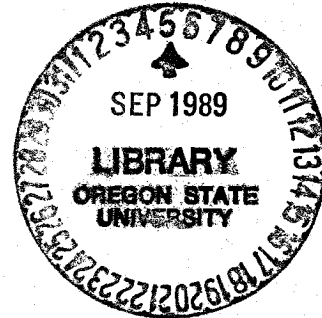


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# **CROPPING ALTERNATIVES**

**A questionnaire for evaluating a new cropping enterprise**



Special Report 838 / April 1989



**OREGON STATE UNIVERSITY EXTENSION SERVICE**

## CROPPING ALTERNATIVES

### A questionnaire for evaluating a new cropping enterprise

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This questionnaire is intended for use by individuals who have not previously farmed but are thinking about starting a farming enterprise and for individuals who are already raising crops but are thinking about growing a new crop. In either case, it is assumed that you have already identified a crop to be grown. The questionnaire is designed as a guide for you to use in evaluating a new crop. The questionnaire guides you through an evaluation process that encompasses production, marketing, financial, and personal considerations. It is intended to serve as a factual base from which you and your county Extension agent or other farming advisor can discuss your specific desires and situation.

If you have not identified a crop to grow, the questionnaire is not as useful, but you can still use it. In such cases, just read through the questions in the various sections. These questions will give you an idea about the type of information you will need to know to be successful in evaluating the potential of a new crop.

The questionnaire is divided into five sections -- physical resources, possible new crop, financial considerations, marketing considerations, and personal considerations. If your primary goal when raising a new crop is to earn a profit, answer as many questions as you can in all sections. If your goal is **not profit-related**, the physical resources and possible new crop questions should still be helpful.

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### Physical Resources

1. Where do you or will you farm? \_\_\_\_\_
2. What are the main soil types you will be farming (see a soil survey if this information is not known)? \_\_\_\_\_  
\_\_\_\_\_
3. What is the normal rainfall in the area? \_\_\_\_\_
4. Can you irrigate? \_\_\_\_\_
  - a. If yes, what type of irrigation are you or will you be using? \_\_\_\_\_  
\_\_\_\_\_
  - b. What is the source of your water? \_\_\_\_\_
  - c. Do you have a current water right for the land where you wish to grow the new crop? \_\_\_\_\_  
If so, what is the limit? \_\_\_\_\_
  - d. Have you had a water quality analysis performed? \_\_\_\_\_
5. What is your anticipated cropping rotation? \_\_\_\_\_  
\_\_\_\_\_

If you are currently farming, please fill in table 1.

Table 1. -- Currently grown crops

	Crop 1	Crop 2	Crop 3	Crop 4
Give crop name ----->				
1. Acres grown				
2. Average yield				
3. Est. cost of production/A				
4. Normal seeding time?				
5. Normal harvest time?				
6. Is this crop irrigated?				
7. Normal yearly fertilizer rate (lbs. of N-P-K-S applied)?				
8. What pesticides do you normally use on this crop?				
9. Typical soil pH needed for this crop				

If you are currently farming, please fill in table 2, listing the types and general condition of equipment you own in each listed category.

Table 2. -- Current equipment pool

Equipment	Make/type/size	Condition (good-fair-poor)	Anticipated replacement year
Tractors	1.		
	2.		
	3.		
	4.		
Tillage equipment	1.		
	2.		
	3.		
	4.		
	5.		
Seeding equipment	1.		
	2.		
	3.		
Harvesting equipment	1.		
	2.		
	3.		
	4.		
On-farm storage	1.		
	2.		
On-farm processing equipment	1.		
	2.		
Other	1.		
	2.		
	3.		
	4.		
	5.		

### Possible New Crop

1. What are you proposing to grow? \_\_\_\_\_
2. How did you learn about this crop? \_\_\_\_\_  
\_\_\_\_\_
3. Basic biology
  - a. Is this crop a grass or a broadleaf? \_\_\_\_\_
  - b. Is the crop annual, biennial, or perennial in growth habit? \_\_\_\_\_  
\_\_\_\_\_
  - c. If perennial:
    - i. What is the expected life of a stand/crop? \_\_\_\_\_
    - ii. When can the first harvest be made? \_\_\_\_\_
    - iii. How many harvests can be taken each year? \_\_\_\_\_
    - iv. If multiple harvests are taken, what is the anticipated yield for each harvest? \_\_\_\_\_  
\_\_\_\_\_
    - v. Is overall production stable over years? \_\_\_\_\_
  - d. Is the crop fall or spring planted or can it be planted any time of year? \_\_\_\_\_  
\_\_\_\_\_
  - e. What is the normal length of time (in months) from planting to first harvest? \_\_\_\_\_  
\_\_\_\_\_
4. Where is the crop now grown? \_\_\_\_\_
5. Moisture requirements
  - a. Is the crop normally irrigated in areas where it is grown? \_\_\_\_\_
  - b. If the crop is not irrigated, what is the minimum precipitation requirement? \_\_\_\_\_  
The maximum? \_\_\_\_\_
6. Temperature requirements
  - a. What are the temperature extremes in the region where the crop is now grown? \_\_\_\_\_
  - b. Is the crop tolerant of or sensitive to heat stress? \_\_\_\_\_
  - c. Is the crop tolerant of or sensitive to cold stress? \_\_\_\_\_
  - d. Is the crop tolerant of or sensitive to frost? \_\_\_\_\_
  - e. What is the basal growth temperature for this crop (the lowest temperature at which the crop still grows)? \_\_\_\_\_
  - f. What is the number of heat units required to reach crop maturity? \_\_\_\_\_  
\_\_\_\_\_

7. Soil requirements

- a. Are there restrictions as to soil type? \_\_\_\_\_
- b. Does the crop do best on soils high in sand? clay? organic matter? \_\_\_\_\_  
\_\_\_\_\_
- c. What is the normal soil pH range under which the crop is grown? \_\_\_\_\_  
\_\_\_\_\_
- d. Is the crop tolerant of or sensitive to sodic soils? \_\_\_\_\_
- e. Is the crop tolerant of or sensitive to "wet" soils? \_\_\_\_\_
- f. Is the crop sensitive to any micronutrient deficiencies or excesses? \_\_\_\_\_  
\_\_\_\_\_

8. Method of propagation

- a. How is this crop propagated? true seed? bulbs? roots? rhizomes?  
rootstock? \_\_\_\_\_  
\_\_\_\_\_
- b. Where is "seed" available? \_\_\_\_\_
- c. In what quantities is "seed" available? \_\_\_\_\_
- d. Is the "seed" of known quality? \_\_\_\_\_
- e. Is certified "seed" available? \_\_\_\_\_
- f. Is the "seed" treated? should it be treated? \_\_\_\_\_
- g. Are there special "seed" storage requirements? \_\_\_\_\_  
\_\_\_\_\_

9. Planting requirements

- a. What is the normal planting date? \_\_\_\_\_
- b. What is a normal planting rate or population density? \_\_\_\_\_
- c. Is the crop broadcast planted or row planted? \_\_\_\_\_
- d. If planted in rows, what is the between-row spacing? \_\_\_\_\_
- e. Is special equipment needed for planting? \_\_\_\_\_  
\_\_\_\_\_

- f. Is special soil preparation necessary (extra fine or firm, raised beds,  
etc.)? \_\_\_\_\_  
\_\_\_\_\_

If special soil preparation is necessary, do you have a means by which to  
prepare it? \_\_\_\_\_

10. Support systems

- a. Is any type of support system needed for the crop? \_\_\_\_\_  
If so, answer the question below. If not, go to question 11.
- b. What type is needed? \_\_\_\_\_  
\_\_\_\_\_
- c. Will you build the system? \_\_\_\_\_
  - i. If so, are materials and plans available? \_\_\_\_\_
  - ii. If not, are commercial builders available? \_\_\_\_\_
- d. Are there local zoning restrictions regarding support systems? \_\_\_\_\_

11. Fertilizer requirements

- a. Is the crop a legume (does it fix nitrogen)? \_\_\_\_\_
- b. What are the known nitrogen, phosphorus, potassium, and sulfur requirements of the crop? \_\_\_\_\_  
\_\_\_\_\_
- c. When are fertilizers normally applied? \_\_\_\_\_  
\_\_\_\_\_
- d. In what form are fertilizers applied (liquid, anhydrous, dry, etc.)? \_\_\_\_\_  
\_\_\_\_\_
- e. Are micronutrients necessary? \_\_\_\_\_

12. Pesticide requirements

- a. Are there pest problems (rodents, birds, nematodes, deer, other mammals, etc.)? \_\_\_\_\_
- b. Are herbicides generally used in production in other regions? \_\_\_\_\_  
If so, what herbicides are generally used? \_\_\_\_\_  
\_\_\_\_\_
- c. Are there diseases that are commonly associated with production of this crop? \_\_\_\_\_  
If so, what are these diseases? \_\_\_\_\_  
\_\_\_\_\_  
Are control measures known? If so, what are they? \_\_\_\_\_  
\_\_\_\_\_
- d. What are the common insect pests of this crop? \_\_\_\_\_  
\_\_\_\_\_
- e. Are insecticides generally used? If so, which ones? \_\_\_\_\_  
\_\_\_\_\_

13. Harvest

- a. When is the crop normally harvested? \_\_\_\_\_
- b. How is the crop normally harvested? \_\_\_\_\_
- c. Does the crop need to be artificially dried? \_\_\_\_\_
- d. Will the crop need to be cleaned before it is marketed? \_\_\_\_\_
- e. Will the crop need to be packaged before it is marketed? \_\_\_\_\_
- f. Do harvest demands of this crop (labor or equipment) conflict with those of other crops you now grow? \_\_\_\_\_



## Financial Considerations

1. Please fill in as much of the table 3 as possible. An enterprise budget sheet on a similar crop may be available through your county Extension office. Such a budget could serve as a useful starting point/information source.

Table 3. -- Estimated cost of production for possible new crop

Item	Practice description	
<b>Variable costs</b>		
Field prep		
Fertilization	Application	
	Materials	
Planting	Equipment	
	Materials	
Herbicides	Application	
	Materials	
Fungicides	Application	
	Materials	
Insecticides	Application	
	Materials	
Other pest control	Application	
	Materials	
Irrigation	Labor	
	Energy	
Harvest		
Hauling		
Storage/processing		
Other marketing costs		
Pickup, ATV, etc.		
Interest on production loan		
Interest on personal investment (opportunity cost)		
Hired labor (seasonal)		
Total variable costs		

Table 3. -- Estimated cost of production for possible new crop (continued)

Item	Practice description
<b>Fixed costs</b>	
Land costs	lease _____
	or _____
	mortgage and taxes _____
Crop support systems (trellises, etc.)	_____
installation and maintenance	_____
Machinery and equipment insurance	_____
Machinery and equipment depreciation	_____
and interest	_____
Hired labor (year-round)	_____
Interest on personal investment in	_____
fixed costs	_____
Total fixed costs	_____
<b>Total cost (variable and fixed)</b>	<b>_____</b>
* * * * *	
Estimated yield	_____
Break-even unit price to recover variable costs (divide	_____
total variable costs by estimated yield)	_____
Break-even unit price to recover total cost (divide	_____
total cost by estimated yield)	_____

2. What are current known prices paid for this commodity? \_\_\_\_\_  
\_\_\_\_\_
3. If your break-even price to recover all costs (see table 3) is more than the current price, can yield be increased? can production costs be decreased? \_\_\_\_\_  
\_\_\_\_\_
4. If your break-even price is less than the current market price, have you overestimated yield? have you underestimated costs? \_\_\_\_\_  
\_\_\_\_\_
5. What has been the average price paid for this commodity over the last 3 years? 5 years? 10 years? \_\_\_\_\_  
\_\_\_\_\_
6. Is price stable over the year or are there dramatic shifts in price? \_\_\_\_\_
  - a. If shifts occur, when are prices normally highest? \_\_\_\_\_
  - b. When are prices normally lowest? \_\_\_\_\_
7. If no price is currently established, on what basis will you price your crop? \_\_\_\_\_  
\_\_\_\_\_
8. Will you need new equipment to produce this crop? \_\_\_\_\_
9. Will you obtain income from this crop in the first cropping season? If not, when? \_\_\_\_\_
10. How will this new crop affect your cash flow? \_\_\_\_\_  
\_\_\_\_\_
11. How will this new crop affect your debt load? \_\_\_\_\_  
\_\_\_\_\_
12. What do you see as the financial risks involved in switching to this new crop? Are you willing and able to assume these risks? \_\_\_\_\_  
\_\_\_\_\_
13. Will you have to obtain additional insurance, licenses, or permits to make this cropping change? \_\_\_\_\_
14. Are there zoning or land development restrictions that you should consider before you make this cropping change? \_\_\_\_\_  
\_\_\_\_\_
15. Will you need to hire additional seasonal labor? Will such laborers be available when you need them? \_\_\_\_\_

## Marketing Considerations

1. Is this crop currently grown in your area? \_\_\_\_\_
2. What type of experience have other producers had with this same or similar crops in your area? \_\_\_\_\_  
\_\_\_\_\_
3. What evidence is there that a demand exists for this crop? \_\_\_\_\_  
\_\_\_\_\_
4. Have you conducted a marketing survey? \_\_\_\_\_
5. Have you tested the market? \_\_\_\_\_
6. What are your marketing alternatives -- you pick, you sell/roadside, local sales, regional, national, export? \_\_\_\_\_  
\_\_\_\_\_
7. Who will your typical buyer be? \_\_\_\_\_
8. How many potential buyers are there? \_\_\_\_\_
9. How long have these buyers been "in the market"? \_\_\_\_\_
10. Are buyers willing to enter into a contract? \_\_\_\_\_
11. Are there other opportunities to minimize price risk? \_\_\_\_\_
12. Are there established grading standards for this crop? \_\_\_\_\_
13. If standards exist, who has established these standards? what are the standards? \_\_\_\_\_  
\_\_\_\_\_
14. When is a grade determined in the marketing process? \_\_\_\_\_
15. Who assigns a grade? \_\_\_\_\_
16. How sensitive is price to grade? \_\_\_\_\_
17. Is there a market for premium quality product? for organically grown product? \_\_\_\_\_  
\_\_\_\_\_
18. Will your crop be sold year-round? at harvest? \_\_\_\_\_
19. If you intend to market year-round, what type of storage is necessary? Is such storage available "on site"? Can you lease/rent storage? \_\_\_\_\_  
\_\_\_\_\_
20. In what quantities will buyers want to deal? \_\_\_\_\_
21. How many acres of the crop will you plant? \_\_\_\_\_
22. How many acres of this crop could you plant? \_\_\_\_\_
23. Who is your competition? \_\_\_\_\_
24. What do you see as your marketing advantages over your competition? \_\_\_\_\_  
\_\_\_\_\_

### Personal Considerations

1. Why are you thinking of growing this crop? What are your primary goals in growing this crop? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. What effect will growing this crop have on your workload? on your available free time? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. What effect will growing this crop have on work expectations for other family members or business partners? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What other types of risks or hardships will growing this crop impose on you, your family, or your business? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. What opportunities will this cropping change afford you and your family or business? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Have you discussed this change with family member or business partner? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Are new skills needed to make this endeavor successful? If so, where will you get the necessary training? \_\_\_\_\_  
\_\_\_\_\_