Weed Extractor

Red B Sketch Model
Product Concept

• “Zero-effort” weeding device

• Contacts
  – Sergi Farm
  – Allandale Farm

• Potential application
  – Community farms and gardens
  – Elderly
Sketch Model Goal

What modifications make weeding easier?

Water jet?

Vibration?
Controlled Testing

• Metric: force required to pull artificial weed out of compacted potting soil
Results: Pulling weed by hand
Results: Pulling weed with vibration
Results: Pulling weed with water
Results: Quantitative

Average Force for Weed Removal

- By hand: 45 N
- No vibration: 20 N
- Vibration: 15 N
- Water spray: 10 N

66% reduction in required force
Conclusion

• What modifications make weeding easier?
  – Effective: loosening soil via stirring or vibration
  – More effective: blasting soil with water jet