

HORTICULTURAL CHOICE DILEMMAS QUESTIONNAIRE

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Horticultural Choice Dilemmas Questionnaire

Adapted from N. Kogan and M.A. Wallach, *Risk Taking: A Study in Cognition and Personality*, New York: Holt, Rinehart, and Winston, 1964 by Wesley N. Musser and George F. Patrick in 1999 and revised in 2001.

Instructions. On the following pages, you will find a series of situations that are likely to occur in everyday life. The central person in each situation is faced with a choice between two alternative courses of action, which we might call X and Y. Alternative X is more desirable and attractive than alternative Y, but the probability of attaining or achieving X is less than that of achieving Y.

For each situation on the following pages, you will be asked to indicate the minimum odds of success that you would demand before recommending that the more attractive or desirable alternative, X, be chosen.

Read each situation carefully before giving your judgement. Try to place yourself in the position of the central person in each of the situations. There are twelve situations in all. Please do not omit any of them.

1. Carol K, who is single, has been successfully working as the manager of sales department of a large nursery since graduating from college five years ago. She is assured of a lifetime job with a modest, though adequate, salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that her salary will increase much before she retires. While attending a ornamental horticulture conference, Ms. K is offered a job with a small, newly founded company producing woody ornamentals which has a highly uncertain future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of larger existing firms.

Imagine you are advising Ms. K. Listed below are several probabilities or odds of the new company's proving financially sound.

Please check the lowest probability that you would consider acceptable for Ms. K to take the new job.

- The chances are 1 in 10 that the company will prove financially sound.
- The chances are 3 in 10 that the company will prove financially sound
- The chances are 5 in 10 that the company will prove financially sound.
- The chances are 7 in 10 that the company will prove financially sound.
- The chances are 9 in 10 that the company will prove financially sound.
- Place a check here if you think that Ms. K should not take the new job no matter what the probabilities.

2. Phil B, a 45-year-old vegetable grower, has recently been informed by his physician that he has developed a severe heart ailment. The disease would be sufficiently serious to force Mr. B to change many of his strongest life habits--giving up his farming activities, drastically changing his diet, reducing favorite leisure time activities. The physician suggests a delicate medical operation could be attempted which, if successful, would completely relieve the heart condition. But its success could not be assured, and in fact, the operation might prove fatal.

Imagine you are advising Mr. B. Listed below are several probabilities or odds that the operation will prove successful.

Please check the lowest probability that you would consider acceptable for the operation to be performed.

- Please place a check here if you think Mr. B should not have the operation no matter what the probabilities.
- The chances are 9 in 10 the operation will be a success.
- The chances are 7 in 10 the operation will be a success.
- The chances are 5 in 10 the operation will be a success.
- The chances are 3 in 10 the operation will be a success.
- The chances are 1 in 10 the operation will be a success.

3. Peter T is the owner and operator of a vegetable and fruit operation. The farm is quite prosperous, and Mr. T has strongly considered the possibilities of business expansion. The choice is between buying additional cropland to plant more vegetables, which would provide a moderate return on the additional \$100,000 investment, or planting additional apple trees. Because of Mr. T's apple management skills, planting trees offers a much higher potential return on the \$100,000 invested. On the other hand, future environmental and food safety policies are unclear and may be subject to change for fruit. In fact, one proposal would sharply limit fruit production in the area, making the orchard investment worthless.

Imagine you are advising Mr. T. Listed below are several probabilities or odds of continued stability in policies with respect to fruit production.

Please check the lowest probability that you would consider acceptable for Mr. T to plant additional apple trees.

- The chances are 1 in 10 that apple production will not be sharply limited.
- The chances are 3 in 10 that apple production will not be sharply limited.
- The chances are 5 in 10 that apple production will not be sharply limited.
- The chances are 7 in 10 that apple production will not be sharply limited.
- The chances are 9 in 10 that apple production will not be sharply limited.
- Place a check here if you think that Mr. T should not invest in additional apple production , no matter what the probabilities.

4. Ms. Lynn P is in the middle of sweet corn harvesting when her hydrocooling unit has a major breakdown and it begins to rain. Ms. P could purchase a new unit which is currently available from a local dealer to be delivered and installed in the morning. On the other hand, Ms. P could arrange for the repair of her hydrocooler which would be much less costly than a new unit. The hydrocooler would have several years of life remaining after the repairs. However, the local dealer does not know when the needed parts will be obtained and repairs can be completed. If Ms. P is unable to resume harvesting after the rain, there will be extra harvesting losses.

Imagine that you are advising Ms. P. Listed below are several probabilities or odds that the repairs will be completed before Ms. P would be able to resume harvesting and avoid extra harvesting losses.

Please check the lowest probability that you would consider acceptable for Ms. P to repair the old hydrocooler.

- Place a check here if you think Ms. P should not consider repair to the old hydrocooling unit no matter what the probabilities.
- The chances are 9 in 10 that the hydrocooling unit will be repaired before harvesting can be resumed.
- The chances are 7 in 10 that the hydrocooling unit will be repaired before harvesting can be resumed.
- The chances are 5 in 10 that the hydrocooling unit will be repaired before harvesting can be resumed.
- The chances are 3 in 10 that the hydrocooling unit will be repaired before harvesting can be resumed.
- The chances are 1 in 10 that the hydrocooling unit will be repaired before harvesting can be resumed.

5. Mr. C., a married man with two children, has a farm which provides net income for family living expenditures of \$40,000 per year. He can easily afford the necessities of life, but few of the luxuries. Mr. C's father, who recently died, carried a \$100,000 life insurance policy. Mr. C would like to use the money as down payment on additional farm land. He is aware of a nearby tract of land which he could easily incorporate into his existing farming operation. He estimates that his net income, after expenses and making the loan payment, would be \$5,000 per year. On the other hand, he has also heard about a tract of land near a local urban area. If the city starts growing again, the land could quickly double in value. In the interim, Mr. C believes that he can break-even farming the land. However, if the city continues its current stagnation, the land could decline in value.

Imagine you are advising Mr. C. Listed below are several probabilities or odds that the land will double in value.

Please check the lowest probability that you would consider acceptable for Mr. C to invest in the tract of land near the urban area.

- The chances are 1 in 10 that the land will double in value.
- The chances are 3 in 10 that the land will double in value.
- The chances are 5 in 10 that the land will double in value.
- The chances are 7 in 10 that the land will double in value.
- The chances are 9 in 10 that the land will double in value.
- Place a check here if you think that Mr. C should not invest in the tract of land, no matter what the probabilities.

6. Wes G is a crop farmer who produces 100,000 bushels of apples in a normal year. He has storage for 40,000 bushels and sells the rest at harvest. Currently, he can forward contract 50,000 bushels of apples for harvest delivery at \$6.00 per bushel. On the other hand, he can wait to sell his apples at the market price when they are delivered. If the market price of apples increases, Mr. G will have a higher income. But there is also some chance the price of apples may decrease and Mr. G would have a lower income. Mr. G must decide whether it would be best to guarantee himself a price on one-half of his expected production now, or wait and sell his grain at harvest.

Imagine you are advising Mr. G. Listed below are several probabilities or odds that waiting to sell at harvest will result in higher income.

Please check the lowest probability that you would consider acceptable for Mr. G to wait to sell at harvest.

- Please place a check here if you think Mr. G should not wait to sell, no matter what the probabilities.
- The chances are 9 in 10 that waiting to sell will be a success.
- The chances are 7 in 10 that waiting to sell will be a success.
- The chances are 5 in 10 that waiting to sell will be a success.
- The chances are 3 in 10 that waiting to sell will be a success.
- The chances are 1 in 10 that waiting to sell will be a success.

7. Kate S is a farmer who uses about 10,000 gallons of diesel fuel annually. Currently petroleum prices are quite high compared with historical levels. A local firm offers to sell Ms. S as much diesel fuel as she would use in the next production season at a price considerably below current levels. At that price, Ms. S would have significant cost savings. However, Ms. S must pay for the diesel fuel now, before its delivery next year. Because petroleum prices are quite volatile, prices may drop substantially before the next production season. This would result in a significant loss for Ms. S.

Imagine you are advising Ms. S. Listed below are several probabilities or odds that diesel prices will not drop below current levels.

Please check the lowest probability that you would consider acceptable for Ms. S to buy the diesel fuel now.

- The chances are 1 in 10 that diesel fuel prices will not decline.
- The chances are 3 in 10 that diesel fuel prices will not decline.
- The chances are 5 in 10 that diesel fuel prices will not decline.
- The chances are 7 in 10 that diesel fuel prices will not decline.
- The chances are 9 in 10 that diesel fuel prices will not decline.
- Please place a check here if you think Ms. S should not buy the diesel fuel, no matter what the probabilities.

8. Mr. P, a 28-year old married farmer, has been cash renting cropland from several landowners for more than five years. Mrs. W, a widow, is offering Mr. P the opportunity to buy her land at a price slightly below the current market value. Mr. P can obtain the necessary financing, although the land purchase would involve a large debt and put him in a vulnerable financial situation. Purchase of the land would be a good investment, if no major adversity occurs in agriculture. On the other hand, a significant adversity, such as a severe disease outbreak or a commodity price decline, could force Mr. P out of farming.

Imagine you are advising Mr. P. Listed below are several probabilities or odds of no significant adversity occurring in agriculture.

Please check the lowest probability that you would consider acceptable for Mr. P to purchase Mrs. W's land.

- Please place a check here if you think Mr. P should not buy the land, no matter what the probabilities.
- The chances are 9 in 10 that no significant adversity will occur.
- The chances are 7 in 10 that no significant adversity will occur.
- The chances are 5 in 10 that no significant adversity will occur.
- The chances are 3 in 10 that no significant adversity will occur.
- The chances are 1 in 10 that no significant adversity will occur.

9. Mr. H has a farm with sandy soils which yield well in years of above average rainfall. Yields tend to be low in normal years and very low if there is a drought. The past couple of years yields have been below average and Mr. H's financial position is not strong. Irrigation is possible in the area. A center pivot irrigation system for 160 acres would require an investment of about \$75,000. Mr. H has determined that he would need an increase in his average green bean yield of about 15 bushels per acre to pay for the additional seed, fertilizer, water applications and recover his investment in the irrigation system over a ten year period. Experimental irrigation plots have obtained yield increases of 25 to 35 bushels per acre. If Mr. H could obtain this kind of yield increases, the irrigation investment would be very profitable. However, if yield increases of less than 15 bushels per acre were obtained, Mr. H's financial position would worsen rapidly.

Imagine you are advising Mr. H. Listed below are several probabilities or odds that Mr. H will obtain an average green bean yield increase of greater than 15 bushels per acre.

Please check the lowest probability that you would consider acceptable to make the investment in irrigation.

- The chances are 1 in 10 that the yield increase will exceed 15 bushels per acre.
- The chances are 3 in 10 that the yield increase will exceed 15 bushels per acre.
- The chances are 5 in 10 that the yield increase will exceed 15 bushels per acre.
- The chances are 7 in 10 that the yield increase will exceed 15 bushels per acre.
- The chances are 9 in 10 that the yield increase will exceed 15 bushels per acre.
- Please place a check here if you think Mr. H should not invest in irrigation no matter what the probabilities.

10. David K is a successful farmer who has participated in a number of civic activities of considerable value to the community. Mr. K has been approached by the leaders of his political party as a possible congressional candidate in the next election. Mr. K's party is a minority party in the district, though the party has won occasional elections in the past. Mr. K would like to hold political office, but to do so would involve a serious financial sacrifice, since the party has insufficient campaign funds. He would also have to endure the attacks of his political opponents in a hot campaign.

Imagine you are advising Mr. K. Listed below are several probabilities or odds of Mr. K's winning the election in his district.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. K to run for political office.

- Please place a check here if you think Mr. K should not run for political office, no matter what the probabilities.
- The chances are 9 in 10 that Mr. K would win the election.
- The chances are 7 in 10 that Mr. K would win the election.
- The chances are 5 in 10 that Mr. K would win the election.
- The chances are 3 in 10 that Mr. K would win the election.
- The chances are 1 in 10 that Mr. K would win the election.

11. Gerald O, a married 30-year old farmer, has obtained a five year lease on 320 acres of farmland. Mr. O currently has sufficient machinery for the land and some operating capital. As he considers a farm plan for the next five years, Mr. O realizes that he might grow vegetables on part of the land. If he could successfully manage vegetable production and markets continued to exist, he would be very successful financially and would probably be able to purchase the land after the five years. If he were unsuccessful in vegetable production and marketing, Mr. O would be likely to lose his existing capital and have to quit farming. On the other hand, Mr O could, as most local farmers are doing, grow corn and soybeans with which he has had experience, but which would be likely to allow only limited financial progress.

Imagine you are advising Mr. O. Listed below are several probabilities or odds that he will be successful in vegetable production.

Please check the lowest probability that you would consider acceptable for Mr. O to go into vegetable production .

- The chances are 1 in 10 vegetable production would be successful.
- The chances are 3 in 10 vegetable production would be successful.
- The chances are 5 in 10 vegetable production would be successful.
- The chances are 7 in 10 vegetable production would be successful.
- The chances are 9 in 10 vegetable production would be successful.
- Please place a check here if you think Mr. O should not attempt vegetable production, no matter what the probabilities.

12. Mr. M, an older farmer, is contemplating forming a partnership with Mr. Z, a man whom he has employed on the farm for more than two years. Recently, however, a number of arguments have occurred between them, suggesting some sharp differences of opinion in the way each views certain matters and how things should be done. Indeed, they decide to seek professional advice from a business counselor as to whether it would be wise for them to form a partnership. On the basis of these meetings with the business counselor, they realize that a well-working partnership, while possible, would not be assured.

Imagine you are advising Mr. M and Mr. Z. Listed below are several probabilities or odds that their partnership would prove to be a well-working one.

Please check the lowest probability that you would consider acceptable for Mr. M and Mr. Z to form a farm partnership.

- Please place a check here if you think Mr. M and Mr. Z should not form a farm partnership, no matter what the probabilities.
- The chances are 9 in 10 that the partnership will be a success.
- The chances are 7 in 10 that the partnership will be a success.
- The chances are 5 in 10 that the partnership will be a success.
- The chances are 3 in 10 that the partnership will be a success.
- The chances are 1 in 10 that the partnership will be a success.

RESPONSES

Score each situation below based on your response. List the probabilities from one to nine corresponding to your choice for each situation. Score the response that the risky alternative is never chosen no matter the probabilities as ten. Then, sum your scores on the individual situations:

<u>Choice Number</u>	<u>Response Number</u>
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____
7.	_____
8.	_____
9.	_____
10.	_____
11.	_____
12.	_____
Sum of Above	_____