



# BACK PADDOCK NUTRIFACT

## A Guide to Sampling Irrigation Water

There are several important factors to remember when collecting water samples, these are:

### Hygiene

Samples should be collected in a clean plastic bottle (at least 500mL) with a screw cap. A plastic soft drink bottle of 1 – 2 L capacity can be used. Rinse the plastic bottle (both new and used) and cap at least 3 times with the water being sampled to eliminate any contamination. Fill the bottle with sub-samples to the very top eliminating all air and cap tightly.

Avoid glass containers which have higher potential for breakage and can contain boron.

Do not use a bottle that previously contained any chemicals, such as bleach or agricultural chemicals or oil based materials as the smallest residue left in the container can make a difference.

### Representative Sample

Samples must represent the water supply being sampled.

### Pumped Water

The best way to collect a representative sample from any pumped water source is to take the sample on the outlet side of the pump.

Prior to collection, allow water to run for a sufficient period of time to clean out standing water in the lines. Let the pump operate twenty minutes to an hour before taking the sample to be sure the water is representative of what is being used for irrigation or other purposes.

Collect your sample as close to the point of end use as possible i.e. fill the bottle directly from a sprinkler or point of emission. Several sub samples taken a few minutes apart can be taken to make up the full sample.

Some authorities suggest taking the sample from water at the pump so that residues from the lines do not contaminate the sample but flushing should eliminate any problems in this regard and the crop or animal has to use the water at point of use. It is best to sample irrigation bores during the peak of the pumping season but it also is good practice to sample before the start of the season so growers know what quality of water they will be irrigating with. If a bore hasn't been used for several months, pump for at least 1 hour before sampling.

New bores - dependable sampling of irrigation test bores can be done only after casing and a screen is installed and after pumping out all water added during the drilling operation (ideally pump for at least 24 hours before sampling).

If two or more water sources supply an irrigation system, one sample may be taken from the point of end use after pumping (flushing) for at least one hour. However, if a water test indicates

a problem; all sources supplying the system will need to be tested individually to determine the source of the problem. Sometimes one poor quality source can dramatically reduce the quality of a mixture.

### Non-pumped Water

Samples from streams or dams should be taken below the surface for a representative sample.

Obtain samples by attaching a clean bottle to a pole or extension and collecting and mixing several sub-samples into a composite which is sent to the laboratory.

If you must sample from a dam outside of the pumping season take the sample from around the suction inlet.

For streams take the sample from the main stream flow unless it is for stock drinking purposes, in which case sample from where stock are likely to drink.

If sampling a dam for stock drinking purposes, sample from near the edge where stock would be expected to drink.

### Preparing the Sample for Transit

Seal the container lid with tape so that it doesn't leak in transit. Wipe the bottle dry. If necessary, pack your bottle in a box and pack with loose, soft packing material to prevent crushing in transit. As an extra precaution to preventing leakage seal the sample container in a plastic bag and fasten at the top securely.

Send your sample to the laboratory so that it arrives within 36 to 48 hours of sampling. It is preferable to send your sample to the laboratory early in the week rather than later so that delivery will not be delayed over the weekend.

If the sample cannot be sent immediately, refrigerate it before sending to the laboratory.

Clearly identify each container with a barcode and secure with sticky tape to ensure adhesion of the label.

Use a Sample Order Form to accompany sample/s to the lab. Preferably enclose paperwork in a separate plastic bag with the sample.

Use an express courier service, not the normal postal service in case of leakage in transit.

**Please note** that water samples sent through the SoilMate system will be analysed for inorganic chemical properties only and so is unsuitable to assess whether the water is potable and suitable for human consumption. It will NOT be analysed for biological properties e.g. faecal contamination nor organic chemical properties e.g. pesticides.

