	ı	1	1	1	1.85	4.85
sInsvt	1.67	1	1	1	1	'	1	1	3.35	0.03	0.01	1	0.58	'	'	'	0.40	0.46
ttiela	'	1	0.03	0.03	0.53	0.06	0.36	1	4.27	0.08	1	1	0.03	1	1	1	2.70	20.40
tpre8a		1	1	1	0.01	0.08	0.01	1	1.45	ı	0.02	1	1	ı	ı	1	0.53	5.28
tpre7a	0.09	1	1	1	1	1	1	1	0.36	1	1	1	1	1	1	0.46	0.23	3.35
tpre6a	0.05	0.10	1	1	0.77	1	0.07	1	0.03	1	1	1	0.01	1	0.45	0.01	1	6.74
tpre5a	0.20	0.35	1	1	0.31	1	0.07	1	1.67	1	1	1	1	1	1	1	0.32	8.37
tpre4a	0.05	1	1	0.01	0.02	1	0.11	1	1.83	1	1	1	1	1	1	1	0.72	6.90
tpre3a	'	99.0	1	1	0.26	1	0.24	1	4.77	1	1	1	1	0.01	1	1	0.51	8.60
tpre2a	١.	1	1	1	0.25	1	0.19	1	1.90	0.01	0.01	1	1	1	1	1	0.72	7.88
tprela	١.	0.25	1	1	0.13	1	0.07	1	1.38	1	0.02	1	1	1	0.12	1	0.50	5.12
sləint	6.33	1	1	0.03	1	1	1.36	1	1.69	0.01	0.01	1	1	1	1	1	1	0.49
tjonla	0.02	1	1	1	1	1	0.04	1	0.26	1	1	1	1	1	1	1	1	4.10 0.63 0.49
tharla	0.11	1	1	1	1	1	0.64	0.02	0.74	1	1	1	1	1	1	1	1	4.10
sfsit	,	1	1	1	1	ı	1	1	1	ı	1	1	1	ı	ı	1	1	- 1
stvsbt	0.04	1	1	1	0.47	0.13	1	1	0.95	1	1	1	1	1	1	1	0.48	3.15
tber2a	١	1	1	1	1	1	0.01	0.03	0.09	0.03	1	0.01	1	1	1	1	1	2.87
tberla	'	1	1	1	1	1	0.02	1	1.42	1	1	1	1	1	1	1	1	2.38
tappla	'	1	1	1	1	'	0.08	0.01	1.25	'	1	1	1	'	'	1	0.01	3.07
Nectar Plant Species	black eyed susan	olue vervain	butterfly milkweed	canada milk vetch	foxglove beardtongue	golden alexanders	hoary vervain	ironweed	ox eye sunflower	pale purple coneflower	partridge pea	prairie cinquefoil	purple prairie clover	tiff goldenrod	irginia mountain mint	white heath aster	wild bergamot	yellow coneflower

Table 23: 2018 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

frosla	9.23	1	1	1	1	1	1	1	•	1	1	1	0.09	1	1	1	0.01	1
sInsvt	1	ı	19.20	1	1	1	1	1	1	1	1	1	1	ı	ı	ı	1	1
ttiela	'	1	1	1	1	1	0.72	0.78	1	1	0.56	0.23	1	١	١	1	1	1
tpre8a	1	1	0.37	1	ı	1	1	1	1	1	2.64	0.09	1	1	1	1	1	1
tpre7a	'	1	0.44	1	1	0.00	1	1	1	1	1.92	0.01	1	1	0.30	1	1	1
гргеба	'	1	1	1	1	1	1	1	1	1	4.73	0.01	1	'	0.03	1	1	1
tpre5a	'	1	0.22	1	0.38	1	1	1	1	1	0.35	0.06	0.23	'	0.00	1	1	1
tpre4a	1	1	0.03	0.15	ı	1	1	1	1	1	4.10	0.04	1	1	0.01	1	0.01	1
tpre3a	1	1	0.03	0.22	0.01	0.02	1	0.02	0.11	1	2.73	0.05	1	1	0.01	1	1	1
tpre2a	1	1	0.33	1	ı	ı	1	0.02	1	ı	1.19	0.12	1	1	2.77	1	0.01	1
tprela	'	1	1.08	0.03	0.00	1	1	0.15	1	1	1.18	0.08	0.36	'	0.01	1	0.03	1
tniela	'	1	0.33	1	1	1	1	0.12	1	1	1	1	1	1	1	1	1	1
sInojt	0.03	1	23.93	1	1	1	1	1	1	0.67	1	1	0.01	0.02	1.33	1	0.03	1
tharla	1	0.03	0.78	0.22	1	1	1	1	1	1	0.03	1	1	1	1	1	1	1
stsat	1	1	1	1	1	ı	1	1	1	1	1	1	1	1	1	1	1	1
stvsbt	'	1	1	1	1	1	1	0.39	1	1	1	1	0.08	1	1	1	1	90.0
tber2a	'	1	1	1	1	'	1	1	1	1	1	0.05	1	1.30	1	2.02	1	1
therla	1	1	1.71	1	1	1	1	1	1	1	0.46	0.10	0.05	1	1	0.27	1	1
tappla	0.01	1	1	1	1	1	1	0.17	1	1	0.06	1	1	1	1	1	1	1
Nectar Plant Species	alfalfa	birdsfoot trefoil	black medic	bladder campion	bog yellow-cress	canada goldenrod	canada lettuce	canada thistle	catnip	chicory	common cinquefoil	common dandelion	common evening primrose	cup plant	eastern daisy fleabane	field pennycress	field thistle	groundcherry

Table 24: 2018 Nectar plant species density: average density (count / m2) across all rounds for Pork and Soy grant transects

berls: davls: fisla stra
13 13
17.97
0.11
$0.03 \ 0.01 \ 0.01 \ - 0.0$
.03
1
1
.13
0.01
1
3.53 13.11
1
0.09 1.37
0.33 - 0.06
ı
14.34 0.03 4.44
$2.51 \ 0.01 \ 21.26$ -
- 21.51 -
0.47 - 0.22
1

Table 25: 2018 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

	,	,		
	ydla	yd2a	sls	qғų:
Nectar Plant Species	tp:	tp:	Юţ	.na
black eyed susan	0.00	0.05	0.00 0.05 0.05 2.29	2.29
blue vervain	'	1	0.02	1
butterfly milkweed	0.03	1	1	1
foxglove beardtongue	0.06	0.09	1	1
golden alexanders	0.00	1	1	1
hoary vervain	0.09	0.01	0.02	0.00
ox eye sunflower	2.36	1.44	0.69	0.13
pale purple coneflower	0.01	0.01	1	1
partridge pea		1	1	0.08
prairie cinquefoil	1	0.00	1	1
purple prairie clover	1	1	0.00	1
swamp milkweed	1	0.01	1	1
tall boneset	1	1	0.01	1
wild bergamot	0.68	0.68 2.26	1	0.13
yellow coneflower	5.90	6.87	6.87 1.66	1.82

Table 26: 2018 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

Nectar Plant Species	tbydla	tbyd2a	terala	զջպերդ
alfalfa	2.73	2.73 0.52	1	1
prown eyed susan	1	1	1	0.03
canada thistle	1	0.03	1	0.07
common cinquefoil	1	1	1.64	0.02
common dandelion	0.01	0.01	1	1
common mullein	1	0.00	1	0.04
eastern daisy fleabane	1	1	0.34	1

Table 27: 2018 Nectar plant species density: average density (count / m2) across all rounds for IACIG grant transects

	вIb	e2b	sla	զջդ
Nectar Plant Species	грх	ұрх	stor	լդոդ
marestail	1	1	3.65	$3.65 ext{ } 1.67$
morning glory	ı	1	1	0.00
musk thistle	ı	ı	1	0.05
panicledleaf tick trefoil	1	1	1	0.03
prickly lettuce	1	1	0.05	'
red clover	2.06	1.11	9.45	'
white clover	28.82	13.27	10.94	1.20
white sweet clover	1	0.07	0.08	'
white vervain	1	1	1	0.30
wild mustard	ı	ı	0.43	0.13
wild parsnip	0.15	0.14	1	2.38
yellow sweet clover	1	1.83	1	0.03

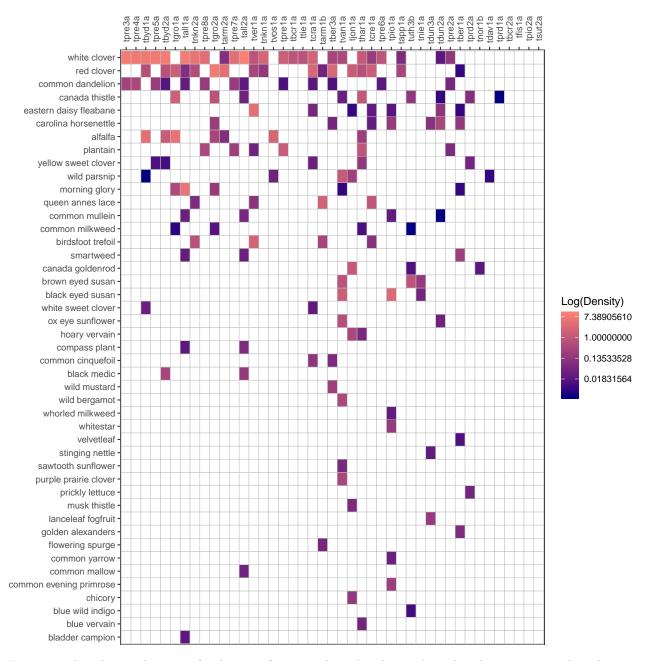


Figure 1: This plot is a heatmap for density of species planted and non-planted with transects on the columns and species on the rows sorting transects by average density and sorting species by avg presence for year 2016.

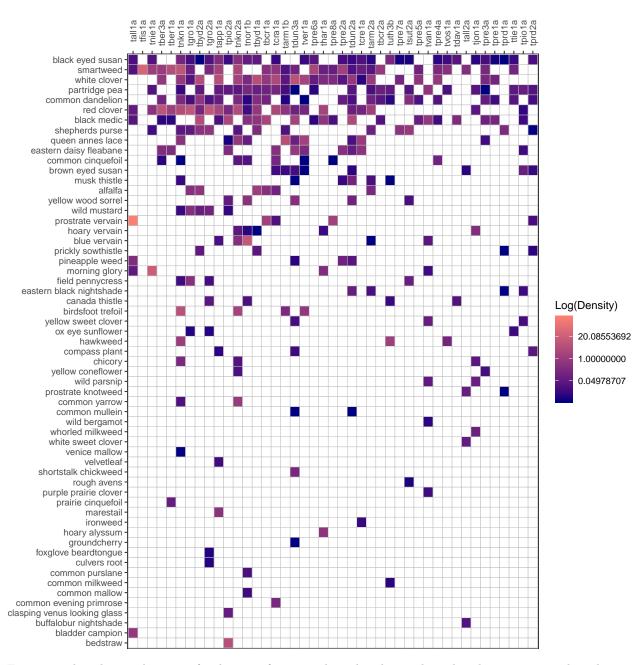


Figure 2: This plot is a heatmap for density of species planted and non-planted with transects on the columns and species on the rows sorting transects by average density and sorting species by avg presence for year 2017.

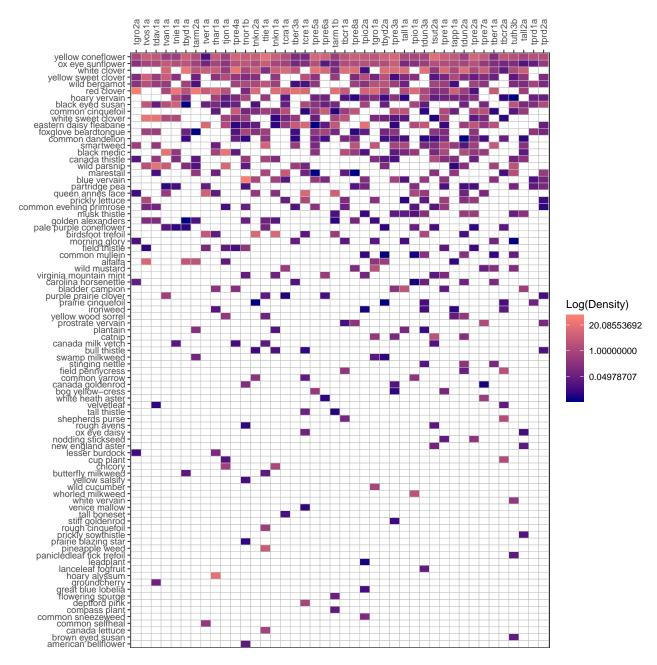


Figure 3: This plot is a heatmap for density of species planted and non-planted with transects on the columns and species on the rows sorting transects by average density and sorting species by avg presence for year 2018.

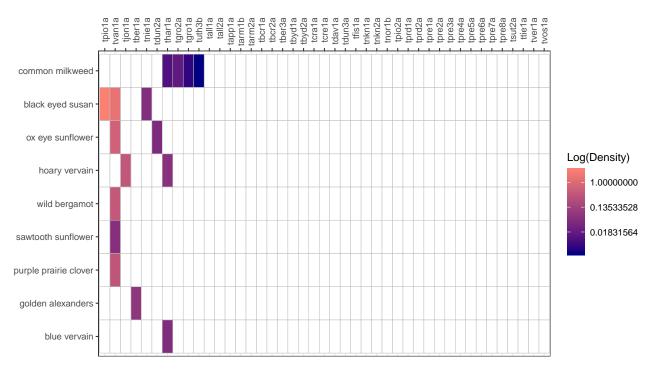


Figure 4: This plot is a heatmap for density of species planted with transects on the columns and species on the rows sorting transects by average density and sorting species by avg presence for year 2016.

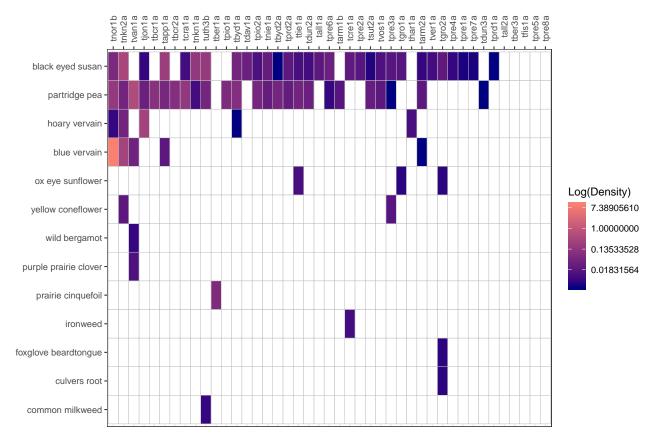


Figure 5: This plot is a heatmap for density of species planted with transects on the columns and species on the rows sorting transects by average density and sorting species by avg presence for year 2017.

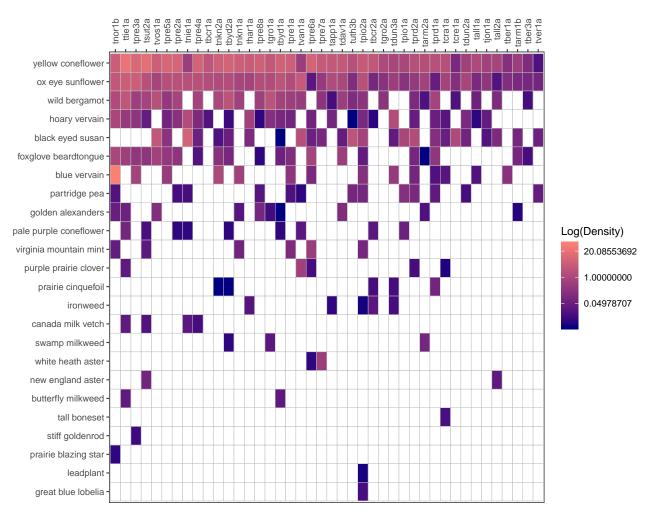


Figure 6: This plot is a heatmap for density of species planted with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2018.

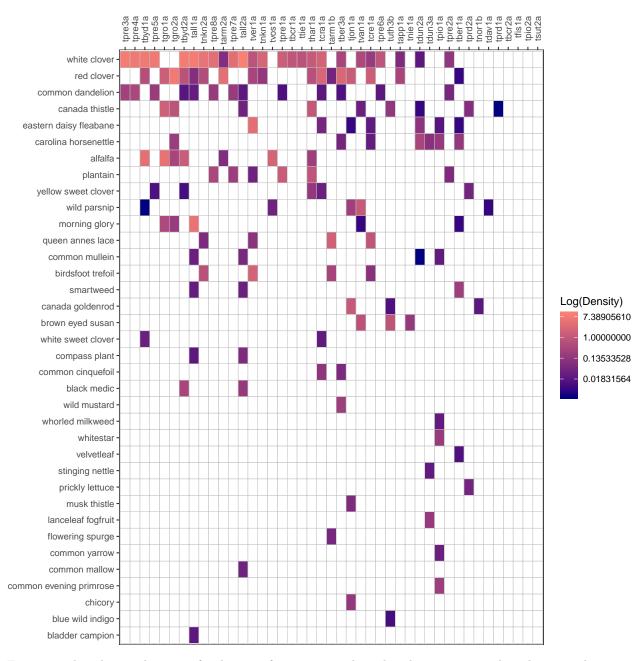


Figure 7: This plot is a heatmap for density of species non planted with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2016.

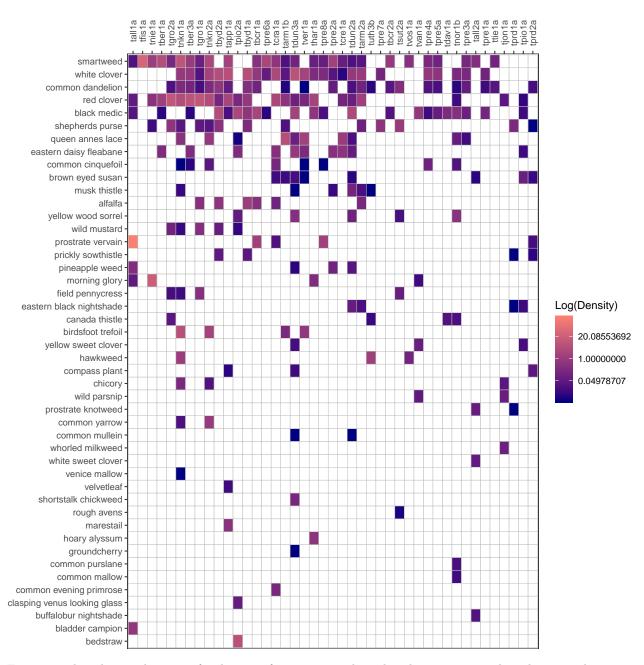


Figure 8: This plot is a heatmap for density of species non planted with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2017.

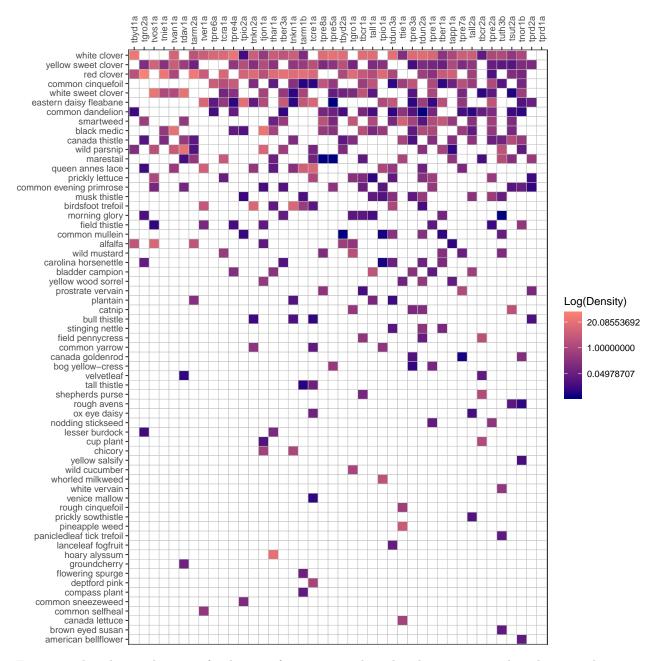


Figure 9: This plot is a heatmap for density of species non planted with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2018.

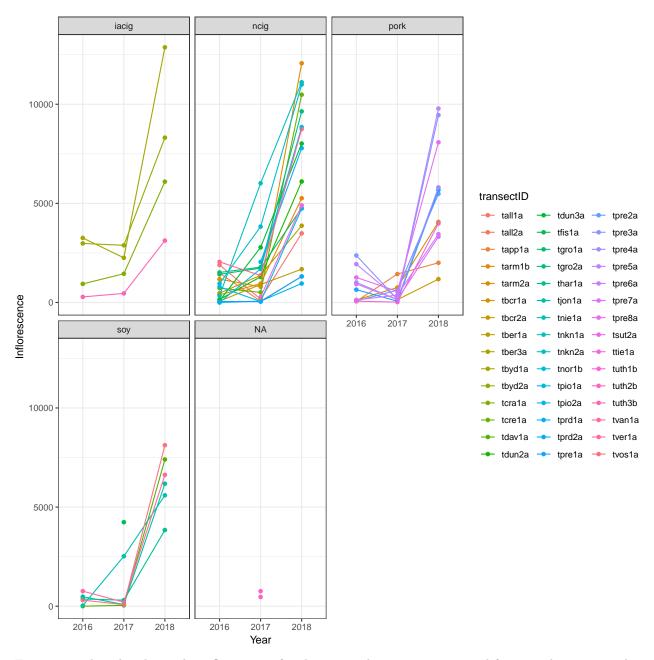


Figure 10: This plot shows the inflorescence for the nectar data across years and faceting the transects by grant excluding tall1a in 2017 for ncig sites.

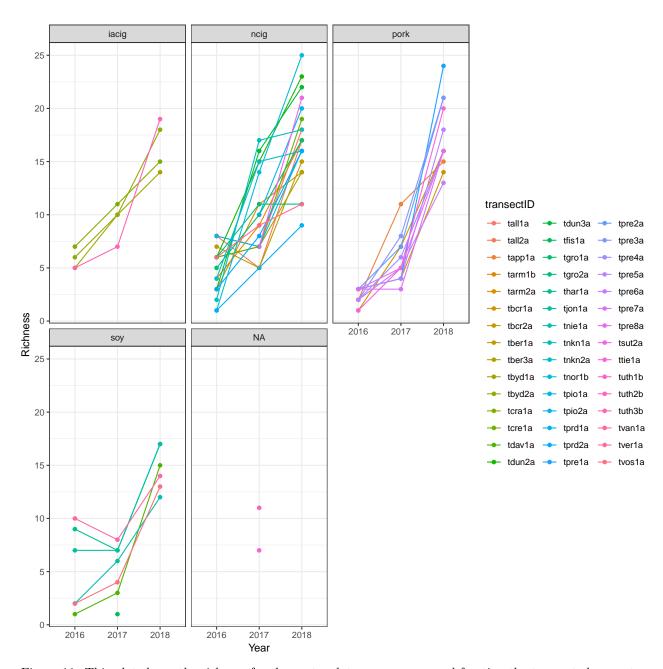


Figure 11: This plot shows the richness for the nectar data across years and faceting the transects by grant.

	Df	Sum of Sq	RSS	AIC	F value	Pr(>F)
<none></none>			0.99	-14435.67		
round	2	0.00	0.99	-14437.59	1.04	0.3537
planted_non_planted	1	0.00	0.99	-14437.46	0.21	0.6459
year	2	0.00	0.99	-14434.73	2.46	0.0855
grant	3	0.00	1.00	-14435.28	2.13	0.0950

	Df	Sum of Sq	RSS	AIC	F value	$\Pr(>F)$
<none></none>			106369.48	7698.87		
round	2	1022.09	107391.57	7713.14	9.14	0.0001
$planted_non_planted$	1	640.20	107009.68	7708.33	11.45	0.0007
year	2	1868.27	108237.75	7728.14	16.70	0.0000
grant	3	885.08	107254.56	7708.70	5.28	0.0013