Approximate water needs of common horticultural crops in the Darwin region

Different crops have different water use depending on their physiology, size, growth rate and form. Crops such as bananas, with big leaves, have high water needs. Others, such as maize, are better adapted to dry conditions and use less water.

Supplementary irrigation is needed for crops during those times of the year when rainfall is less than crop need. Crops in the Northern Territory commonly need a lot of supplementary irrigation because of high evaporation rates and low rainfall for most of the year outside the wet season.

Approximate water use for crops can be calculated using Bureau of Meteorology evapotranspiration data for a location and experimental data on specific crop water use found in scientific literature, such as the estimates below. Farmers should make up their own minds about their water use, however some **approximate crop irrigation needs** for crops grown **continuously all year round**, in megalitres per hectare per year include:

Crop	Irrigation requirement (ML/ha/year)
Asian vegetable	9
Asparagus	9
Banana	16
Mature Citrus	8
Papaw or Papaya	9
Sweet corn	5
Maize	7
Mango (mature)	8
Squash	5
Pumpkin	5
Rockmelon	4
Watermelon	6
Carambola	7

For example, one crop of bitter melons, or cucumbers or rockmelons under irrigation in the dry season for 100 – 120 days (about one-third of a year), might use roughly one-third of the amount shown above. The amount of irrigation used varies with irrigation type (e.g. sprinklers, drippers), use of mulch or not, and weather. Sometimes growers will irrigate their crops less than the theoretical maximum amount they need in order to manage other aspects of their growth, like flowering and fruit quality. Crops would need less supplementary irrigation in wetter years, but only if part or all of their growth was in the wet season.

These are broad estimates; the Department recommends that you **seek assistance** from your irrigation designer and your agronomist to help you **estimate your own water use**.