Blueberry Production
How Does Cash Flow

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Scenarios

- 1st year site development & 2nd year spring planting
- 1st year site development & fall planting
- Borrow 100% investment
- Invest $?????? per year personal funds
- Invest 100% personal funds for total cost
- Various % interest on debt
Parameters

- **Equipment purchase year 1?**
  - tractor, mower, sprayer, loader, mulcher
- **Plants / acre**
  - Depends on grid
  - Replace 3% per year
  - 8’, 10’, 12’, 14’ row spacing
  - 3’, 4’, 5’ plant spacing
- **$ per plant**
  - 2 year old plants $3.80 ea
- **Well/no well**
  - Other options
Parameters cont’

- Fertilizer (soil test, soil test, soil test)
  - Nitrogen every year
  - P, K & S every 3 years
  - Inject S?
- Mulch every other year
- Land use charge as rent or as purchase
- Labor
  - Site establishment and maintenance
  - Harvest labor additional
- Irrigation
  - Major repair year 4
  - Replace year 8
- Yield
  - Based on MSU 30 year data
- Price
  - Variable
Yield Data from OSU

Year of production

Yield # per plant
Yield Data from MSU

30-Year (Composite) Plant Yields

Pounds / Plant

Year

Not justifiable below 50 acres
One Acre

Investment Scenario
<table>
<thead>
<tr>
<th>Item</th>
<th>Units/acre</th>
<th>Per acre cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertilizer, seed, soil test, weed, insect, disease, &amp; rodent control</td>
<td>3.8 ft³/bale</td>
<td>355</td>
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<tr>
<td>Peat moss</td>
<td>67</td>
<td>888</td>
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<tr>
<td>Plants</td>
<td>904</td>
<td>3437</td>
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<tr>
<td>Mulch</td>
<td>174</td>
<td>1340</td>
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<tr>
<td>Water Use</td>
<td>12</td>
<td>300</td>
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<tr>
<td>Irrigation supplies</td>
<td>1</td>
<td>2100</td>
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<td>Worker protection</td>
<td>various</td>
<td>85</td>
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<tr>
<td>Machine or custom cost</td>
<td>1</td>
<td>1125</td>
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<tr>
<td>Mower</td>
<td>1</td>
<td>1500</td>
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<td>Well system</td>
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<td>10000</td>
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<tr>
<td>Land charge</td>
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<td>100</td>
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<tr>
<td>Interest</td>
<td>4%</td>
<td>913</td>
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<tr>
<td>Total</td>
<td>23388</td>
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</tr>
</tbody>
</table>
Borrow All Investment Capital

$30,039 outlay of cash
Payback in year 6
Plus $1,160 net income
Borrow All & Pay Back $5000 Per Year

Payback in year 6
Plus $4,765 net income

$20,000 outlay of cash

Year 1  $5000
Year 2  $5000
Year 3  $5000
Year 4  $5000
Pay As You Go

Year 1 $22,829
Year 2 2,563
Year 3 1,569

$26,921 outlay of cash through year 3
Payback in year 6
plus $7,184 net income
Ten Acres

Investment Scenario
Borrow All Investment Capital

$210,777 outlay of cash through year 4

Payback in year 5
Plus $28,703 net income.
Borrow All & Pay Back $30,000 Per Year

Year 1   $30,000
Year 2   $30,000
Year 3   $30,000
Year 4   $30,000
$120,000 outlay of cash through year 4
Payback in year 5
Plus $46,493 net income.
**Pay As You Go**

Year 1: $162,860
Year 2: $19,200
Year 3: $7,000

$189,060 outlay of cash through year 3

Payback in year 5
Plus $65,806 net income.
Money doesn’t grow on trees

Unless it’s a blueberry tree
Observations / Thoughts

• Lenders may not be interested
• Planting same year as site development could:
  – Reduce debt?
  – Provide healthier plant
  – Earlier profit??
• Do you really need equipment 1st year?
• Economies of scale with larger plantings
Observations / Thoughts

• Larger plantings will lead to:
  – Processing
  – Packaging
  – Necessity for marketing expansion

• U-pick can support smaller plantings

• Conservative expansion will take too long
  – Start one planting, pay it off, start another
  – Age makes a huge difference

• Investing personal $ = quicker payback?
More Observations / Thoughts

• Cash flow analysis doesn’t give all answers
  – Raises even more questions
  – Points out necessary decisions

• Examples
  – What if... bad year?
  – When to buy equipment?
    • Base on plot size or income level or...?
  – Which varieties?
  – Can you find plants in the fall?
2011 Weather Atrocity

• Lamar  June 1 to Sept 30
  – 14 days over 100°
  – 27 days between 95° & 100°
  – 27 days between 90° & 95°
  – 13” rain

• Joplin  June 1 to Sept 30
  – 32 days over 100°
  – 25 days between 95° & 100°
  – 23 days between 90° & 95°
  – <10” rain (Carthage) 11/30 events less than 0.1”
Even More Observations / Thoughts

• Examples con’t
  – Are custom operations available?
  – How much field loss w/ mechanical harvester?
  – What % fresh harvest?
  – When do you need processing facility?