Table 3.1. Filtration options for greenhouses and nurseries (by Ratus Fischer, fischerecoworks.com)

WHAT TO FILTER OUT		**SCREEN/MESH FILTRATION**		**MEDIA FILTRATION**			**MEMBRANE FILTRATION**			
		Coarse 4 – 50 mesh (5000 – 300 micron)	**Fine** 50+ mesh (<300 micron)	**Sand**	**Slow sand/ Bio-filter**	**Paper/ Fabric** 5–50 micron	**Micro** 1 – 0.1 micron	**Ultra** 0.1 – 0.01 micron	**Nano** 0.01 - 0.001 Micron	**Reverse Osmosis** <.001 Micron
Inorganic Particle	Debris	++	++	++ Small load only	Not intended for large amounts of solids. Excess solids will clog bio-active zone.	++	Particles other than intended for a specific membrane will shorten its life span, or destroy it. Proper pre-treatment of the water is essential.			
	Sand	+	++	++ Small load only		++				
	Silt	-	++	+ Small load only		++				
Organic particle	Debris	++	++	++ Small load only		++				
	Soil Particles	+	++ Small load only	++ Small load only		++				
	Algae, Biofilm	-	++ Small load only	++ Small load only	+ in small amounts	++	Will clog membranes.			
	Pathogens	-	-	Minor effect	++	Minor effect	+ Except viruses	++	++	++
Dissolved in-organics	Salts , Iron	-	-	-	-	-	-	-	-	++
	CaCO (Hard Water)	-	-	-	-	-	-	-	++	++
Dissolved organics	Humic acids	-	-	-	-	-	-	-	++	++
	Pesticides Herbicides	-	-	-	-	-	-	-	++	++
NOTES		Mainly pre-filtration. Drippers, nozzles need 120+ mesh	Sub-stantial dirt loads require backflush systems	Back-flush standard. Not for heavy dirt loads.	Low flow only. Pre-filtration for heavy dirt loads.	Handles heavy dirt loads in one step.	Requires lower pressure than reverse osmosis. Membranes are tailored to specific applications. Rejection rates (discharged portion of the feed water carrying concentrated waste) generally smaller than reverse osmosis.			Removes every-thing. Typically back-blended with supply water.

Dimensions: 1 micron = 10 m = 1/1000 mm = .00004 inches.
Filtration treatment efficacy: ++ indicates good, + fair, and – not effective.