

## **ASSESSING RISKS AND FINANCE REQUIREMENTS**

*by Russell Tronstad<sup>1</sup>*

*"The man who makes no mistakes  
does not usually make anything."*

Edward John Phelps

**S**tarting out in a direct farm marketing and tourism venture will require many decisions and some will undoubtedly be "mistakes." One never starts out or continues in a business with the goal of losing money but reality is that many years will have negative profits. The potential for things to turn sour is never far off since agricultural products are notorious for irregularities in production, price, and input costs. Determine what you are willing to forfeit up front rather than after you are fully committed and drowning in financial commitments. This section gives some tips and tools that can help assess understanding your market and the associated risks and finances required. The section of Business Planning has related discussion on risk and finance requirements.

### ***Secondary Data***

Securing a loan for starting a direct farm marketing and tourism related business is generally not easy. With little or no proven production and marketing history, one can hardly blame agricultural lenders

for being very cautious. Investing one's own money needs to be carefully evaluated as well.

Market analysis is crucial for providing the information you need for making investment decisions and especially for securing a loan. A good starting place is to explore secondary data and previously published studies. Data presented in the previous section on industry trends can be updated for a nominal charge by receiving timely ERS publications. Most of this data is available free of charge if one has access to Internet — the electronic communication tool that is connecting the world. Many private companies offer access to Internet for a modest monthly fee (currently less than \$10/month for about 5 hours of time). Computer and News magazines review the services and costs associated with these private "e-mail" services on a regular basis.

Analyses of market and production risks are often found in farm magazines that provide valuable information as well. A fairly recent study by Blank and Schmiesing indicate that the farm financial crisis of the 1980s and savings and loan crisis have caused lenders to shift from the common practice of lending on equity to income. The focus of analysis from equity to cash flow has caused lenders to place more emphasis on risk analysis. Lenders are paying more attention to the volatility and uncertainty surrounding expected income rather than a target income level.

Blank proposes a measure for calculating the probability of a loss from an activity as the average return divided by the standard deviation of returns. The standard deviation, a figure easily computed on virtually all hand held calculators, is a measure of dispersion associated with returns. Dividing mean returns by the standard deviation gives a normalized value in which probabilities can be inter-

preted from a normal distribution (see Blank or any introductory statistical book for a table of values). The value from the normal distribution gives the probability of a loss occurring from an activity. Table 1 presents these probability of loss estimates and average return estimates for some of the crops and counties in California Blank considered in a recent study.

Blank calculated average returns from California Agricultural Statistics data and University of California cost estimates.

These secondary data sources are available to the public. Farmer prices received (volume weighted) were multiplied by average county yield estimates for calculating gross revenues. Then total costs per acre (fixed and variable costs), as reported in Extension budgets published for each crop by county, were subtracted to obtain a return estimate for each crop year. Annual return estimates from 1958 - 86 were used as a basis for the study by Blank.

**Table 1. Assessing Price and Income Risk of Selected Agricultural Crops.<sup>a</sup>**

<u>Crop/County</u>	<u>Mean Price</u> \$/ton	<u>Standard Price Deviation</u> \$/ton	<u>Mean Income</u> \$/acre	<u>Standard Income Deviation</u> \$/acre	<u>Probability of Loss</u> %
<b>Almonds</b>					
San Luis Obispo	1,605	790	170	1,383	45.2
Stanislaus	1,741	727	NA	NA	NA
<b>Broccoli</b>					
Santa Barbara	341	29	891	1,581	28.8
San Luis Obispo	388	65	337	1,370	40.1
<b>Carrots</b>					
Monterey	157	28	1,675	643	0.5
Riverside	189	43	233	1,793	44.8
<b>Grapes, table</b>					
Fresno	363	135	1,342	659	2.1
Riverside	971	221	NA	NA	NA
<b>Grapes, wine</b>					
Fresno	150	42	440	559	21.5
San Luis Obispo	305	135	502	1,653	38.2
<b>Lettuce</b>					
Fresno	197	56	860	814	14.5
Monterey	222	28	545	604	18.4
<b>Walnuts</b>					
San Luis Obispo	914	201	262	1,331	42.1
Stanislaus	935	2362	97	647	32.3
<b>Watermelons</b>					
Kern	86	24	802	794	15.6
Riverside	92	21	509	1,398	35.9

<sup>a</sup> NA denotes that the mean net income in this county was not available over the data period due to insufficient cost data. All figures were adjusted for inflation to reflect 1986 dollars.

Source: Blank, *California Agriculture*, Volume 46, No. 5, 1992.

Results quantify what the relative risks and returns have been for several agricultural crops between 1958 and

1986. Although history doesn't always repeat itself, yield and price fluctuations are largely location and commodity specific. The difference in location can be seen by comparing carrots in Monterey versus Riverside county. Probability of a loss or year with negative income for carrots in Monterey is only .5% whereas it is 44.8% in Riverside. Mean prices are actually higher for Riverside than Monterey (\$189/ton vs. \$157/ton). These results indicate that yield levels and variability along with costs of production are remarkably different according to geographic location. Results show that income variation and the probability of a loss by site is often more different than differences found across commodities. Thus, the production capabilities of your site need to be carefully researched and explored on a small scale if no current production can be found in your area.

The method outlined above for calculating the probability of a loss can also be used for sensitivity analysis. For example, if you wanted to calculate the odds for making at least \$100/acre, simply subtract \$100/acre from average returns (\$/acre)

before dividing by the standard deviation of returns. This would also measure the chance for defaulting on a loan payment of \$100/acre, information that loan officers would like to make before securing a loan.

For many innovative and often new tourist attractions or farming activities, little historical data are available. In this situation, looking at farm profitability under; 1) best, 2) anticipated, and 3) worst case scenarios for yield, costs of production, and prices can provide a good feel for the risk-return tradeoff of an activity. The worst case scenario is obtained by combing a conservative low product price with a low yield and high costs of production. This value should also be the amount of money you are willing to risk or give-up from taking on a new activity.

### ***Primary Data***

Primary data collection can be very expensive to collect on consumers in a “scientifically based” format. The cost is generally prohibitive for the small direct marketer. Thus, primary research for the small scale direct marketer might be better coined as “personal observations.” Nonetheless, personal observation of potential and current consumers is probably the best source of market information for the small direct marketer.

First, have an ear that is sensitive to what the consumer is saying. When Jay Leno was starting out as a comedian he used to rush into the mens’ rest room and sit in a “stall” after he did a comedian show. For what reason? To obtain invaluable unbiased information on what consumers were thinking of his product. Jay would use this information in making changes to his comedy show. As a direct marketer, you should also seek unbiased information on what consumers are thinking of your products. Act like you’re a consumer in your own store if possible or persuade a friend to find out what customers might be complaining or praising about your busi-

ness. Find ways for getting an unbiased opinion of what consumers think of your products, and react appropriately. If you are just starting out, visit other businesses in the area as a customer to see what works for them. Ask yourself, “why would I rather buy from the business I envision instead of the competition?”

Surveys are another common method for getting detailed information that can help target your consumer. First, determine what “population” you are trying to gain information from. Most surveys focus on current customers since they have had an experience with your business and are an easy population to identify for sampling. But if you are trying to figure out why consumers haven’t visited the local farmers’ market — you obviously can’t survey people at the farmers’ market. When doing any survey, be sensitive to the amount of time you are requesting from participants. A small sample of free products or discount coupons are token gifts that can give individuals some compensation for their time and show your appreciation. Scientifically designed surveys often pay their participants well for completing surveys.

Surveys can be conducted in person, over the phone, or by mail. Personal interviews have an advantage in that you can often gear your survey so that it comes off as a promotion for your business. It gives your customer a feeling that you care for them personally and lets them know that management is listening to suggestions or concerns they might have. Also, you can give them a gift of appreciation immediately after they answer your questions. A disadvantage with personal interviews is that they require lots of man hours and responses may be biased more favorable than what consumers are really thinking. Human nature is that nobody wants to bring bad news. Most of us would rather tell someone that their business is great rather than a disaster.

Telephone surveys can yield information in a timely manner and are relatively

inexpensive. But be sure that your phone calls don't invade on an individual's privacy. Many people are annoyed at evening phone calls, particularly when dinner is warm, and this brings a negative image to your business. Keep phone surveys short with easy questions to answer and call business rather than home numbers. Be sure and ask the same

questions in the same tone of voice to everyone as well, to improve consistency.

Mail surveys are great for obtaining detailed information and consistency across individuals. But the response rate is often very low for mail surveys. A letter or phone call reminding individuals of the survey a week or two later are helpful for improving response rates. A response rate of at least 60 percent is considered sufficient for most types of questionnaires. However, the response rate for many mail surveys to businesses are as low as 20 percent. Information compiled from structured questions, like questions 1 through 3 in the "sample of survey questions," have little value with low survey responses. Questions that are more open-ended, like questions 4 and 5, are more useful with low survey responses since they yield specific suggestions that can be evaluated and acted upon. A combination of structured and open-ended questions will provide general information along with specific suggestions.

All surveys need to be interpreted with care. What consumers say they will do with their dollars and actually do are sometimes different. Over 90% of the consumers interviewed by the Packer indicated that they had increased or at least maintained their fruit and vegetable consumption (see Figure 1) between 1987 and 1992. Yet average per capita consumption figures have been flat during this period (see Charts 1 and 2). When consumers actually vote with their dollars, pay attention. Thus, not enough can be said for keeping track of the cash register and having a record system that can pinpoint what items consumers have increased or decreased their purchases of. Daily or weekly records are preferred to just annual summaries too, since many produce items may sell better at the beginning of the season than at the end of the season. Tourist activities and events are often heavily dependent on a holiday or season. Demand for specialty meat products like summer sausage, smoked hams and turkeys can surge before the holidays of Thanksgiving, Christmas, and

### Sample Customer Survey Questions

1. How did you first learn about this fresh farm produce outlet?
  - Through friends or family.
  - Through roadside signs.
  - Through a newspaper article.
  - Through the Fresh Farm Produce brochure.
  - Through classified newspaper ads.
  - Received a call or postcard.
  - Referred by another producer or business.
  - I don't remember or am not sure.
  - Other, please specify: \_\_\_\_\_
  
2. Have you seen the following advertisements for produce operations here?
  - Fresh Farm Produce brochure.
  - Classified newspaper ads.
  - Newspaper feature articles.
  - Road signs.
  - Radio announcements.
  - Television coverage.
  
3. Of the lettered income categories on this chart, can you tell me which letter best describes your family's before-tax income?
  - a. less than \$15,000.
  - b. 15,001-30,000.
  - c. 30,001-40,000.
  - d. 40,001-60,000.
  - e. 60,001-80,000.
  - f. 80,001-100,000.
  - g. over 100,000.
  - h. No response.
  
4. Are there any other products you would like to see offered for sale?
  - No.
  - Yes, please describe: \_\_\_\_\_
  
5. Are there other things that you would like to do during this trip that you can not currently do?
  - No.
  - Yes, please describe: \_\_\_\_\_

*Questions extracted from Agricultural Tourism in Cochise County, Arizona, Characteristics and Economic Impacts, by Leones et al.*

Easter. Craft sales generally fluctuate with tourist travel and the seasons too. Keeping track of daily sales receipts can help you better plan for holidays and the value of special events in subsequent years.

### **Starting Small - "Testing the Winds"**

Not enough can be said for the merits of starting out on a small scale. If you were on your first hang gliding adventure, wouldn't you rather launch from a small hill with sand below rather than a 300' cliff with boulders at the bottom? Sometimes this reasoning is forgotten when starting a business. Most major corporations and successful small businesses started in a home office, garage, or side project just like most of the thriving direct farm marketing and tourism operations today. Entrepreneurs that are on the "cutting edge" of production and marketing techniques always seem to be trying something different and they almost always trial test a new idea before going full scale. Even large companies like McDonalds do a test trial on all their new products before they go "national." Obvious advantages to starting small are that you can:

- ♣ Obtain valuable market information that will indicate what products you should exploit or drop. How customers vote with their dollars determines where you focus your limited resources. A *market approach* means growing products consumers want rather than a *sales approach* of running a high visibility add campaign that "coerces" consumers into making one-time purchases.
- ♣ Devote more time for each unit of production, making it easier to produce a higher quality product. This can be important for building a "name brand" image.
- ♣ Test your production capabilities for your land site and resources available without risking a large amount of capital.

- ♣ Lower finance requirements so that self-financing is often much more reachable. Credit sources generally loan to small businesses starting out at their highest category of interest rate, if they will loan.
- ♣ Assess the work load and type of work required before a full commitment is made to the business.
- ♣ Learn the legal requirements the most appropriate way of meeting legal obligations. Would be a shame to find out that a local ordinance could close down your business after you have already made a large investment in time and money.
- ♣ Work at least part-time at another job so that a "salary" is not required during the start-up phase.

A disadvantage commonly cited for not going into a direct farm marketing venture in a large way is that, "I have no other job and need to utilize my time and earn a full-time salary." But a more reasonable policy is to commit to not withdrawing any salary for at least a year and preferably two years. Many businesses fail to be the financial success they are destined for because start-up expenses in the first two years exhaust the available cash flow of the business.

### **Secondary Data Sources (wholesale price data)**

#### **Arizona Agricultural Statistics Service**

3003 N Central Ave., Suite 950,  
Phoenix, Arizona 85012-2994  
602-280-8850

#### **Arizona Field and Vegetable Crop Budgets**

4042 N. Campbell  
Tucson, AZ 85719  
602-621-1713

**The Packer**

*(weekly newspaper of the  
fruit and vegetable industry)*

Vance Publishing  
7950 College Blvd.  
P. O. Box 2939  
Shawnee Mission, KS 66201  
800-255-5113

**United States Department of  
Agriculture**

Economic Research Service  
National Ag. Statistics Service  
Livestock and Poultry Situation  
and Outlook  
341 Victory Drive  
Herndon, VA 22070  
800-999-6779

Federal-State Market News Service  
Ag Marketing Service  
Fruit and Vegetable Market News  
P.O. Box 96456  
Rm. 2503 So. Bldg.  
Washington, DC 20090-6456  
202-720-2745

Vegetables:

Gary Lucier, John Love,  
& Charles Plummer  
202-219-0884

Fruit & Tree Nuts:

Dennis Shields & Diane Bertelsen  
202-219-0884

AutoFax: 202-219-1107  
*(document 0411 for general in-  
formation that leads to data for  
specific commodities)*

Internet *(electronic data bases)*:  
oldal.mannlib.cornell.edu

**References**

Blank, Steven C. "Income Risk Varies  
With What You Grow, Where You Grow  
It." California Agriculture 46, 5 (1992):14-  
16.

Blank, Steven C. and Brian H. Schmiesing.  
"Farm credit: The new focus on risk."  
Choices, First Quarter 1993, pp. 28-29,  
41.

<sup>1</sup> *Russell Tronstad, Assistant Specialist,  
Department of Agriculture and Resource  
Economics, Cooperative Extension, The  
University of Arizona, Tucson, Az.*

**FROM:**

Direct Farm Marketing and Tourism Handbook.

**Disclaimer**

*Neither the issuing individual, originating unit, Arizona Cooperative Extension, nor the Arizona Board of Regents warrant or guarantee the use or results of this publication issued by Arizona Cooperative Extension and its cooperating Departments and Offices.*

*Any products, services, or organizations that are mentioned, shown, or indirectly implied in this publication do not imply endorsement by The University of Arizona.*

---

*Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, James Christenson, Director, Cooperative Extension, College of Agriculture, The University of Arizona.*

*The University of Arizona College of Agriculture is an Equal Opportunity employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to sex, race, religion, color, national origin, age, Vietnam Era Veteran's status, or disability.*

