

# The Best Nursery Sprinkler

What is the best nursery sprinkler? This isn't a simple question to answer, as every nursery has a unique situation and one size doesn't fit all. The following factors need to be considered in deciding the best sprinkler for a particular situation.

## *Spacing*

Individual sprinklers perform best within a restricted range of spacings. Single stream sprinklers are generally better suited to larger spacings, as they produce larger droplets which are more effectively thrown over longer distances. (See photo)

## *Operating pressure and flow rate*

Operating pressure is a key factor in deciding which sprinkler is suited to a particular situation. If only very low pressures are available (150kPa and below), sprinkler options are limited. The available flow rate will also influence the suitability of a particular sprinkler in a given situation, and needs to be considered in relation to the size of blocks to be irrigated, and the number of sprinklers that can be run at one time.

## *Sprinkler orientation*

This refers to whether the sprinklers are to be used in an inverted or upright position. Some sprinklers can be used in both orientations, but these sprinklers have different spinners for each orientation. The sprinklers designed for inverted applications will have a flatter trajectory and, in some cases, the spinner is designed to prevent buildup in the spinner bearing. Non-drip valves may also need to be considered for inverted sprinklers if the sprinklers are located above the crop.

## *Wind*

Wind affects all sprinklers to some degree, and sprinklers with small droplet sizes will be more affected. The amount of wind, and the degree to which sprinklers are affected, may also determine the time of day that plants can be irrigated effectively.

## *Trajectory*

Sprinklers that have very high or very low trajectories are more likely to be affected by the wind, but the degree of effect depends on the particular sprinkler. In a covered structure, depending on the trajectory, the cover may intercept the water from a particular sprinkler, which will affect the efficiency of the layout.

## *Crop*

Larger droplet sizes have better foliage penetration, but can cause damage to fragile crops. Lower mean application rates (MAR) and small droplet sizes may be necessary for small container sizes.

## *Growing media*

The absorption rate of the growing media is important when deciding on the appropriate MAR for the system. The MAR in turn is determined by the jet size and spacing of the sprinklers.

## *Filtration*

Sprinklers with small jet sizes, or internal gears and filters, may not be suitable where there is little or no filtration of the water. Equally, the presence of abrasive substances in the water may limit the sprinkler options to ones with few moving parts and construction using materials that are wear resistant.



*Water quality*

Some sprinklers with complicated mechanisms may not operate reliably if deposits build up on the sprinkler.

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