Cooperatively Exploring Dry Edible Beans as a Value Added/Alternative Crop Dry Edible Beans

Chris Henning Cooklin  
Greene Bean Project Steering Committee

Ray Hansen  
Iowa State University, hansenr@iastate.edu

Craig Hertel  
Iowa State University

John Kennicker  
Iowa State University

Follow this and additional works at: https://lib.dr.iastate.edu/icm

Part of the Agriculture Commons, and the Agronomy and Crop Sciences Commons
COOPERATIVELY EXPLORING DRY EDIBLE BEANS
AS A VALUE ADDED/ALTERNATE CROP
DRIED BEANS

Chris Henning Cocklin – Greene Bean Project Steering Committee Chairperson
Ray Hansen - Value Added Ag Specialist Iowa State University Extension
Craig Hertel – County Extension Education Director, Greene County
John Kenicker – Extension Agronomist Iowa State University Agronomy

Background

Driven by the desire and interest in finding a value-added marketable alternative crop a group of 24 producers in central Iowa recently tackled the formidable challenge of evaluating potential alternatives for their farming operations. Having witnessed other alternative crop projects come and go this group approached the process with a unique attitude of cooperation. Through a cooperative approach the risks, rewards and resources were shared for the purpose of more quickly reaching project resolution and at a scale that would reflect realistic market potential.

Initial grower meetings narrowed the project down to two potential dry edible beans and established a protocol for risk management. Producers were encouraged to grow these dry edible beans with the mindset of research and experimentation. Individual growers were encouraged to utilize their existing cropping practices and commit to no more acres than they were willing to put at risk. To provide consistent evaluation data, the growers performed all production tasks and absorbed all personal production costs, however, all harvesting was done by a common machine and operator. Based on acres of production revenue from sales would be divided equally to all producers. This protocol was developed for the first year of production only and for the purpose of evaluating crop profitability as well as establishing a baseline of production practices.

Considerations of Diversification

As with any alternative agricultural production enterprise the following questions must be addressed.

- What information and research is currently available?
- What additional production resources are needed?
- What is the profit potential and is the market stable and accessible?
- What is the level of risk?

Information and research access:
Producer experience and access to technical expertise at Iowa State University as well as, electronic resources were utilized to successfully help the project. Industry experts from Washington State and edible bean growers from Michigan where also brought in to help the group apply their experience to local regional weather, soil, pest management and other agronomic variables.
Additional Resources:
The ability to produce alternative crops with traditional soybean production protocol while minimizing changes to management practices and equipment was part of the evaluation criteria utilized in selecting the types of dry edible beans to be grown. Although the producers were willing to make management and equipment changes, the primary concern was to determine if the profitability of the alternative crops was significant enough to merit additional capital investments. More than with traditional commodity crops, “quality” drives both market access and market price for dry edible beans. Once the determination is made on the ability to produce a “quality bean” acceptable to the marketplace additional resource decisions could be made which would further enhance the quality and improve overall production.

Other resource considerations included the need for additional labor, crop management, crop segregation, equipment requirements and storage/handling requirements including additional transportation needs.

Marketing and profit potential:
Value-added and alternative crop specialist continually recommends that you validate your market before production. While this is always advisable it is more difficult to apply to alternative crops being grown in new geographical regions and for new local markets. When “quality” sets the price, and there is no proven track record of the quality potential of a product grown in the region it is nearly impossible to find any buyer willing to commit to purchasing your product, let alone offer a contract. Clearly the paradox is you can’t get a contract without production history, and you can’t establish production history without growing the crop.

In this scenario the value of a cooperative project becomes very obvious. By spreading the risk several producers can grow large enough quantities to capture the attention of potential buyers. The cooperative approach also quickly identifies the production practices that best met the customer’s expectations. Since there often is no guaranteed market for many alternative crops, and establishing a secure market for new products can take years the following strategies are important risk management tools.

- Risk only the acres than you can afford.
- Keep an emphasis on quality at all times.
- Start with marketing and let it drive every production decision.
- Establish as many potential markets as possible.
- Establish an alternative user.

Risk:
The reality of raising an alternative crop is that your entire investment may be at risk; therefore, it is critical that a producer carefully evaluates each enterprise for its potential return. In evaluating a new enterprise for potential returns versus risk the following questions need to be addressed.

- Is the initial investment (start-up cost) appropriate for the potential return?
- Can you meet the time and resource requirements of the enterprise?
- Is there a history of success for this enterprise?
Do you have to create demand or is there already a demand with low supply?

Are there market scale requirements that determine profitability?

What is the realistic timeframe for positive cash flow?

**Economic Comparisons of Productions**

Production costs and operational procedures similar to those of traditional soybeans was one of the reasons dry edible beans were considered as an alternative crop. Below is a cost estimate comparison for the production for azuki’s raised in central Iowa. This comparison was used to help determine breakeven yield estimates.

<table>
<thead>
<tr>
<th>Sample: Dry edible bean production costs compared to conventional soybean.</th>
<th>Estimated Soybean cost/acre at 50 bu/acre</th>
<th>Estimated Dry Edible bean cost/acre. (Azuki)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Harvest Machinery</td>
<td>$22.78</td>
<td>$22.78</td>
</tr>
<tr>
<td>Seed Costs/acre</td>
<td>$19.20</td>
<td>$44.80</td>
</tr>
<tr>
<td>Chemicals/insurance/misc.</td>
<td>$74.20</td>
<td>$94.20</td>
</tr>
<tr>
<td>Harvest/handling</td>
<td>$20.41</td>
<td>$20.41</td>
</tr>
<tr>
<td>Labor</td>
<td>$19.60</td>
<td>$23.52</td>
</tr>
<tr>
<td>Land</td>
<td>$140.00</td>
<td>$140.00</td>
</tr>
<tr>
<td><strong>Total Cost/acre</strong></td>
<td>$296.19</td>
<td>$345.71</td>
</tr>
</tbody>
</table>

Average price 2001

<table>
<thead>
<tr>
<th>2001</th>
<th>$4.20/bu</th>
<th>$.24/lb</th>
</tr>
</thead>
</table>

Breakeven yield

| 1440 lbs/acre |

Estimated yield

| 1600-1900 lbs/acre |

Estimated return/acre

| *(−$86.00)* | **$38 - $110/acre** |

* Does not include govt. support programs

** Does not include additional cleaning, hauling and marketing expenses that may be required.

**Market Outlook**

According to USDA – NASS information, the 2001 U.S. dry edible bean production is estimated to be down 23% from a year ago and the smallest crop since 1993. Harvested acres and yield per acre are down in all the major producing states including Michigan and North Dakota. Global production is up 3%. The US dry bean production for 2000 was:

- 18% navy
- 40% pintos
- 9% kidneys
- 5% blacks
- 5% garbanzos
- 1% pinks
- 1% small reds.
The US exports 15-20% of their production. Last year dry bean export volumes were down 14% primarily due to large declines in navy beans and pinto beans however, there was a strong volume moved for most of the other bean classes. Domestic markets continue to show modest improvement as per capita consumption increases.

**Summary and Conclusion**

A paramount issue when considering “new” alternative crops for any given geographical area has always been and will continue to be the market and access to that market. But the cold reality of the situation is that until a significant volume of a proven quality can be delivered there are no guaranteed markets for a product. Through a cooperative project producers can; simultaneously generate valuable and diverse cropping history, raise enough product to truly test the market, and substantially spread the risk of production.

Perhaps the greatest benefits of a cooperative approach to raising alternative crops is the utilization of human resources. The cooperative approach fosters an atmosphere of sharing experiences and the challenges of problem solving. Shared information between individual participants, ISU Extension staff, and outside resources efficiently addresses agronomic concerns and market development issue concurrently and continuously. There will never be a perfect model for introducing an alternative crop enterprise but by creating a cooperative environment that provides a broad spectrum of information producers while be empowered to make better choices.