Lean Farming on off the Ground
Glade Road Growing for VABF
March 2021
The Lean Farm

Farm smaller and smarter

All online courses and materials 25% off through March 31

Use code (all caps): MARCH25

FIND OUT MORE
Clay Bottom Farm
Ben Hartman is the author of The Lean Farm. SPRING SALE THRU MARCH 25% OFF online courses at claybottomfarm.com.
www.claybottomfarm.com

Followed by earthfirstfarm, paperpotco, sassafras_creek_farm +58 more
“How to minimize waste, increase efficiency, and maximize value and profits with less work”
“The traditional farm adds capacity through constant expansion. The lean farm grows by cutting out waste.”
Vegetables

Our own certified naturally grown produce raised by us right here in Blacksburg, Va. We only sell produce that we grow ourselves. Flavorful and nutrient-dense.

Click on the individual products to see typical weights per pack and description.

Sign up for our farm's newsletter!

First Name:
Your first name

Last Name:
Your last name

Email address:
Your email address

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Glade Road Growing
Need a ham for Easter? We have whole
“How to minimize waste, increase efficiency, and maximize value and profits with less work”

**Vegetable Production**

**Crop health**

**Hoophouses**

**Mechanized intensive production**

**Harvest/wash/pack labor**

**Sales**

**Online farm market**

**Farm share**
Lean Techniques in Vegetable Production

Crop health
Hoophouses
Mechanized intensive production
Harvest/wash/pack labor
Crop health
Crop health

Why is crop health part of a lean talk?
Crop health

Helping growers make more money with regenerative agriculture since 2006.

We're Hiring!

Tree Fruit  Berries  Vegetables  Brassicas  Cucurbits  Greens  Citrus  Soybeans/W...  Corn

AEA Standard Vegetable Program

This example AEA program is representative of the products and rates that continually result in improved crop production for growers of vegetable growers across the country and is appropriate for the majority of garden produce. For the small grower, these product applications are an excellent start to regenerative management. There is no one size fits all solution, though. Programs should be modified based on soil and sap reports, crop advisor recommendations, actual plant performance, and where appropriate, organic certification requirements. AEA can arrange for customized consulting to better maximize performance on your acreage.

AEA's crop nutrition management program can bring higher yields and improved resistance to insects and disease through optimized nutrition resulting in greater economic returns.

Standard Mixed Vegetable Program for Personal and Market Growers

Standard Potato Program
Crop health

<table>
<thead>
<tr>
<th>Mineral</th>
<th>Current level</th>
<th>Optimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sugars</td>
<td>% 0.4</td>
<td>0.7 - 2.1</td>
</tr>
<tr>
<td>pH</td>
<td>6.5</td>
<td>6.2 - 6.6</td>
</tr>
<tr>
<td>EC</td>
<td>mS/cm 12.7</td>
<td>12.5 - 15.5</td>
</tr>
<tr>
<td>K - Potassium</td>
<td>ppm 3950</td>
<td>ppm 3393 - 4407</td>
</tr>
<tr>
<td>Ca - Calcium</td>
<td>ppm 1023</td>
<td>ppm 2485 - 5151</td>
</tr>
<tr>
<td>K / Ca</td>
<td>3.86</td>
<td>1.21</td>
</tr>
<tr>
<td>Mg - Magnesium</td>
<td>ppm 483</td>
<td>ppm 560 - 840</td>
</tr>
<tr>
<td>Na - Sodium</td>
<td>ppm 17</td>
<td>ppm 28 - 62</td>
</tr>
<tr>
<td>NH4 - Ammonium</td>
<td>ppm 805</td>
<td>ppm 805</td>
</tr>
<tr>
<td>NO3 - Nitrate</td>
<td>ppm 931</td>
<td>ppm 70 - 210</td>
</tr>
<tr>
<td>N in Nitrate</td>
<td>ppm 210</td>
<td>ppm 16 - 47</td>
</tr>
<tr>
<td>N - Total Nitrogen</td>
<td>ppm 1966</td>
<td>ppm 1147 - 1552</td>
</tr>
<tr>
<td>Cl - Chloride</td>
<td>ppm 702</td>
<td>ppm 620 - 1230</td>
</tr>
<tr>
<td>S - Sulfur</td>
<td>ppm 849</td>
<td>ppm 1235 - 2015</td>
</tr>
<tr>
<td>P - Phosphorus</td>
<td>ppm 270</td>
<td>ppm 180 - 420</td>
</tr>
</tbody>
</table>
Crop health
Hoophouses
Hoophouses
Hoophouses
Hoophouses
Hoophouses
Hoophouses
Hoophouses
Hoophouses
Hoophouses
Mechanized intensive system
Mechanized intensive system
Mechanized intensive system
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Mechanized intensive system
Mechanized intensive system
Mechanized intensive system
Harvest/wash/pack labor
Harvest/wash/pack labor
Harvest/wash/pack labor
Harvest/wash/pack labor
Harvest/wash/pack labor
Harvest wash/pack/cooler
Harvest/wash/pack labor
Harvest wash/pack/cooler
Harvest/wash/pack labor
Harvest/wash/pack labor

All of our positions require the following:

- Can work independently and in a team
- Positive and respectful attitude
- Responsible and reliable
- Teachable
- Committed
- Good communication skills
- Adaptable and flexible with necessary plan changes due to weather, market, crew dynamics, etc
- Physical strength to lift 50 lbs without injury to yourself
- Can maintain your own physical and mental health; awareness for safety of self and others
- Physically able to deal with adverse weather conditions
- Can work fast to set a standard for others

Benefits to working here (besides starting wages listed) include:

- Home-made lunch provided
- Free produce for you/your family’s home consumption
- Discounted farm meats available in staff freezer
- Discounted meals and drinks at Rising Silo Brewery
- Unpaid personal time off available when prearranged
- Unscheduled cash bonus

- Position: Seasonal crew member, introductory position, starts at $11/hr
  - May- November; 3 month minimum, 30-40 hrs/week, M-F, 8:15 am until 5 pm or 6 pm

Tasks include
- Bulk harvesting
- Daily harvesting needs
- Washing
- Packing
Lean Techniques in Selling

Online farm market
Farm Share
‘What they want, when they want it, and how much they

Online Farm Market

Vegetables

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Sign up

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## Online Farm Market

**Products**

Add New  Import  Export

Exported file orders-export-2021_03_22_03_34_02.csv is ready! You can download the exported file from the [Export List](#).

**Bulk actions**

- **Name**
- **Stock**
- **Price**
- **Categories**
- **Tags**
- **Date**

<table>
<thead>
<tr>
<th>Name</th>
<th>Stock</th>
<th>Price</th>
<th>Categories</th>
<th>Tags</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greens, Spinach (Baby)</td>
<td>In stock (16)</td>
<td>$4.00</td>
<td>Vegetables</td>
<td>-</td>
<td>Published 2021/03/17 at 4:56 pm</td>
</tr>
<tr>
<td>Carrot Soups</td>
<td>In stock</td>
<td>$12.75</td>
<td>Prepared foods, Vegetables</td>
<td>-</td>
<td>Published 2021/02/09 at 8:29 pm</td>
</tr>
<tr>
<td>Carrot, Bulk</td>
<td>In stock (74)</td>
<td>$10.75</td>
<td>Vegetables</td>
<td>-</td>
<td>Published 2020/10/30 at 6:34 pm</td>
</tr>
<tr>
<td>Asian Greens, Tokyo Bekana</td>
<td>In stock (2)</td>
<td>$3.85</td>
<td>Vegetables</td>
<td>-</td>
<td>Published 2020/10/26 at 6:03 pm</td>
</tr>
<tr>
<td>Herbs, Rosemary</td>
<td>In stock (10)</td>
<td>$2.95</td>
<td>Vegetables</td>
<td>-</td>
<td>Published 2020/10/25 at 9:00 pm</td>
</tr>
<tr>
<td>Potato, Kennebec</td>
<td>In stock (2)</td>
<td>$5.00</td>
<td>Vegetables</td>
<td>-</td>
<td>Published 2020/10/07 at 6:36 pm</td>
</tr>
<tr>
<td>Lettuce, Baby Head Lettuce Variety Bag</td>
<td>In stock (3)</td>
<td>$4.15</td>
<td>Vegetables</td>
<td>-</td>
<td>Published 2020/05/25 at 5:45 pm</td>
</tr>
<tr>
<td>Radish, Purple Daikon</td>
<td>In stock (413)</td>
<td>$3.35</td>
<td>Vegetables</td>
<td>-</td>
<td>Published</td>
</tr>
</tbody>
</table>

[Screen Options]  Help
Online Farm Market
Track sales

Current Sale
- Salad Turnips: $3.00
- Radish: $3.00
- Beets: $3.00
- Tax: $0.22

Reports

Payment Methods

Item Sales

Top 5 Items: Gross Sales
- 2021 Main season share: $1,380.00
- 2021 Main season bay share: $475.00
- Online Preorder items: $354.35
- 2021 Egg share: $360.00

Graphs

Modifiers Sales
- Items Sold: Arabi greens, Mizuna
- Gross Sales: $7.70
- Returns: $0.00
- Net Sales: $7.70

Graphs of sales over time.
<table>
<thead>
<tr>
<th>Row Labels</th>
<th>Sum of Item Labels</th>
<th>Sum of Item_quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian greens, Bok Choy</td>
<td>Greens, Spinach (bagged)</td>
<td>48</td>
</tr>
<tr>
<td>Asian greens, Mizuna</td>
<td>Lettuce, Lettuce mix - 0.33 pound</td>
<td>47</td>
</tr>
<tr>
<td>Asian greens, Tat Soi</td>
<td>Carrots</td>
<td>45</td>
</tr>
<tr>
<td>Asian Greens, Tokyo Bekana</td>
<td>Greens, Tender Spring Mix</td>
<td>38</td>
</tr>
<tr>
<td>Carrot, Bulk</td>
<td>Kale, Red Russian</td>
<td>32</td>
</tr>
<tr>
<td>Carrots</td>
<td>Asian greens, Bok Choy</td>
<td>29</td>
</tr>
<tr>
<td>Greens, Arugula</td>
<td>Greens, Microgreens Mix</td>
<td>28</td>
</tr>
<tr>
<td>Greens, Collards</td>
<td>Herbs, Cilantro</td>
<td>21</td>
</tr>
<tr>
<td>Greens, Microgreens Mix</td>
<td>Turnips, Hakurei</td>
<td>15</td>
</tr>
<tr>
<td>Greens, Spinach (Baby)</td>
<td>Greens, Spinach (Baby)</td>
<td>14</td>
</tr>
<tr>
<td>Greens, Spinach (bagged)</td>
<td>Herbs, Dill</td>
<td>12</td>
</tr>
<tr>
<td>Greens, Tender Spring Mix</td>
<td>Greens, Arugula</td>
<td>11</td>
</tr>
<tr>
<td>Happy Hollow Honey</td>
<td>Carrot,Bulk</td>
<td>10</td>
</tr>
<tr>
<td>Herbs, Cilantro</td>
<td>Lettuce, Baby Head Lettuce Variet</td>
<td>10</td>
</tr>
<tr>
<td>Herbs, Dill</td>
<td>Radish, Watermelon</td>
<td>10</td>
</tr>
<tr>
<td>Herbs, Rosemary</td>
<td>Onion, Green (Scallions)</td>
<td>8</td>
</tr>
<tr>
<td>Kale, Red Russian</td>
<td>Asian greens, Mizuma</td>
<td>7</td>
</tr>
<tr>
<td>Lettuce, Baby Head Lettuce Variety</td>
<td>Greens, Pea Shoots</td>
<td>7</td>
</tr>
<tr>
<td>Lettuce, Lettuce mix - 0.33 pound</td>
<td>Radish, French Breakfast</td>
<td>6</td>
</tr>
<tr>
<td>Lettuce, Lettuce mix - 1 pound bag</td>
<td>Asian Greens, Tokyo Bekana</td>
<td>5</td>
</tr>
<tr>
<td>Onion, Green (Scallions)</td>
<td>Radish, Loose Red Salad</td>
<td>4</td>
</tr>
<tr>
<td>Radish, French Breakfast</td>
<td>Asian greens, Tat Soi</td>
<td>3</td>
</tr>
<tr>
<td>Radish, Loose Red Salad</td>
<td>Greens, Collards</td>
<td>3</td>
</tr>
</tbody>
</table>
Farm Share
2021 Farm Shares

2021 Farm Share options

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Email address:

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Glade Road Growing
Andrew and Elias planting onions that are ready to be delivered.
Farm Share/CSA
Farm Share/CSA
Farm Share/CSA

Swipe Card to Load or Check Balance

- Sell Physical Gift Card
- Sell eGift Card
- Check Balance
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**Summary**

**Vegetable Production**

**Crop health** - focus on improving soil microbiology for a healthier, tastier, more productive crop

**Hoophouses** - automation, insect screening

**Mechanized intensive production** - choose tools to minimize hand labor

**Harvest/wash/pack labor** - reduce heavy lifting, make cleanable; have smooth, pleasant flow from garden to cooler

**Sales**

“Give them what they want, when they want it, and how much they want”
What are the bottlenecks in your system?

When you look around you farm what physical and mental baggage is pulling you down?

What **waste** do you see (physical junk, unnecessary motions, clogged up space) that can be minimized?
Jason Pall & Sally Walker

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