



Abstract

This project attempts to increase biodiversity in suburban environments in Massachusetts. By creating and distributing a pamphlet called *Bioasis*, the project aims to spread information on the benefits of ecologically conscious landscaping and how to easily implement it.

Background

Suburban development contributes to a large portion of habitat degradation in Massachusetts. The characteristic landscaping of suburbs consists of mono-cropped lawns, which contain little to no structural biodiversity.

Use of pesticides and fertilizer to maintain these lawns hurts local ecology. Lawn ecosystems facilitate the invasion of alien species which are also a threat to biodiversity. If action is not taken to protect biodiversity, Massachusetts residents face the loss of important ecosystem services.

Project Goals

- Spread awareness of the problems caused by non-native landscaping and the benefits of an ecofriendly property
- Create a simple and economically feasible plan for residents to increase biodiversity in their yards



Typical suburban yard with minimal structural biodiversity

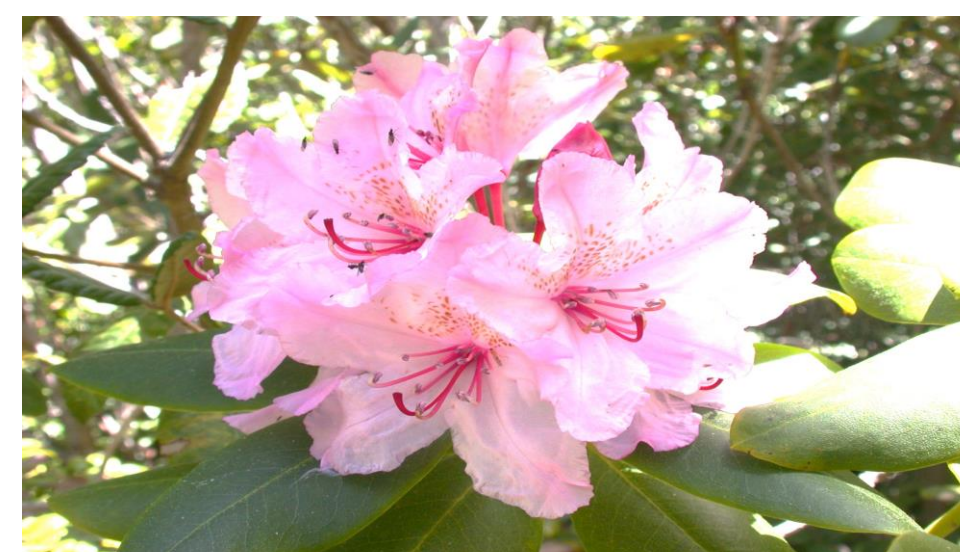
Ten Steps to Bioscape

1. Plant native species
2. Don't use pesticides
3. Create structural diversity
4. Plant trees, shrubs, and flowers that support native wildlife
5. Turn off floodlights during nighttime hours
6. Plant native trees
7. Use natural fertilizer such as manure
8. Remove invasive species
9. Leave grass clippings on the lawn
10. Choose hardy perennial plants over annual plants

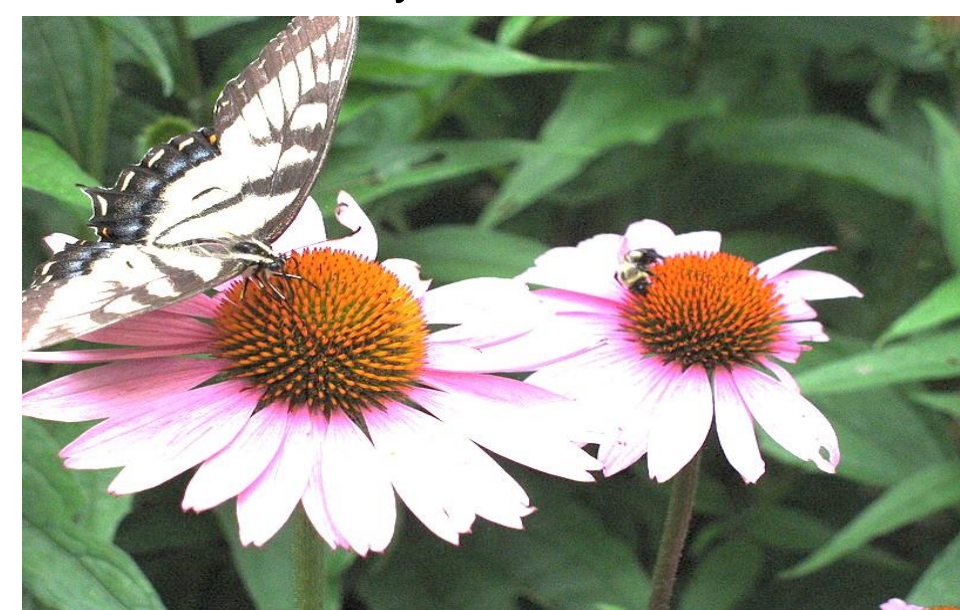
Suggested Native Plants



Red Maple



Rosebay Rhododendron



Purple Coneflower

Native Wildlife



Red Squirrel



Black-capped Chickadee



Red Admiral

Attracts

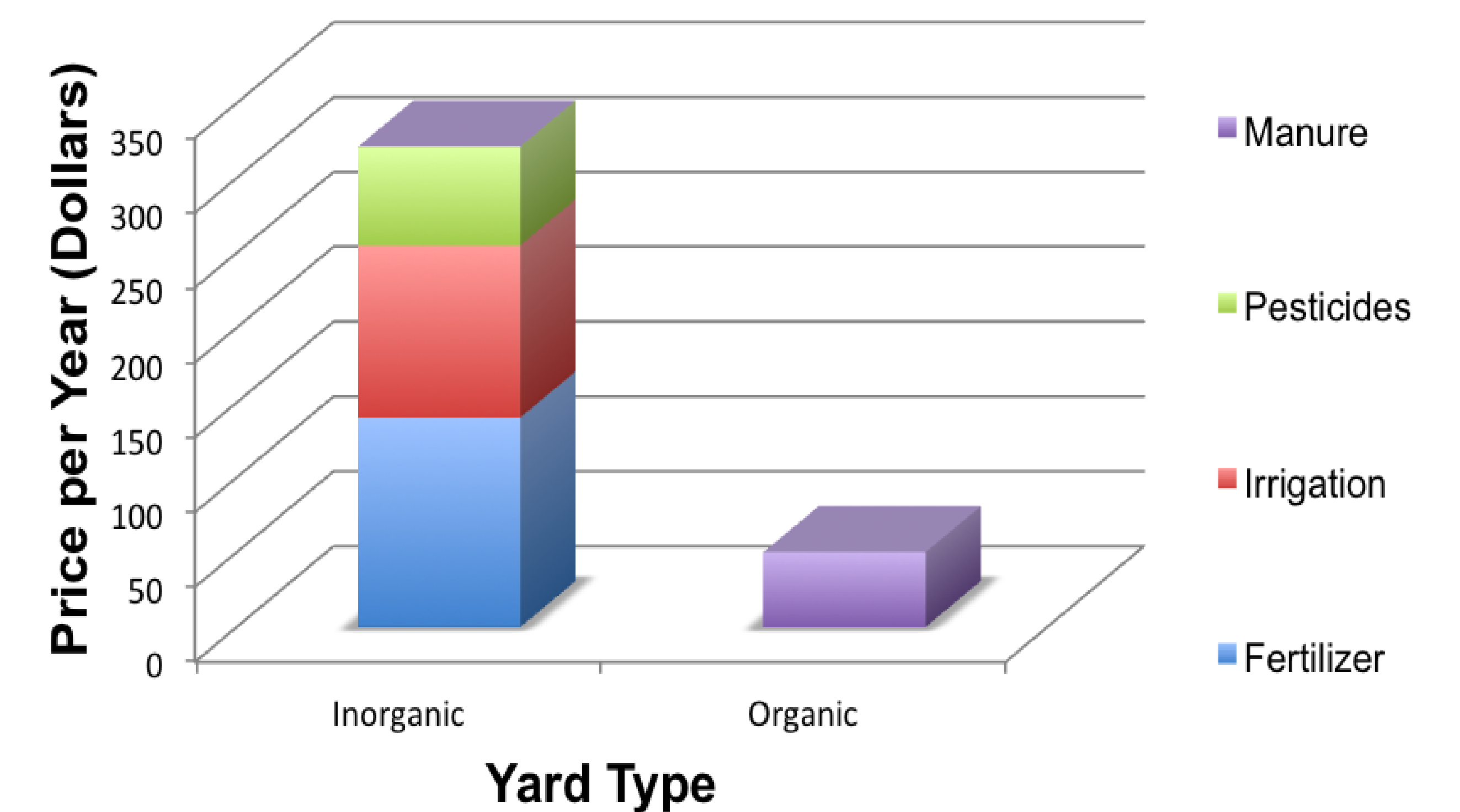
Attracts

Attracts

Outcomes

This project is intended to lead to an increase in biodiversity in Massachusetts. After reading *Bioasis*, homeowners will know how to design and maintain a yard full of native species that is ecologically friendly.

Annual Price Comparison of Yard Types



Conclusions

- Natural Massachusetts habitat must be integrated into modern residential development
- The cost to maintain an inorganic lawn is greater than an organic lawn

Acknowledgments

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For a more detailed reference page, look to project paper.