Bio-Security Proficiency Level 3: Risk Analysis and Mitigation Planning

Once you have identified risks in your environment, it is important to develop a plan to reduce your level of risk. Risk mitigation refers to the process of improving your environment or bio-security practices in a manner that will reduce your level of risk. Part of this process involves determining the investment required to make the desired improvements. Investment can come in the form of money, time or supplies, and all should be considered when you are developing a risk mitigation plan.

Cost-benefit analysis is a term used to describe the process of evaluating your options for risk reduction in terms of the amount investment required (cost) and the expected positive outcome (benefit). No animal housing environment is "risk free", and some bio-security risks are beyond our control. However, with proper planning, we can use our available resources in a way that reduces the probability of disease events and accompanying financial expenses.

To begin, please make sure that you have your **Bio-Security Risk Assessment Tool**, a copy of the **Risk Analysis Table**, and **5 copies of the Detailed Risk Mitigation Plan Template**. You will also need a writing utensil.

Step 1:

On your Bio-Security Risk Assessment Tool, please circle all areas that were identified as moderate or high risk.

Step 2:

For each identified risk area, complete Risk Analysis Table. Include a general approach to risk reduction as well as an estimate of investment involved (including time and resources). You do not need to know specific amounts at this point. Some examples are show in the chart. Add your work in the rows below the examples.

Step 3:

Review your Risk Analysis Table and select up to **5** risk areas for which you will develop a detailed risk mitigation plan. If there are fewer than 5 risks included on your table, include all of your listed risks.

Step 4:

Develop a Detailed Risk Mitigation Plan for each of your identified risks. Please use the template provided to guide your work.

Step 5:

Review your Detailed Risk Mitigation Plans with a parent or guardian. Discuss the costs and expected benefits of each plan. Revise plans as necessary. Select 2 plans that you will carry out.

Step 6:

Attend your group meeting with your parent or guardian. Present the two plans you have chosen to implement making sure to include a discussion of the costs and expected benefits.

Risk Analysis Table

Risk	General Plan	Estimated Investment
Many signs of vectors / vermin	Set traps, reduce standing water	Traps, construction supplies, help with repairs
No specific footwear	Keep an old pair of shoes in the barn for barn use only.	None. Use shoes I already have.
Bedding is foul and wet	Change bedding more often	More bedding needed More time needed

Risk Analysis Table Continued

Risk	General Plan	Estimated Investment

Detailed Risk Mitigation Plan Template (Example)

Describe the Risk

Many flies, mosquitoes, and mouse droppings visible in the barn, feed shed, and surrounding yard. Water collects on the ground near the spigot on the outside of the barn and near the barn entrance after it rains. Standing water could be a breeding area for insects.

Describe your Detailed Plan to Reduce the Risk

1. Set mouse traps in feed shed.
2. Hang fly paper every 25 sq feet in barn.
3. Hang bug zapper near barn.
4. Patch holes in feed shed.
5. Fix water spigot to stop leaking.
6. Level ground and place gravel near barn entrance to prevent pooling of water after rain.

Describe the Investment Required (include money, supplies, help from friends or parents, etc.)

Need a ride to the hardware store to get supplies.

Need adult's help to fix the spigot.

4 mouse traps = $10

8 fly paper traps = $5

Bug Zapper and extension cord = $35

Scrap wood and nails = free

Gravel (25 square feet x 2 inches deep) = $40

Describe the Expected Benefits and Potential Challenges of this Plan

I expect that there will be an immediate reduction in the amount of flies in the barn, but I will need to replace fly paper on a regular basis. The bug zapper might be more effective, but I'm not sure if we can run an extension cord safely to the barn.

Mouse dropping should decrease if we can trap them or cause them to move away if we prevent access to the feed shed by patching holes. If we can't trap them, they may just move into the barn to access the feed there. Placing traps in the barn will be challenging because I don't want the sheep to be able to access them. Maybe we can find some out of the way areas to place additional traps.

If we can eliminate the standing water, we should be able to reduce the number of mosquitoes. Do not know how expensive it will be to fix the spigot.

Detailed Risk Mitigation Plan Template

Describe the Risk

Describe your Detailed Plan to Reduce the Risk

Describe the Investment Required (include money, supplies, time, help from friends or parents, etc.)

Describe the Expected Benefits and Potential Challenges of this Plan