Soil Conditioner
Design Proposal

DILLER DESIGNS
Established 2010
The Team

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The Sponsor

The Vassar Company
- Perkins, Oklahoma
- Established in 1940
- Produces farm equipment
- 6 Distributors including one in Canada
  distributor

Diller Designs
The Problem

Design a multi-purpose tool for soil conditioning and seedbed preparation that is innovative, but comparable in features and quality to the competition, while priced to sell to the landscape contractors and small construction companies industries.
Soil conditioners are used in soil preparation for landscape designers, sod layers, golf turf managers, construction workers and large acre homeowners. Current models specialize in soil tillage, rock and debris collection, and/or soil smoothing/finishing.
Industry Analysis

Users of this product come primarily from two markets:

• Landscaping Services
• Construction
Landscaping Industry

• Growing industry: easy entry, low start-up costs, large profit potential
• Demand follows national economy
• Equal number of small and large firms:

![Annual income, in thousands of dollars]

- More than $500: 23%
- $50 - $100: 19%
- $100 - $200: 20%
- $200 - $500: 19%
- Less than $50: 19%

Diller Designs
Construction Industry

• Growing industry: Demand follows national economy
• Single-family homebuilders (86.4% of residential industry) still competitive
• Land developing is projected to increase 9% annually 2011-2015
The Competition

- Harley Power Box Rake
- FFC Preparator
- Stone Dawg Landscape Rake
- York Power Rake
- Bobcat Soil Conditioner
Competitors

http://www.abcgroff.com/ic/sslattach.htm

http://www.abcgroff.com/ic/pics/ffc1.jpg
Competitors

http://www.wikco.com/pwrrake.html

http://www.usagnet.com/manufacturers/122/soil_conditioner.jpg
Testing

Harley Rake  FFC Preparator
Testing

Harley Rake  FFC Preparator
Engineering Specifications

• Width
  – Overall 6ft
• Durable
  – Over Built
• Skid Steer Auxiliary Ports
• Manual Angle
Design Concepts

Tooth design
- Number of teeth
- Position/pattern
- Size/length of tooth

Drum diameter
- Larger diameter keeps bearing out of dirt
- Raises costs
Design Goals *summary*

- Floating Implement
- Direct Drive to Drum
- Bi-directional Hydraulic Motor
- Low Cost
Spring Design Changes

- Teeth number/pattern
- Chain drive
Spring Design

- Insert solid works picture of complete proto
Production

• Pictures from 4/2
Testing

• Pictures – videos? Changes made thereof
Finished Prototype

• Pictures, video
Communication Plan

• Advertisements at Related Businesses
  – Brochures, flyers, etc

• State Landscape Associations
  – Magazine or newsletter ads
  – Conference/trade show displays
  – Assist dealers with displays
Trade Shows

• Signs, layout, whatever the hell you feel like
Website

• Print screen of site with hyperlink
Business Plan

• Decisions in spring
• Product/brand diversification
• Pricing target
  – MSRP Goal: $6500-$7000
• Cost-driven price vs price-driven costs
  – Production table
## Production Table

### Factors of Production

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