

Specialized Garden Designs

Garden designs for heavy rains and flood-prone environments



Garden designs for heavy rains and flood-prone environments

LEARNING OBJECTIVE

Gardeners will problem solve how to protect home gardens from heavy rains and flooding and will learn gardening techniques for flood prone areas.

MATERIALS NEEDED

- Flipchart and markers

DURATION



KEY CONCEPTS

- Too much water can wash away topsoil and seeds. Heavy rains can damage plants and create waterlogged conditions that suffocate plant roots.
- Gardeners can help each other develop solutions to protecting their home gardens when flooding and heavy rains create challenging conditions.
- Raised beds and elevated container and sack gardens can help gardeners direct excess water away from plant roots. Flat garden beds help protect topsoil from erosion.

TRAINING AGENDA

1	Protecting our gardens from heavy rains and flooding	 DISCUSSION	1 hour
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Protecting our gardens from heavy rains and flooding

INTERACTIVE DISCUSSION

GOAL OF DISCUSSION: Gardeners think through how to protect their gardens from heavy rains and/or floods.

FACILITATOR PREPARATION: A flipchart with two columns

MATERIALS NEEDED: Flipchart and markers

1. Ask gardeners to brainstorm some challenges to gardening when heavy rains and/or floods are a problem. Write the challenges gardeners say on the left side of the paper. Add any challenges that they missed.
2. As a group, discuss possible solutions to these challenges. Ask gardeners what they can do to prepare for heavy rains or floods when they are preparing their garden. Ask them to share examples of gardeners who have successfully protected their crops from heavy rains or floods.
3. For areas with heavy rains, discuss the importance of a flat garden bed to reduce erosion and stop, spread, and sink water before it reaches garden beds.
4. Draw a picture of a raised bed and show how rainwater can quickly percolate downwards away from plant roots when loosened soil is piled up on the garden bed surface.

KEY MESSAGES

Many gardeners are experiencing heavier rains or more frequent flooding than normal due to climatic changes.

TOO MUCH WATER CAN BE DAMAGING TO GARDEN BEDS:

- Garden bed soil can be eroded. When topsoil is eroded away, many nutrients are lost, including any nutrients from fertilizer that was added.
- Seeds can be washed away.
- Small seedlings can be washed away or damaged in the rain.
- Even large plants can be damaged from heavy rains. Delicate flowers and fruits can also be damaged.
- Plant roots can be sitting in water for long periods of time. This means they cannot access any air and plants can suffocate as a result.

PROPER USE OF RAISED BEDS:

- Raised beds drain water out of them quicker than if plants were planted at the original soil level. This is important so that plant roots are not sitting in flooded soil.
- It is possible to create a very deep garden bed by digging down below the bed and then creating the raised garden bed on top of where you just dug. This gives the roots extra space to explore without compaction.
- Raised beds can be very prone to erosion, especially during heavy rain storms. It is important to reinforce the sides of the beds with locally-available materials, such as stones, banana stems, timbers, or wood panels so that topsoil does not get washed away.
- Raised garden beds should be aligned perpendicular to the slope to reduce erosion. Rainwater should be stopped and slowed with berms located upslope from the garden beds. Garden beds should be flat to avoid runoff and always mulched.

Note: Horizontal and vertical sack gardens strategically placed on high areas such as walls, flat lying roofs, or hills can also help gardeners grow vegetables in areas with seasonal flooding.