

Bio-Security and Financial Risk

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Introduction

What is Risk?

Risk is a part of most everything we do. When we cross a street there is the risk that we could be hit by a car. Or, when we eat food there is the risk that it could be contaminated and we'll become ill. Thus, we could look at risk as the possibility of some negative consequence that could result from engaging in an event or activity. However, there is also the potential of an upside when taking a risk. For example, if we cross the street safely we arrive at a desired destination (e.g., restaurant, movie theater, school); or if we consume healthy food we nourish our bodies and grow. Therefore, once we recognize the daily presence of risks, it is important to determine whether specific risks are worth taking, or not. It is important to **manage a risk** by weighing the consequences of an activity or event by looking carefully at both the potential benefits and potential drawbacks. An additional strategy when dealing with risk is to look at **mitigation strategies**, which are ways to lower a risk. For example, when crossing a busy street, choosing to cross at a crosswalk with a light will mitigate (lower) the risk of being hit by a car than if one were to choose to dart across the street at a point where there is no crosswalk or light.

Disease Risk

The risk of contracting a disease depends upon a wide variety of factors, some of which can be controlled (e.g., environmental) and some of which cannot (e.g., genetics). **Pathogens** (e.g., bacteria or viruses) that cause diseases are spread in a variety of ways, such as **direct contact**, **indirect contact**, and **airborne transmission**. There is no way to eliminate **disease risk**, but a variety of **bio-security** measures can mitigate risks by taking precautionary actions associated with risk factors over which we have some control. For example, a thorough and regular washing of our hands can help prevent the spread of the cold virus.

Nationally, approximately 2,300,000 youth participate in 4-H Animal Science projects each year. Because working with animals can present potential **bio-security risks**, bio-security measures on the farm and at fairs, shows, and exhibitions must be implemented to help prevent the contraction and spread of disease that could result in human illness, the loss of animal life, as well as financial losses. Developing **bio-security practices** such as sanitizing tools and trailers, keeping stalls clean, keeping food and water fresh, and avoiding the mixing of animals as much as possible can go a long way in helping mitigate the risk of disease.

Financial Risk

Financial risk can be viewed as the possibility of some financial consequence – negative or positive – that may result from engaging in an event or activity. To help deal with the financial risks one faces when raising livestock, first consider your attitude toward taking risks. Do you avoid risks in order to steer clear of potential negative consequences, or are you someone who enjoys taking risks with the hope of trying to reap the greatest rewards? Think about it!

Looking at agricultural production from a financial perspective presents two main risks to consider when raising a market animal:

1. **Production.** There is always a desired or targeted level of production when raising animals. The better the production the better the yield, and thus the better the financial reward. However, variability in production can occur, and common causes include weather and disease. For example, poor weather conditions may lead to poor pasture growth and food availability, thus affecting the growth of your animal. Financial cost may also rise due to the necessity of having to supplement food for your animal. Additionally, poor bio-security measures may result in your animal contracting an illness which may also increase cost and have a negative effect on production. On the other hand, good weather conditions may lead to excellent pasture growth and food availability, thus improving the growth of your animal. Additionally, good bio-security measures may result in your animal avoiding an illness, therefore having a positive effect on production.
2. **Market and Price.** Like any investment, we want to “buy low and sell high.” However, market prices that are out of your control can vary due to changes in supply and demand. You may achieve your desired level of production, but the market price you receive for your animal this year may be below what you would have received in a previous year or would receive in a subsequent year. Conversely, the market price you receive for your animal this year may be greater than what you would have received in a previous year or would receive in a subsequent year.

There are three strategies that are important to help manage financial risks:

1. **Record Keeping.** Financial records can provide valuable information necessary to understand critical financial risks. By keeping accurate financial records that are up to date, future decisions can be based on past performances.
2. **Budgeting.** A budget is an estimated plan of what is going to happen financially. If accurate financial records are kept, budgets can help one anticipate and prepare for what is expected to happen and thus help manage an activity within the funds that are available.
3. **Animal Health Management and Bio-security.** Ensuring that your animal is healthy and is current on all vaccinations can help ensure a higher level of production. Additionally, bio-security measures that help maintain sanitary conditions on the farm and at fairs and expositions can decrease the risk of disease transmission and therefore also improve the chances of achieving your desired production. Additionally, disease outbreaks can adversely affect market prices.

Terms and Concepts

- **Airborne Transmission:** Spread of pathogens by the air as pollen or dust.
- **Animal Health Management:** The responsibility of ensuring the health of one’s animal in order to optimize production.
- **Bio-security:** Precautions taken to protect from attack or interference due to biological organisms that can cause diseases harming humans and/or animals. (Or, a less formal definition: "Keeping the bad bugs off the farm.")

- **Cost/Benefit Analysis:** A process that involves analyzing the cost effectiveness of different possible decisions or alternatives in order to determine whether the benefits or drawbacks of those decisions or alternatives outweigh the costs.
- **Direct Contact:** Spread of pathogens by physical contact between an ill person or animal and a healthy person or animal.
- **Bio-Security Risk:** The probability of a negative outcome while taking precautions to protect from attack or interference due to biological organisms that can cause diseases harming humans and/or animals.
- **Budgeting:** The effort to manage finances by estimating short and long term goals.
- **Disease Transmission Risk:** The potential risk of contracting an illness through one form of transmission or another.
- **Indirect Contact:** When an uninfected person or animal touches the contaminated surface (e.g., table top) of an inanimate object (e.g., food dish).
- **Market and Price Risk:** The probability of a negative outcome while evaluating supply and demand as well as the value of products produced
- **Pathogen:** A disease-causing organism.
- **Production Risk:** Weighing consequences of an activity or event by looking carefully at both the potential benefits and potential drawbacks to production.
- **Record Keeping:** The recording of valuable information performed on a regular basis
- **Risk:** The possibility of some consequence – negative or positive – that may result from engaging in an event or activity.
- **Risk Management:** Weighing consequences of an activity or event by looking carefully at both the potential benefits and potential drawbacks
- **Risk Mitigation:** Steps one can take to lower risk.
- **Vector:** A living carrier that transmits a pathogen is referred to as a vector (e.g., insect).

Skill Level

Beginner, Intermediate, or Advanced

Learner Outcomes

Increase knowledge of important concepts that relate to bio-security and financial risks

Success Indicator

Demonstrate ability to make detailed decisions based on assessment of risks.

Life Skill(s)

Critical Thinking, Problem Solving, Decision Making, Record Keeping, Communication, Cooperation, Planning & Organizing, Wise Use of Resources, Goal Keeping, Teamwork, Disease Prevention

Tags

Risk, risk assessment, bio-security, financial risk, disease risk

Time Needed

45-75 minutes

Materials List

- * Recording Sheet Part I (Appendix A)

- * Recording Sheet Part II (Appendix C)
- * Handouts and Charts Part I (Appendix B)
- * Handouts and Charts Part II (Appendix D)
- 3 dice per group
- Pen or Pencils
- Flip chart paper and markers

* *Materials provided*

Volunteer Tip: Each group will need a Part I and Part II Recording Sheet (Appendices A and C), and Handouts and Charts Parts I and II (Appendices B and D). These should be copied in advance; each Appendix should be collated and organized as separate packets (**Note:** Do not staple packets; the pages are distributed individually as the activity proceeds.) Documents for **Part I**  and **Part II**  are color coded and identified by a symbol to help with your organization.

Suggested Grouping

Pairs or small groups of 3-4 youth

Getting Ready

1. Make one copy of Recording Sheet Part I (Appendix A) for each group.
2. Make one copy of Recording Sheet Part II (Appendix C) for each group.
3. Make one copy of Handout and Charts I (Appendix B) for each group.
4. Make one copy of Handout and Charts II (Appendix D) for each group.
5. Hand out 3 dice to each group.
6. Provide each group with flip chart paper and writing utensils.

Opening Questions

1. Explain what the term “risk” means to you and provide some examples of things you consider to be risks. Ask the youth to record their ideas on the flip chart paper provided.
2. Explain what you think are risks involved in raising a project animal. Ask the youth to record their ideas on the flip chart paper provided.

Experience

Part I

Volunteer Tip: Explain to the youth participants that this activity represents either a market animal project where there is no sale involved or a breeding animal project.

1. Announce to the youth that every group has a project budget of \$600. Pass out Recording Sheet Part I.
2. Next, distribute the *Shows/Exhibitions (I)* handout and ask the youth to read through the descriptions of the options provided. Have the youth choose two shows/exhibitions they plan on attending and record their choices onto their recording sheet.

(Decision Point. Ask the youth the following: Explain your choices. What do you think are the risks involved in these choices? Record your response in the lines provided on your Recording Sheet.)

3. Now distribute the *Choosing Your Animal (II)* handout. Have the youth review the descriptions of Animal A, Animal B, and Animal C. Ask the youth to choose their project animal, record their animal choice and the cost, and their current balance onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this animal. What do you think are the risks involved in choosing this animal? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

4. Pass out the *Bringing Your Animal Home (III)* handout. Have the youth review the descriptions of both Option A (quarantine) and Option B (no quarantine) and ask the youth to record their choice onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this option. What do you think are the risks involved in choosing this option? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

5. Distribute *CHART 1: At Home; Before Show/Exhibition (IV)* (**Volunteer Note:** There are separate charts for Animals A, B, and C) according to their above choices (quarantine; no quarantine) and ask the youth to roll 3 dice. Have the youth record their outcome and current balance onto their Recording Sheet and proceed to their first show/exhibition.

6. Next, give out the *Healthy Practices at Shows/Exhibitions (V)* handout. Ask the youth to review the descriptions of both Option C and Option D and to record their choice onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this option. What do you think the risks are involved in these choices? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

7. Then, provide youth with *CHART 2: Chance Roll (VI)* and ask the youth to roll 3 dice. Have the youth record their outcome and current balance onto their Recording Sheet.
8. Pass out *Bringing Your Animal Home from First Fair/Exhibition (VII)* handout. Ask the youth to review the descriptions of both Option E (quarantine) and Option F (no quarantine) and to record their choice onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this option. What do you think are the risks involved in choosing this option? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

9. Next, distribute *CHART 3: After First Show/Exhibition* (VIII) according to their above choices (quarantine; no quarantine) and ask the youth to roll 3 dice. Have the youth record their outcome and current balance onto their Recording Sheet.
10. Last, ask the youth to consider their second fair choice and to answer the questions presented on their Recording Sheet, *Second Show/Exhibition* section.

Share, Process, Generalize

Working together in small groups, follow the lines of thinking that have been developed by the youth through their explorations and sharing of their observations and comparisons. Specific question/prompt might include:

- Explain how, if at all, you think the decisions made in Year 1 will affect decisions you will make in the future.

Volunteer Tip: Ask each group to present their thoughts and ideas to the other youth. Discuss similarities and differences.

Part II

Volunteer Tip: Use Handouts and Charts Part II

1. Announce to the youth that a year has passed and every group has a project budget of \$600 in Year 2. Pass out Recording Sheet Part II.
2. Announce that it is time again to purchase, raise, and show another project animal. Inform the youth that in addition to the \$600 budget they have for their project animal in Year 2, they can carry forward their remaining budget from last year. However, for those youth who had a deficit at the end of last year they must subtract that amount from their Year 2 \$600 budget. Have the youth record their budget figures on their Recording Sheet Part II.
3. Next, distribute the *Shows/Exhibition* (I) handout and ask the youth to read through the descriptions of the shows provided. Have the youth choose two shows/exhibitions they plan on attending and record their choices onto their recording sheet.

(Decision Point. Ask the youth the following: Explain your choices. What do you think the risks are involved in these choices? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

4. Give out the *Choosing Your Animal* (II) handout. Have the youth review the descriptions of Animal A, Animal B, and Animal C. Ask the youth to choose their project animal, record their animal choice and the cost, and their current balance onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this animal. What do you think are the risks involved in choosing this animal? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

5. Pass out the *Bringing Your Animal Home* (III) handout. Have the youth review the descriptions of both Option A (quarantine) and Option B (no quarantine) and ask the youth to record their choice onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this option. What do you think are the risks involved in choosing this option? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

6. Distribute *CHART 1: At Home; Before Show/Exhibition* (IV) (**Volunteer Note:** There are separate charts for Animals A, B, and C) according to their above choices (quarantine; no quarantine) and ask the youth to roll 3 dice. Have the youth record their outcome and current balance onto their Recording Sheet and proceed to their first show/exhibition.
7. Next, give out the *Healthy Practices at Shows/Exhibitions* (V) handout. Ask the youth to review the descriptions of both Option C and Option D and to record their choice onto their Recording Sheet.
8. Then, provide youth with *CHART 2: Chance Roll* (VI) and ask the youth to roll 3 dice. Have the youth record their outcome and current balance onto their Recording Sheet.
9. Pass out *Bringing Your Animal Home from First Fair/Exhibition* (VII) handout. Ask the youth to review the descriptions of both Option E (quarantine) and Option F (no quarantine) and to record their choice onto their Recording Sheet.

(Decision Point. Ask the youth the following: Explain why you chose this option. What do you think are the risks involved in choosing this option? Ask the youth to record their responses in the lines provided on their Recording Sheet.)

10. Next, distribute *CHART 3: After First Show/Exhibition* (VIII) according to their above choices (quarantine; no quarantine) and ask the youth to roll 3 dice. Have the youth record their outcome and current balance onto their Recording Sheet.
11. Last, ask the youth to consider their second fair choice and to answer the questions presented on their Recording Sheet, *Second Show/Exhibition* section.

Share, Process, Generalize

Working together in small groups, follow the lines of thinking that have been developed by the youth through their explorations and sharing of their observations and comparisons. Specific questions/prompts might include:

1. Explain how, if at all, the decisions you made in Year 1 and Year 2 differed.
2. Explain how, if at all, you think decisions made in Year 1 affected the decisions made in Year 2.

3. Discuss how the decisions made in this activity are similar to those you need to make with your 4-H Animal Science projects.
4. Discuss how, if at all, the decisions you in this activity made were influenced by comparing costs to potential benefits (or drawbacks).

Volunteer Tip: Ask each group to present their thoughts and ideas to the other youth. Discuss similarities and differences.

Term and Concept Discovery/Introduction

At this point of the activity facilitators need to ensure that the following terms and concepts have either been discovered by the youth during their exploration or introduced by the facilitator:

Airborne Transmission, Animal Health Management, Bio-Security, Cost/Benefit Analysis, Direct Contact, Bio-Security Risk, Budgeting, Disease Transmission Risk, Indirect Contact, Market and Price Risk, Pathogen, Production Risk, Record Keeping, Risk, Risk Management, Risk Mitigation, and Vector.

Volunteer Tip: The goal is to have the youth develop an understanding of the concepts through their exploration and define the terms using their own words.

Concept Application

Resources:

http://homepage.smc.edu/mcgraw_colleen/math_52/dice%20roulette.pdf



Recording Sheet Part

Establishing My Project Budget: \$600

Show/Exhibition (check two):

- A: June 5th
- B: June 15th
- C: August 24th

Decision point justification: _____

Choosing My Animal (Check one animal):

- Animal A: Examined and vaccinated by veterinarian
- Animal B: No signs of illness; seller vaccinated
- Animal C: No signs of illness; not vaccinated

Decision point justification: _____

The cost of my animal: \$ _____. My current balance: \$ _____.

(Check one option):

- Option A: Quarantined for 14 days
- Option B: Not quarantined

Decision point justification: _____



**APPENDIX A
Recording Sheet PART I**

After bringing home my animal, my animal(s) (check one):

- Remained Healthy
- Became Sick

My current balance: \$_____.

My next step will be to (check all that apply):

- Go to my FIRST Show/Exhibition
Cost: Entrance Fee (Fair A = \$35; Fair B = \$25; Fair C = \$50)
- Ask a veterinarian to examine my animal(s) and provide treatment
Cost: Exam and Treatment
- Ask a veterinarian to examine my animal, provide treatment, and vaccinate
Cost: Exam, Treatment and Vaccines
- Give vaccinations only
Cost: Vaccines

The total cost: \$_____.

My current balance: \$_____.

FIRST SHOW/EXHIBITION

At the fair, I chose to perform (check one option):

- Option C: Purchased own shovels/rakes and disinfectant
- Option D: Shared shovels/rakes and purchased disinfectant

Decision point justification: _____

The cost: \$_____.

My current balance: \$_____.

Chance Roll: Results (check one option):

- Breach in bio-security; sent home.
- Showed animal; no prize money awarded.
- Showed animal; prize money awarded.

Prize Money received: \$_____.

My current balance: \$_____.



(I)

SHOWS/EXHIBITIONS

SHOWS/EXHIBITIONS	
A	Date: June 5 th Distance from your home: 115 miles Entrance Fee: \$35
B	Date: June 15 th Distance from your home: 32 miles Entrance Fee: \$25
C	Date: August 24 th Distance from your home: 75 miles Entrance Fee: \$50



(II)

CHOOSING MY ANIMAL

Choosing My Animal		
ANIMAL A	ANIMAL B	ANIMAL C
<ul style="list-style-type: none">• Examined and declared healthy by veterinarian• Vaccinated• Cost: \$400	<ul style="list-style-type: none">• Never examined by a veterinarian• No clinical signs of illness• Seller says he vaccinated the animal himself• Cost: \$325	<ul style="list-style-type: none">• Never examined by a veterinarian• No clinical signs of illness• Never vaccinated• Cost: \$275



(III)

BRINGING MY ANIMAL HOME

Bringing My Animal Home	
OPTION A	OPTION B
<ul style="list-style-type: none">• I quarantine my animal for 14 days where it is isolated in a different living space away from other animals on my property.	<ul style="list-style-type: none">• I do not quarantine my animal. I introduce my animal to his designated living space near other animals on my property.



(IV-A)

**AT HOME; BEFORE SHOW/EXHIBITION
CHART I – Animal A**

CHART 1: At Home; Before Show/Exhibition (Animal A, Option A)	
ROLL (Sum of 3 dice)	OUTCOME
3	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.
One of the following: 4,5,6,7,8,9,10,11,12,13,14,15,16,17	My animal is still very healthy and we may attend our first show/exhibition.
18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.

CHART 1: At Home; Before Show/Exhibition (Animal A, Option B)	
ROLL	OUTCOME
3	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.
One of the following: 4,5,6,7,8,9,10,11,12,13,14,15,16,17	My project animal is still very healthy and we may attend our first show/exhibition.
18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.



(IV-B)

**AT HOME; BEFORE SHOW/EXHIBITION
CHART I – Animal B**

CHART 1: At Home; Before Show/Exhibition (Animal B, Option A)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8,9,10,11,12	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.
One of the following: 13,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.

CHART 1: At Home; Before Show/Exhibition (Animal B, Option B)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8,9,10,11,12	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.
One of the following: 13,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.



(IV-C)

**AT HOME; BEFORE SHOW/EXHIBITION
CHART I – Animal C**

CHART 2: At Home; Before Show/Exhibition (Animal C, Option A)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8,9,10,11,12	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.
One of the following: 13,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.

CHART 2: At Home; Before Show/Exhibition (Animal C, Option B)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8,9,10,11,12	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.
One of the following: 13,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.



(V)

HEALTHY PRACTICES AT SHOWS/EXHIBITIONS

Healthy Practices at Shows/Exhibitions	
OPTION C	OPTION D
<ul style="list-style-type: none">• At the show/exhibition, I plan to purchase shovels and rakes for \$40 to bring to the show/exhibition. In addition, I also plan to purchase disinfectant for \$25 to bring to the show/exhibition so I can clean the equipment before and after every use.	<ul style="list-style-type: none">• At the show/exhibition, I plan to share shovels and rakes from other show members. I also plan to purchase disinfectant for \$25 to bring to the show/exhibition so I can clean the equipment before and after every use.



(VI)

CHANCE

CHART 2: Chance Roll	
ROLL	OUTCOME
Total of all dice = Odd Number (Excluding 3-of-a-kind or 17)	You showed your animal but were not awarded any prize money. It's time to return home.
Total of all dice = Even Number (Excluding 3-of-a-kind or 4)	Winner! After showing your animal, you were awarded \$50 in prize money. Now it's time to return home.
You roll: 3-Of-A-Kind (111,222, 333, etc.)	Yikes! There is a potential breach in bio-security at the fair. For the protection of the visitors, exhibitors, and the animals, you and your animal are sent home.
Total of all dice = 4 or 17	Congratulations! After showing your animal, you were awarded \$200 in prize money. Now it's time to return home.



(VII)

BRINGING MY ANIMAL HOME FROM FIRST FAIR/EXHIBITION

Bringing My Animal Home from First Fair/Exhibition	
OPTION E	OPTION F
<ul style="list-style-type: none">I quarantine my animal for 14 days where it is isolated in a different living space away from other animals on my property.	<ul style="list-style-type: none">I do not quarantine my animal. Introduce my animal to his designated living space near other animals on my property.



(VIII)

AFTER FIRST SHOW/EXHIBITION

CHART 3: After First Show/Exhibition (Option C, Option E)	
ROLL	OUTCOME
One of the following: 8,9,10,11,12,13	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 3,4,5,6,7,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$50 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

CHART 3: After First Show/Exhibition (Option C, Option F)	
ROLL	OUTCOME
One of the following: 8,9,10,11,12,13	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 3,4,5,6,7,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$100 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

CHART 3: After First Show/Exhibition (Option D, Option E)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,14,15,16,17,18	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 8,9,10,11,12,13	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$50 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

CHART 3: After First Show/Exhibition (Option D, Option F)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,14,15,16,17,18	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 8,9,10,11,12,13	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$100 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.



Recording Sheet Part II

Establishing My Project Budget

Year 1 budget surplus (\$_____) + Year 2 budget \$600 = Year 2 total budget \$_____

Year 1 budget deficit (\$-_____) + Year 2 budget \$600 = Year 2 total budget \$_____

Show/Exhibition (check two):

A: June 5th

B: June 15th

C: August 24th

Decision point justification: _____

Choosing My Animal (Check one animal):

Animal A: Examined and vaccinated by veterinarian

Animal B: No signs of illness; seller vaccinated

Animal C: No signs of illness; not vaccinated

Decision point justification: _____

The cost of my animal: \$_____.

My current balance: \$_____.

(Check one animal):

Option A: Quarantined for 14 days

Option B: Not quarantined

Decision point justification: _____



APPENDIX C
Recording Sheet PART II

After bringing my animal home, my animal(s) (check one)...

- Remained Healthy
- Became Sick

My current balance: \$ _____.

My next step will be to (check one):

- Go to my FIRST Show/Exhibition
Cost: Entrance Fee (Fair A = \$35; Fair B = \$25; Fair C = \$50)
- Ask a veterinarian to see my animal(s) and give treatment
Cost: Exam and Treatment
- Ask a veterinarian to see my animal, give treatment, then vaccinate
Cost: Exam, Treatment and Vaccines
- Give vaccinations only
Cost: Vaccines

The total cost: \$ _____.

My current balance: \$ _____.

FIRST SHOW/EXHIBITION

At the fair, I chose to perform (check one option)...

- Option C: Purchased own shovels/rakes and disinfectant
- Option D: Shared shovels/rakes and purchased disinfectant

Decision point justification: _____

The cost: \$ _____.

My current balance: \$ _____.

Chance Roll: Results

Prize Money: \$ _____.

My current balance: \$ _____.



(I)

SHOWS/EXHIBITIONS

SHOWS/EXHIBITIONS	
A	Date: June 5 th Distance (mi) from your home: 115 miles Entrance Fee: \$35
B	Date: June 15 th Distance (mi) from your home: 32 miles Entrance Fee: \$25
C	Date: August 24 th Distance (mi) from your home: 75 miles Entrance Fee: \$50



(II)

CHOOSING MY ANIMAL

Choosing My Animal		
ANIMAL A	ANIMAL B	ANIMAL C
<ul style="list-style-type: none">• Examined and declared healthy by veterinarian• Vaccinated• Cost: \$400	<ul style="list-style-type: none">• Never examined by a veterinarian• No clinical signs of illness• Seller says he vaccinated the animal himself• Cost: \$325	<ul style="list-style-type: none">• Never examined by a veterinarian• No clinical signs of illness• Never vaccinated• Cost: \$275



(III)

BRINGING MY ANIMAL HOME

Bringing My Animal Home	
OPTION A	OPTION B
<ul style="list-style-type: none">I quarantine my animal for 14 days where it is isolated in a different living space away from other animals on my property.	<ul style="list-style-type: none">I do not quarantine my animal. I introduce my animal to his designated living space near other animals on my property.



(IV-A)

AT HOME; BEFORE SHOW/EXHIBITION
CHART 1 – Animal A

CHART 1: At Home; Before Show/Exhibition (Animal A, Option A)	
ROLL (Sum of 3 dice)	OUTCOME
3	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.
One of the following: 4,5,6,7,8,9,10,11,12,13,14,15,16,17	My animal is still very healthy and we may attend our first show/exhibition.
18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.

CHART 1: At Home; Before Show/Exhibition (Animal A, Option B)	
ROLL	OUTCOME
3	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.
One of the following: 4,5,6,7,8,9,10,11,12,13,14,15,16,17	My project animal is still very healthy and we may attend our first show/exhibition.
18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition.



(IV-B)

AT HOME; BEFORE SHOW/EXHIBITION

CHART 1 – Animal B

CHART 1: At Home; Before Show/Exhibition (Animal B, Option A)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8	My project animal still seems healthy and we may attend my first show/exhibition. In order to have this, I must ask my veterinarian to properly vaccinate my animal and this will cost \$100.
One of the following: 9,10,11,12,13,14,15,16	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I must ask my veterinarian to properly vaccinate my animal and this will cost \$100.

CHART 1: At Home; Before Show/Exhibition (Animal B, Option B)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required provided a vaccine certificate. In order to have this, I must ask my veterinarian to properly vaccinate my animal and this will cost \$100.
One of the following: 9,10,11,12,13,14,15,16	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend , I must ask my veterinarian to properly vaccinate my animal and this will cost \$100.



(IV-C)

AT HOME; BEFORE SHOW/EXHIBITION

CHART 1 – Animal C

CHART 1: At Home; Before Show/Exhibition (Animal C, Option A)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8,9,10,11,12	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.
One of the following: 13,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$75 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.

CHART 1: At Home; Before Show/Exhibition (Animal C, Option B)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,8,9,10,11,12	My project animal still seems healthy and we may attend my first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.
One of the following: 13,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$150 for the antibiotic treatment for all my animals exposed to the disease. After the treatment course of 14 days, my project animal and I may attend our first show/exhibition. In order to attend, I am required to vaccinate my project animal. This will cost \$100.



(V)

HEALTHY PRACTICES AT SHOWS/EXHIBITIONS

Healthy Practices at Shows/Exhibitions	
OPTION C	OPTION D
<ul style="list-style-type: none">At the show/exhibition, I plan to purchase shovels and rakes for \$40 to bring to the show/exhibition. In addition, I also plan to purchase disinfectant for \$25 to bring to the show/exhibition so I can clean the equipment before and after every use.	<ul style="list-style-type: none">At the show/exhibition, I plan to share shovels and rakes from other show members. I also plan to purchase disinfectant for \$25 to bring to the show/exhibition so I can clean the equipment before and after every use.



(VI)

CHANCE

CHART 2: Chance Roll	
ROLL	OUTCOME
Total of all dice = Odd Number (Excluding 3-of-a-kind or 17)	You showed your animal but were not awarded any prize money. It's time to return home.
Total of all dice = Even Number (Excluding 3-of-a-kind or 4)	Winner! After showing your animal, you were awarded \$50 as prize money. Now it's time to return home.
You roll: 3-Of-A-Kind (111,222, 333, etc.)	Yikes! There is a potential breach in bio-security at the fair. For the protection of the visitors, exhibitors, and the animals, you and your animal are sent home.
Total of all dice = 4 or 17	Congratulations! After showing your animal, you were awarded \$200 as your prize money. Now it's time to return home.



(VII)

BRINGING MY ANIMAL HOME FROM FIRST FAIR

Bringing My Animal Home from First Fair	
OPTION E	OPTION F
<ul style="list-style-type: none">• I quarantine my animal for 14 days where it is isolated in a different living space away from other animals on my property.	<ul style="list-style-type: none">• I do not quarantine my animal. Introduce my animal to his designated living space near other animals on my property.



(VIII)

AFTER FIRST SHOW/EXHIBITION

CHART 3: After First Show/Exhibition (Option C, Option E)	
ROLL	OUTCOME
One of the following: 8,9,10,11,12,13	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 3,4,5,6,7,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$50 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

CHART 3: After First Show/Exhibition (Option C, Option F)	
ROLL	OUTCOME
One of the following: 8,9,10,11,12,13	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 3,4,5,6,7,14,15,16,17,18	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$100 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

CHART 3: After First Show/Exhibition (Option D, Option E)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,14,15,16,17,18	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 8,9,10,11,12,13	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$50 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

CHART 3: After First Show/Exhibition (Option D, Option F)	
ROLL	OUTCOME
One of the following: 3,4,5,6,7,14,15,16,17,18	My animal is still very healthy and we may attend our second show/exhibition.
One of the following: 8,9,10,11,12,13	My project animal became sick. It will cost me \$50 for my veterinarian to come see my project animal and \$100 for his antibiotic treatment. After the treatment course of 14 days, my project animal and I may attend our second show/exhibition.

