DEPARTMENT OF
PRIMARY INDUSTRIES

Vegetable Matters-of-Facts

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VegCheque
extension for the vegetable industries

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WATER

Managing the Drought

Main points

1. Ensure your irrigation system is operating at its most efficient
2. Minimise the evaporation of your irrigation application
3. Decide now what you will do if water becomes restricted
4. Monitor soil moisture and irrigation output

An efficient irrigation system

Check your irrigation system when it is operating, look for :

- leaks
- blocked lines
- worn sprinkler heads

Install shut-off values to avoid end-of-row water loss

When using movable pipes allow the pipes to drain back into storage before being disconnected.

Run-off occurs when the application of water exceeds how fast the soil will accept the water (infiltration). This is a waste of water and may cause erosion. If necessary reduce the application rate of the system.

Measure the output of your irrigation system. Use rain gauges, buckets or tin cans. Spread them though out the paddock to get an overall picture of what the irrigation system is applying.
Check for even distribution. Check the volume applied in an hour. Seek advice from an irrigation company if problems show up.

Minimize Evaporation

It is important that the water you apply is able to get to the rootzone. Evaporation means precious water is lost. But you can minimise its effects.

Irrigate in low wind conditions.
No point in watering the headlands and roads just because that's the way the wind is blowing.

Windbreaks, nursecrops and covercrops all help to reduce evaporation and protect establishing seedlings.

These support crops should be slashed once the main crop becomes established so that they do not compete for water and nutrients

Mulch-plastic or organic mulches will also reduce evaporation from the soil.

Irrigate when temperatures are at their lowest, at night or early in the morning.
Note that it is important to consider the possible disease implications this may have. Some vegetables should not have wet leaves for long periods in certain weather conditions. If in doubt seek further advice.

Victoria
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What if water does become restricted?

You may be faced with not having enough water to meet your demands. What you do in these circumstances should be decided now while you have time to think about it calmly, rather than in the heat of the moment.

Develop a contingency plan.
You will need to consider a number of things to ensure you get the maximum return from your crop. **You may have to sacrifice some crops if there is not enough water**. Which crops are of higher value? Are there lower value varieties that could be sacrificed for higher value varieties?

Are you growing any crops that are likely to be in short supply because of the drought?
Which crops may be coming to the end of their productive life?
Which crops are showing particularly good yields?
Which crops can withstand reduced irrigation? Newly planted crops will need more frequent irrigation than crops that have had the chance to develop a larger / stronger root system.
Correct irrigation is critical at certain periods of plant development. Crops in these stages should have water allocated to them in preference to crops in non-critical stages (see the table below).

Critical periods for correct irrigation

Critical period	Crop
Flowering, pod setting	Beans Peas
Head formation and enlargement	Broccoli Cabbage Cauliflower Lettuce
Tasselling, pollination, ear filling	Sweet Corn
Flowering, fruit set and development	Cucumbers Zucchini Eggplant Peppers Tomatoes Melons
Bulb formation and enlargement	Onions
Fern	Asparagus
Root development	Carrots Turnips
Continuous	Greens Spinach
Tuber set and enlargement	Potatoes

For more information please contact your local Veg Cheque facilitator.

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Name: _____
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Crops grown _____

What else can you do?

Do you know your soils' Readily Available Water (RAW)? It will help you understand how much water the root zone will hold. It is different for each type of soil and is easy to work out. When you know your RAW you can work out the optimum amount of water to apply for efficient irrigation.

Enrol in **an Irrigation Management Course (IMC)**. The completion of an IMC may mean you are eligible for irrigation improvement subsidies. Contact your local Veg Cheque officer who can organise an IMC for your local area.

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