PRECAUTIONS TO BE TAKEN FOR YOUR CROPS

CROP PROTECTION FROM RAINFALL

METHOD 1:PREVENTING PLANT DAMAGE

- Raindrops can do a lot of damage to plants and soil if they're moving at full-speed, so anything that slows them down will help. Plant coverings are like tubes that cover rows of plants, and you can find them at any garden store. Spread these covers over all your crops before a rainstorm to slow the raindrops and prevent damage.
    - You could also use a plain fabric sheet. Attach the sheet corners to stakes and drive the stakes into the ground to keep the plants covered
    - If you're expecting heavy winds too, then a strong plastic covering is best. This blocks the rain and also protects the plants from wind damage.
- Cover individual plants with pots or buckets. Simply flip the pot or bucket upside down and place it over individual plants. Weigh the buckets down with heavy rocks so they stay in place during the storm.
    - Make sure the bucket is tall enough for the plant to fit under. If the top of the plant presses against the bucket, the stem could break.
- Stake plants with stems so they don't break in the wind. Wind often goes along with heavy rain, which could snap plants with stems. Drive a wooden stake into the ground next to any stemmed plants. Make sure the stake is a bit taller than the plant. Then attach the plant stem to the stake with string or twist-ties to support them during the storm.
    - Staking is helpful even if you're not expecting a storm. It supports the plant and prevents the stem from bending or breaking as the plant grows.
- Avoid planting trees near your crops. You don't want your crops getting crushed! Branches can break during storms, and the whole tree could even fall if the wind is strong enough. When you're planting new trees, keep them far away from your crop area to protect the plants.
    - If you do have trees near your crops, inspect them regularly and remove any old or unstable limbs. These are most likely to fall in a storm.

METHOD 2:STOPPING SOIL EROSION

- Lay mulch around the base of your plants to protect the soil. Get an organic mulch and spread a layer 1–2 in (2.5–5.1 cm) thick around all of your crops. This slows the rainfall and helps prevent soil and root damage during heavy storms. As a bonus, mulch helps control weeds and keeps your soil moist.
    - You can also use straw, wood chips, or a similar material as mulch.
- Plant cover crops in bare areas. Cover crops act similarly to mulch, and prevent raindrops from hitting the soil at full force. Plant these crops in bare areas around your crops, as well as any sloped areas that rainwater might flow over. One of the most popular cover crops is sorghum, but any type of grassy plant will do the trick.
    - Cover crops also help prevent soil erosion and runoff, so they're very beneficial for your field.
    - This is a useful technique for no-till farming, since you can control the water flow without cutting drainage channels and ditches.
- Add trees and shrubs to upland areas to stop runoff. If you have any hills or raised areas around your crops, then rainwater could flow down and drown your plants. Planting some trees and shrubbery around these spots will block some of that water and prevent harmful runoff.
    - Even if the trees and shrubs don't completely block the water from flowing, they're still helpful because they slow the water down. Fast-moving water can damage roots and sweep away crops.

- The root systems from these plants are also good for preventing soil erosion.
- Leave some crop residue on the soil after harvesting for extra cover. Crop residue is all the leftovers from harvesting, like leaves, stalks, and roots. Leaving about 30% of that residue on the soil helps reduce the impact from rainfall. Try not to be too tidy when you're harvesting!
  - You can use this technique alongside mulching, or just skip the mulch and try this instead.

METHOD 3:IMPROVING DRAINAGE

- Cut a drainage ditch at the end of each crop row. If your crop field doesn't drain well, then water could pool underneath your crops and cause root rot. Try cutting a ditch at each end of a crop row to help that water drain. Dig a ditch up to 30 cm (12 in) deep so the water has a place to flow.
  - If you practice no-till farming, then this isn't a good technique to use. In this case, it's better to protect the soil with mulch or cover crops.
- Dig ditches between crop rows if the soil still isn't draining. If the soil under your crops is still waterlogged after you cut a ditch, then you probably need a bit more drainage improvement. Dig a ditch up to 30 cm (12 in) deep between each crop row and connect it with the ditches at the end of the row. This should help the water drain much better.
  - This is also a tilling technique, so it won't work for no-till farming.
- Redirect water flows with dikes around your crops. Use either stones, soil, or sandbags and surround your crops with a dike, similar to a retaining wall, to block runoff from flooding your crops. This is especially useful if there are hills or elevated areas around your field.
  - You could combine this trick with another one, like using the dike to direct water into a drainage ditch.
  - If you build a dike with soil, plant some grass on it. The roots will help keep it in place and prevent erosion.
- Build raised beds for more delicate plants or flooded areas. Raised planting beds can help you overcome these problems. Plan out a box 1–2 ft (0.30–0.61 m) deep and fill it with soil. Then plant your crops in this box so their roots are elevated and won't get flooded.
  - This is a good trick for delicate plants like tomatoes in a vegetable garden.
  - Raised beds are also good for very wet areas with a lot of rainfall.

METHOD 4:RECOVERING AFTER RAINS

- Monitor your plants for signs of rot or mold after a storm. Moist, warm conditions are ideal for mold to grow, so your plants are at risk right after a storm. Check your crops regularly after heavy rains until everything dries out. Look for dark, bruised spots, which could mean mold is starting to grow.
  - If you do see any mold or diseased sections on your plants, cut them off as soon as possible before the infection spreads.
- Prune damaged crop limbs when the plants are dry. Damaged sections are more susceptible to mold and disease, so prune those parts back if you see any. But wait until the plants are dry before pruning, since moisture helps mold grow.
  - Sterilize your clippers after every cut with a 10% bleach solution or rubbing alcohol. This prevents mold and bacteria from spreading to other plants.
- Spread salt or pesticide to repel slugs from wet crops. Slugs and snails usually flock to wet crops, especially after a rain storm, and they can be especially destructive. Unfortunately, they're tough to get rid of. The most common tricks are sprinkling some salt around wet crops to block slugs and snails, or applying a pesticide barrier to repel them.
  - There are also slug traps, if these repellent methods haven't worked.
  - Always follow the directions on any chemicals you use to repel slugs and snails.
  - Some pesticides are hazardous or toxic, so keep animals away from them.
- Remove saturated mulch and residue if it isn't drying out. While mulch helps protect your soil, it could also support mold and bacteria if it's soaked. If there was a heavy storm and your mulch is saturated, rake it up and let the soil dry out. When the soil is dry again, spread fresh mulch or residue.
- Avoid stepping on flooded areas to prevent root damage. The wet soil is softer, so stepping on it compresses the plant roots and could damage them. Until the soil dries out, walk on it as little as possible.
- Wait until next season to fertilize again. You might think that re-fertilizing your crops after rain is a good idea, but it actually won't help them recover any better. Wait until the next planting season to apply more fertilizer, as you normally would at the beginning of each season.
  - Reapplying fertilizer can also be harmful because the next rainstorm will flush the chemicals into local water sources.