

Urban Wasteland to Pollinator Haven

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Site Preparation

Method for site preparation:
Mulch Smothering.

- Mow section of field
- Place layer of cardboard followed by mulch and optionally manure
- Leave mulch on June to September

Alternate smothering, use tarp as replacement for mulch. Comparing cover cropping as an alternative, smothering is shown to be more effective, lower cost, lower effort, and less time consuming.

Compared to slash and burn weeding, there is no significant difference in post clearing weed densities [2].



Figure 2: Tarp Smothering
washingtonpost.com



Figure 3: Mulch Smothering
downtoearthcommunitygardens.files.wordpress.com

Site A: Wildflower meadow

Wildflowers and nonnative ornamental plants, with the purpose of bringing in native pollinators.

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|--------------------|--|---|
| Plant List: | | |
| Native wildflowers | <ul style="list-style-type: none"> • yellow cone flower • wild bee-balm • milkweed • red columbine • joe-pye weed • wild rye | Nonnative plants <ul style="list-style-type: none"> • iris' • tulips • daffodils • peonies • hosta's |

References:

- [1] Sáez1, A., Aizen, M. A., Medec, S., Viel, M., Villalobos, E., & Negri, P. (2020). *Bees Increase Crop Yield in an Alleged Pollinator-Independent Almond Variety*, 10(1), 1–7. <https://doi.org/10.1038/s41598-020-59995-0>
- [2] Awanyo, L. (2008). *Dealing with Weedy Problems in Agriculture: the Role of Three Agricultural Land Use Management Practices in the Forest-Savanna Ecological Zone of Ghana*, 40(4), 446–458.
- [3] Edwards, C. A. (1999). Chapter 12, evolving strategies for managing weeds. In *Sustainable agricultural systems*. essay, Soil and Water Conservation Society.
- [4] Neal, C. (2019, February). *Planting for Pollinators: Establishing a Wildflower Meadow from Seed*. UNH extension. https://extension.unh.edu/resources/files/Resource007652_Rep11219.pdf.

Introduction

Proposed Redevelopment of Grappone Field on NHTI's campus into a pollinator habitat.



Figure 1: Grappone Field Site Map

Site B: Hydric Soils

Section of water saturated soil separated for specific plants

- joe-Pye weed
- pussy willow
- blue flag iris
- ironweed
- winterberry
- boneset

Site C: Herb Garden

Demonstration for the agriculture program, plants will be both harvested and used to attract pollinators.

Plant List:

- dill
 - rosemary
 - sage
 - lavender
 - mint
 - basil*
 - chives
 - cilantro*
 - parsley*
 - thyme
- * Annual plant



Figure 4: Herb Garden
www.gardeningknowhow.com

Site D: Night Garden

White or silver flowers used to attract nocturnal pollinators.

Plant List:

- bunchberry
- white campion
- painted trillium
- pyxie moss
- night phlox
- boneset
- Canada mayflower



Figure 5: example of night garden plants
thetimes.co.uk

Agriculture benefits

Pollinators provide pollen transportation between plants. This process can increase fruiting bodies and fruit size. A study conducted compared almond trees isolated from pollinators to trees open to pollinators. Data from this experiment showed an average 60% increase to fruit set on open trees, and an average 20% increase to fruit size on open trees [1].