

**Horticulture/ Agricultural Science
Risk Assessment**

Specific Hazard

Associated Injury / Damage Risk

Risk Control Action

Risk Rating

1- Noise from machinery and powered equipment.

Long term damage to hearing of staff & students

Students and Staff during Horticulture Class should wear hearing protection during machine operations that are above 80dBA (decibels).

Medium – High

2- Use of power tools and hand tools (lawnmower, power drills, electric saws, hammers, etc.).

Impact injury, cuts, lacerations and entanglement.

Personal protective clothing (particularly eye protection) must be worn, and users instructed in correct techniques for use. Power tools should operate at 110 volts if not on a power circuit controlled by RCD's.

Medium – High

3- Use of pesticides, petrol, oils, fertilizers

Breathing in contaminated air through the nose, mouth and lungs •
The mouth by ingestion, by touching your mouth after handling chemicals or pesticides • Unintentional ingestion when kept in inappropriate containers • Skin contact, even when there are no wounds or scratches, as some chemicals can be absorbed through the skin

Use the personal protective clothing (PPE) as directed in the Material Safety Data Sheets. Ensure fire extinguishing devices are convenient.

Medium

4- Woodwork Cutting tools e.g. saws

Cuts, impact lacerations, entanglement, etc.

Encourage vigilance among users. Use guards provided and advise users on operation of all machine safety devices. All machinery (purchased since 1993) must have a CE mark indicating the machine complies with the relevant directives.

Medium - High

Horticulture/Ag Science			
Specific Hazard	Associated Injury / Damage Risk	Risk Control Action	Risk Rating
5- Manual handling of heavy items (large project work, raw materials, etc.)	Back injuries Foot crush Muscle strain Ligament damage Slips, trips and falls	Reduce carrying distances, particularly for heavier loads and keep such items stored within a zone of convenient reach (through ergonomic layout). all relevant staff and students are trained in safe manual handling techniques (and refresher training). Keep weights below 15kgs if possible. Maintain and encourage use of handling aids (trolleys, castors). Advise on use of '2-person lift' technique where appropriate.	Medium

6. No exclusion zones marked out around some machinery.

7 Handling long handled tools e.g. Shovels, forks,

Operators working in groups leading to entanglement, cuts, lacerations, etc.

Reduce carrying distances, particularly for heavier loads and keep such items stored within a zone of convenient reach (through ergonomic layout). Risk is mitigated by showing students appropriate ways of handling and operating tools. Keep tools in safe working condition. Always wear protective work gear. (PPE)

Low - Medium

Horticulture/Ag Science
Risk Assessment

Specific Hazard

8- Use of Horticultural machinery

- Lawnmower
- Leaf Blower
- Hedge Trimmer
- Saws
- Drills
- Hand tools
- Shovels
- Spades
- Secateurs
- Wheelbarrow
- Forks

Associated Injury / Damage Risk

Cuts, lacerations, abrasions, eye injuries, electric shock, entanglement etc.

Risk Control Action

Encourage vigilance among users and ensure manufacturer's safety information is conveyed and understood by tool users.

Provide adequate supervision when machines are in use and ensure all guards and emergency stop buttons are operable.

Isolation switches must be conveniently located (with signage) and appropriate protective clothing and equipment used.

Never ever remove guards while a machine is operable.

All machinery must be maintained and tested by a competent person on a periodic basis, with appropriate records kept. These records must be kept for 5 years.

Risk Rating

High

Reduces to medium if highlighted corrective action is completed.

HAZARDS:

Manual Handling

Manual handling in horticulture, lifting, carrying, pulling, and pushing heavy or awkward objects can sometimes be part of the work. Some tasks may involve moving loads and other tasks might simply be repetitive. This is manual handling. In Class, you may need to bend or twist your body a lot during the day. Back and shoulder strains and other manual handling injuries can result from lifting heavy loads, repetitive bending or twisting, having to maintain an awkward posture while moving a load or lifting a load to a height or from the ground. Your Teacher must assess the risks and put measures in place to protect you from injury.

You should avoid handling heavy or awkward loads where possible, and if you are concerned about any particular task you should tell your Teacher. Your Teacher may have provided lifting and movement equipment to help you, such as a trolley or other lifting aid and it is important to use them. If you need to lift a load, you should:

- check the weight of the load by looking at any weight marking on the load
- use lifting aids to move heavy loads,
- perform team lifting where necessary,
- where there are handles on the load, these should be used,
- consider the characteristics of the load (will it be difficult to lift, are the contents likely to shift),
- consider if there is room to complete the task safely, if the floors are even, if there is enough light, and

- before moving a load, walk the route you intend to travel to check that it is clear and free from hazards to prevent slips, trips and falls. In general, inappropriate manual handling can lead to injury.

To avoid the risk of injury, you should:

- ensure that you have received training in manual handling,

- think about and apply what you have learned,
- assess the load in terms of weight, size, shape and available grip,
- ask for assistance if the load is too heavy or awkward to move,
- place yourself correctly with feet flat on the ground,
- keep your back straight, • bend your knees and get in close to the load,
- grip the load firmly and bring it in close to your body,
- raise your chin before lifting,
- use your leg muscles to raise the load without snatching or jerking,
- ensure the load does not obstruct your view, and that the route and set down area is clear before you move,
- avoid repetitive bending or twisting, and
- be especially careful where the ground may be uneven, unstable or slippery.

Skin protection Skin problems can be caused by a number of issues:

- Damage to skin caused by cuts, abrasions or punctures
- Dry and chapped skin by exposure to cold and wet conditions
- Damage from frequent immersion in water which removes natural oils from the skin
- Exposure to chemicals
- Over-exposure to sunlight Consequences include:
 - Dermatitis
 - Infected wounds
 - Skin cancers
- Sun burn Prevention:
 - Wear suitable gloves and protective clothing when handling chemicals
 - Ensure respiratory protective equipment is well maintained and that filters are replaced as required
 - Wash your hands to remove harmful substances
 - Apply industrial barrier creams to protect your skin
 - Cover cuts and abrasions with waterproof adhesive plasters
 - Treat minor infections immediately
- Do not over expose yourself to the sun – wear appropriate clothing and use sunscreen as appropriate
- Look for any warts, moles and skin discolorations and report them to your Teacher if they grow, bleed or itch

Weil's disease

This can be contracted from materials contaminated with rats' urine. Symptoms include feverish illness, headaches or mild flu-like symptoms and can result in meningitis.

Prevention:

- Wear protective gloves when handling materials likely to be contaminated
- Wash hands before eating, drinking or smoking
- Maintain good personal hygiene

Chemicals

Chemicals are widely used in the horticultural sector, and injuries and ill health involving their use can have serious, and often long-lasting, consequences for victims. Chemicals can find their way into your body through a variety of means: • Breathing in contaminated air through the nose, mouth and lungs • The mouth by ingestion, by touching your mouth after handling chemicals or pesticides • Unintentional ingestion when kept in inappropriate containers • Skin contact, even when there are no wounds or scratches, as some chemicals can be absorbed through the skin When chemicals enter your body, they then pass into the blood stream, which can carry them to the liver, kidney, brain and nervous system and may result in serious and often long lasting damage.

Substances harmful to your health include pesticides, herbicides, fungicides, insecticides, disinfectants and cleaning materials.

Visit www.hsa.ie/chemicals.ie for more information

There are a range of important precautions that can be taken:

- Ensure that you have received training in the use or application of chemicals
- Always wear the necessary PPE, protective clothing and appropriate masks
- Ensure that you clearly understand the message conveyed by chemical symbols
- Cooperate with your employer in the steps taken to avoid injury,
- Do not smoke, eat or drink in chemical handling areas and do not keep food there
- Do not transfer contamination for example by putting pens and pencils in your mouth
- Ensure thorough washing of your hands before leaving your workplace
- Be especially careful when handling concentrated chemicals to avoid splash back to eyes, face and hands
- When a chemical is poured from its original container within a workplace, and the risk cannot be removed or controlled, then there may be a need for a warning sign or in-house label
- Never store chemicals in containers such as milk bottles or soft drink containers
- Ensure that chemicals are replaced in the secure, locked store after use
- Be aware of the emergency measures in place in case of a chemical spill or incident
- Do not remove or damage the labels on containers

Fire and evacuation plan

In the event of a fire, all personnel must leave the workplace and go to the nearest safe assembly point. The most senior member of management on duty, or a designated fire officer, must ensure that a head count is carried out to determine if anyone is missing. Action to tackle the fire will only begin after establishing where all personnel are. Facilities for evacuation All doors leading to the outside must have exit signs on them and they must not be locked while people are working on the premises. Firefighting facilities Extinguishers must be located at designated points in the workplace and inspected regularly.

First aid

Immediate and proper examination and treatment of injuries may save your life. Neglect or poor treatment of even a trivial injury may lead to serious infections and ill health. • Your workplace must provide first-aid equipment appropriate to the type of work you are carrying out • You should ensure you know the location of the first-aid box and who is appointed to look after first aid • First aid boxes must contain: • adhesive plasters • individually wrapped triangular bandages, • safety pins • large individually wrapped sterile non-medicated wound dressings • individually wrapped wipes • paramedic shears • pairs of latex gloves • sterile eye wash