Starting Up a Berry Farm Business

Lessons Learned by a Small Berry Farmer in Northern Nevada

Jack Jacobs

Who Are We?

Our Berry Farm

Where we grow berries, provide a venue for weddings/events, and live.

Come Visit Us!
Today’s Topics for Discussion

1. Why We Decided to Grow Berries
2. What We Learned in Our First Years
3. How We Plan to Use What We Learned
4. Suggestions to Other Start Ups

Topic 1: Why Did We Decide to Grow Berries?

- **Goal**: Develop a farm business that will sustain the homestead property and provide owner with field work for exercise and enjoyment
- **Analysis**: Study the options from grains and feed to vegetables and fruits that would grow best on our land and would provide a good reliable rate of return.

Our Options

- **Alfalfa**: Yields about 100 bales per year. Lots of work with little profit but no risk.
- **Berries**: Yields that can range from 6-10,000 pounds per year. A great deal more work with chance to be very profitable but there are undefined risks.
Starting Up a Berry Farm Business,
Jack Jacobs

12/6/2014

Commercial Berry Production Workshop
WNC Speciality Crop Institute

Our Business Case for Berries

**Expenses**
- Improvements
- Labor
- Materials
- Plants
- Services
- Energy

**Income**
- Harvesting at 6-10k pounds/yr
- Sales
  - Berries/ Jams/Syrups
  - Sold on the Farm, Restaurants, Others

Our Concerns: The Risks

- Knowledge/Experience
- Investment/Maintenance/Harvest/Market Costs
- Weather & Pests
- Labor

Topic 2: What We Learned in Our First Years

1. Investment
2. Plant Care
3. Harvesting
4. Production - Yield
5. Labor
6. Customers & Marketing
7. Weather & Pests
2.1 Investment

• Field Production
  1. Field Preparation
  2. Irrigation System
  3. Trellising
  4. Planting
  5. Hoop House

• Harvesting, Processing, Sales
  1. Building & Furnishings
  2. Refrigeration
  3. Marketing

Field Preparation

1. Level Field
2. Raised Mounds
3. Plastic Mulch
4. Drip Line
5. Planting

Hoop House

24' by 96'
Clear Span Gothic Cold Frame
40 Blackberry Plants
Starting Up a Berry Farm Business,
Jack Jacobs

Processing & Selling Investments
Building  Furnishings

Marketing Investments

2.2 Plant Care
1. Pruning & Training
2. Thinning
3. Tipping
4. Watering
Pruning Raspberries

Pruning & Training Blackberries

Thinning
Starting Up a Berry Farm Business,  
Jack Jacobs  
12/6/2014

Tipping or Pinching
Remove 1-4 inches of primocane after reaching desired height (3-4’)

Watering
2013 CABNR Initiated Study
• Monitoring soil water content, temp, UV, wind
• SWC Probes (30 cm) at Plants 1, 3, 7, 14
• Time Domain Reflectometry Probes (measure every minute)
• Background to establish good watering practice
• Investigate plant water stress impacts
• Early Observations
  • Variation between Plant 1 (drier) and 3, 7, 14
  • Varietal effects on SWC are not consistent although Triple Crown produced an avg of 50% more fruit

Monitoring Equipment
Soil Water Content %
Air Temp, UV Light, & Wind

Commercial Berry Production Workshop  
WNC Speciality Crop Institute
Starting Up a Berry Farm Business,
Jack Jacobs

12/6/2014

Watering-Soil Water Content %

2014 Season North & South Field
Comparing 3 yr to 4 yr Blackberry Plants

2014 Irrigation rate increased 50%
5.4 gal per plant every other day
8.1 gal per plant every other day

2014 Season North & South Field
Comparing 3 yr to 4 yr Blackberry Plants

2014 Irrigation rate increased 50%
5.4 gal per plant every other day
8.1 gal per plant every other day

2013 Irrigation rate increased 50%
5.4 gal per plant every other day
3.6 gal per plant every other day

Watering-Soil Water Content %

3 yr Blackberry Plants South Field
Comparing 2013 to 2014 Season

2014 Irrigation rate increased 50%
5.4 gal per plant every other day
8.1 gal per plant every other day

2013 Irrigation rate increased 50%
5.4 gal per plant every other day
3.6 gal per plant every other day

Watering-Soil Water Content %

2011 planting

Irrigation content
Maximum 75% of
Minimum temperature

2011 planting

Irrigation content
Maximum 75% of
Minimum temperature
2.3 Harvesting

Harvesting Rates

Harvesting Cycle
Starting Up a Berry Farm Business,
Jack Jacobs

2.4 Production – Plant Varieties

<table>
<thead>
<tr>
<th>Type</th>
<th>Variety</th>
<th>Prime</th>
<th>Plant cane</th>
<th>Fruiting Season</th>
<th>No. in Field</th>
<th>No. in Hoop House</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackberry</td>
<td>Chester</td>
<td>F</td>
<td>Primocane</td>
<td>Summer</td>
<td>85</td>
<td>10</td>
<td>95</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Triple Crown</td>
<td>F</td>
<td>Primocane</td>
<td>Summer</td>
<td>85</td>
<td>10</td>
<td>95</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Natchez</td>
<td>F</td>
<td>Floricane</td>
<td>Summer</td>
<td>52</td>
<td>10</td>
<td>62</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Ouachita</td>
<td>F</td>
<td>Floricane</td>
<td>Summer</td>
<td>55</td>
<td>0</td>
<td>55</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Prime Ark</td>
<td>F</td>
<td>Primocane</td>
<td>Fall</td>
<td>25</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Prime Jan</td>
<td>F</td>
<td>Primocane</td>
<td>Fall</td>
<td>24</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Mac</td>
<td>F</td>
<td>Floricane</td>
<td>Summer</td>
<td>52</td>
<td>0</td>
<td>52</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Bristol</td>
<td>F</td>
<td>Floricane</td>
<td>Summer</td>
<td>64</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Jewel</td>
<td>F</td>
<td>Floricane</td>
<td>Summer</td>
<td>64</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Nova Red</td>
<td>M</td>
<td>Floricane</td>
<td>Mid – Summer</td>
<td>59</td>
<td>0</td>
<td>59</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Encore Red</td>
<td>M</td>
<td>Floricane</td>
<td>Mid – Late Summer</td>
<td>63</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Taylor Red</td>
<td>L</td>
<td>Floricane</td>
<td>Late Summer</td>
<td>49</td>
<td>0</td>
<td>49</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Polana Red</td>
<td>L</td>
<td>Floricane</td>
<td>Fall</td>
<td>59</td>
<td>0</td>
<td>59</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Jaclyn Red</td>
<td>L</td>
<td>Floricane</td>
<td>Fall</td>
<td>57</td>
<td>0</td>
<td>57</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Heritage Red</td>
<td>L</td>
<td>Floricane</td>
<td>Fall</td>
<td>51</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Joan Red</td>
<td>L</td>
<td>Floricane</td>
<td>Fall</td>
<td>51</td>
<td>0</td>
<td>51</td>
</tr>
</tbody>
</table>

Production – Black Raspberry

![2014 Black Raspberry Production](image)

Production – Red Raspberry

![2014 Red Raspberry Production](image)
Starting Up a Berry Farm Business,
Jack Jacobs

2.5 Labor
2014 Berry Production Work Activity
Distribution by Task

2.6 Customers & Marketing
The Challenge

Commercial Berry Production Workshop
WNC Speciality Crop Institute
Production vs. Customer Preference

UNR Studies on Consumer Acceptance

- Chenin Treftz – PI
- Comparing varieties characteristics (sensory analysis)
  - Color
  - Appearance
  - Aroma
  - Sweetness
  - Soursness
  - Juiciness
  - Firmness
  - Texture
  - Mouth Feel
  - Flavor

2.7 Weather - Temp
Starting Up a Berry Farm Business,
Jack Jacobs

12/6/2014

Weather - Wind

Pests & Controls

2014 Blackberry Harvest

Quality Berries 72%
Bird Damaged Berries 28%

Topic 3: How We Plan to Use Our Experience

• Focus on Production & Sales
  • Change varieties to most productive, customer satisfaction, spread out harvest period
  • Analyze market for best mix of fresh, frozen, products and develop marketing plan

• Refine Field Practices
  • Pruning, Training, Thinning, Tipping
  • Monitor & Adjust Watering – Compare with Fruit Quality

• Forecast Labor Requirements
Topic 4: Suggestions for Others to Use

• Consider the information presented here in preparing your business plan for starting a berry business
• Develop a process to measure results and adapt what you learn to achieve goals
• There is a lot of other information available...do your research!

Stay Tuned for Future Presentations on More of Our Results

Check Us Out On Our Web Site!

www.jacobsberries.com
Starting Up a Berry Farm Business,
Jack Jacobs
12/6/2014

Commercial Berry Production Workshop
WNC Speciality Crop Institute 17