

Beneficial Insects – Natural Enemies

What is risk assessment?

- Risk assessment is a process in which you identify hazards in your business.
- You will need to assign levels to each of the hazards, based on their impact on the business.
- Note the impact and then the likelihood of it occurring using a five point scale of one to five. One is minor and five is major.
- You will then decide on the action to be taken to mitigate these risks.
- There may be some action needed to be taken as statutory obligation.



Tasks involved in risk assessment

Your risk assessment will be built up in stages from the following sequence of activities.

1. Identify the boundaries of your site
2. List the operations on your site
3. List the plants and materials you use
4. List possible pathogens, pest and host plants
5. Map the pest and pathogen pathways
6. Identify control measures
7. Complete a site-specific risk assessment
8. Implement control measures
9. Monitor risks and their controls

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What is unmitigated and mitigated risks?

- The risks identified during assessment before action, is called unmitigated risk.
- You need to decide on what actions need to be taken to reduce risk levels.
- Upon taking necessary action, risk levels need to be reassessed.
 - This is called mitigated risks.



What are pathogens?

- A pathogen is an organism that causes diseases
- It could be fungi, water moles, bacteria, viruses or mycoplasmas
- They are usually called by their Latin names. E.g. *Phytophthora infestans*

What is a disease?

- Disease are collections of symptoms caused by pathogens E.g *Phytophthora infestans*
- It is usually designated a common name. E.g. late blight of potato.

What are pests?

- A pest is an animal e.g. insect, rodent or nematode that causes damage to plants.
- In government documents, the term pest and pathogens are often interchanged.

Quarantine and nonquarantine pests?

- A quarantine pest or pathogen is one that is not present in great Britain or is not widely distributed.
- It is subject to statutory controls such as import controls and measures being put in place for those found in great Britain.
- They are also referred to as notifiable pests.

- A nonquarantine pest is one that may be in Great Britain but whose presence may affect plants for planting with an unacceptable economic impact level infection.
- Control measures are available and in most cases, they are included in legislation.
- They are sometimes called non-notifiable pests.
- You will find more information on the pest and disease index spreadsheet in the resources and in the specific Horticulture online E-learning

What are pest pathways?

Pest pathways are areas or sites on the premises where pests and pathogens arise and then spread within it.

Some examples of how pest and pathogens may arrive are:

- Visitors shoes and clothes
- Machinery imported or bought in
- Plants, soils and growing media where it is attached to the plant or come in through fruit and vegetables.
- Cut flowers, foliage and branches
- Wood and wood products
- Other plant based products such as pallets and bark welch
- They may also arrive naturally by wind, aerosols or through watercourses.

Risk assessment table

Once you have collected most of the information you need for your site-specific plant health assessment you will need to enter it into a table as shown below. You may modify this table as per you need.

Name of risk	Description	Scale of impact	Scale of likelihood	Level of unmitigated risk	Mitigation actions	Scale of mitigated impact	Scale of mitigated likelihood	Level of mitigated risk

Likelihood matrix

You may use this matrix (with scales of likelihood) to find the level of risk (mitigated / unmitigated).

Impact	Insignificant	Minor	Moderate	Major	Severe
Likelihood					
Very likely	Medium	High	Very high	Extreme	Extreme
Likely	Medium	Medium	High	Very high	Extreme
Moderate	Low	Medium	Medium	High	Very high
Unlikely	Very low	Low	Medium	Medium	High
Very Unlikely	Very low	Very low	Low	Medium	Medium

Resources

<https://planthealthportal.defra.gov.uk/pests-and-diseases/uk-plant-health-risk-register/>

<https://planthealthportal.defra.gov.uk/assets/uploads/How-To-Use-Documents-v2.pdf>

Key Points

Having your own pest and disease site-specific risk assessment helps you in

- Planning your own biosecurity measures
- Planning your hygiene routine and training your staff in those
- Ensuring that responsibilities for plant health have been allocated to key individuals
- Making sure that you have documented your control measures
- Tracking what you have done in successive years and evaluate the success of control methods
- Making necessary modification at the end of assessment

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