



What's the best way to establish habitat for beneficial insects? Fall 2018 update

Timeline

Treatment	Fall 2017	Spring 2018	Summer 2018	Fall 2018
A	Herbicide	Herbicide, transplant	Weed 2x	Replace dead plants
B	Herbicide	Till, transplant, mulch	Weed 2x	Replace dead plants
C	Herbicide	Till, direct seed	Mow 3x	Mow 1x
D	Herbicide	Till, plant buckwheat	Mow 1x, till, plant buckwheat	Mow 1x, transplant
E - control	Herbicide	Herbicide	Mow 3x	Mow 1x
F	Herbicide	Till, lay plastic	Continue solarization	Remove plastic, direct seed
G	Herbicide	Herbicide/till	Herbicide 2x, till 1x	Till 1x, direct seed

Establishment costs

(total area per treatment is 460 ft² or 0.01 A)

Treatment	Supply costs	Time (person hrs)
A	\$417.12	13.2
B	\$539.29	20.4
C	\$17.75	4.4
D	\$390.55	10.3
E - control	\$2.32	2.6
F	\$148.02	10.2
G	\$22.04	6.3

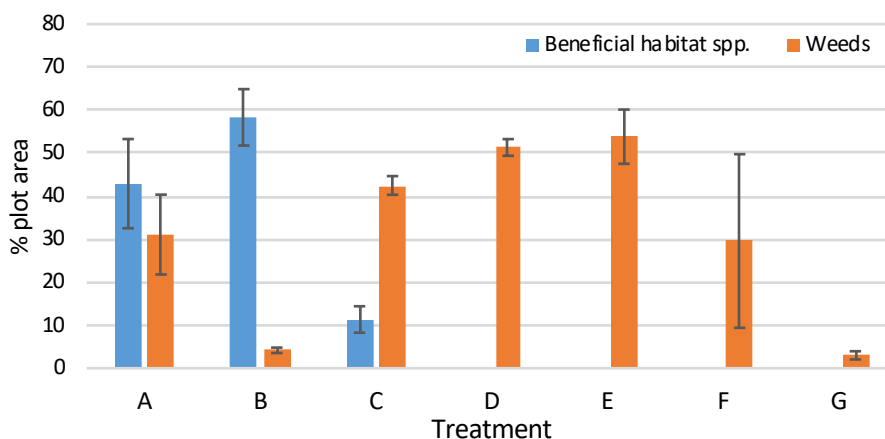
Species list (transplants)

Common name	Scientific name
Anise hyssop	<i>Agastache foeniculum</i>
Common milkweed	<i>Asclepias syriaca</i>
Blue false indigo	<i>Baptisia australis</i>
Lanced-leaved coreopsis	<i>Coreopsis lanceolata</i>
Purple coneflower	<i>Echinacea purpurea</i>
Boneset	<i>Eupatorium perfoliatum</i>
Wild bergamot	<i>Monarda fistulosa</i>
Catmint	<i>Nepeta faassinii</i>
Tall white beard tongue	<i>Penstemon digitalis</i>
Black-eyed susan	<i>Rudbeckia fulgida</i> va. <i>Fulgida</i>
Little bluestem (grass)	<i>Schizachyrium scoparium</i>
Showy goldenrod	<i>Solidago speciosa</i>
New England aster	<i>Symphotrichum novae- angliae</i>
Ohio spiderwort	<i>Tradescantia ohiensis</i>
NY ironweed	<i>Vernonia noveboracensis</i>
Golden alexanders	<i>Zizia aurea</i>

Species list (direct seed)

Plots were planted with 0.5 lb/1,000 ft² Showy Northeast Native Wildflower & Grass Mix (25 species) from Ernst Seeds

Weed control: What plants were there by 9/19/18



By 9 September 2018:

- Beneficial habitat plants had been growing in treatments A, B, and C for ~3 and ½ months
- 2nd planting of buckwheat (treatment D) was mowed 3 weeks prior
- No beneficial habitat yet planted in treatments D, F, or G
- Means are from 4 replicate plots with error bars showing the standard errors.

What did the plots look like by Fall 2018?

A - Transplant in spring (9/28/18)



B - Transplant & mulch in spring (9/28/18)



C - Direct seed in spring (9/28/18)



D - Buckwheat, then transplant in fall (9/28/18)



F - Solarize, then direct seed in fall (10/19/18)



G - Herbicide/till, then direct seed in fall (10/19/18)



E - Control, mow only (9/28/18)



Learn more about this project at:

blogs.cornell.edu/biocontrolbytes

NYS IPM staff involved:

Amara Dunn
Brian Eshenaur

Betsy Lamb
Bryan Brown (weed assessment)

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