Department of Agriculture and Fisheries

Drought decisions checklist

As drought conditions impact on the amount of water available for irrigation, some of the following decisions may need to be made before or during the next production season:

- How much crop can you grow using the reduced supplies of irrigation water available?
- Can you change the crop mix to a mix which will result in a better dollar return or more efficient use of limited water supplies?
- Can you install alternative forms of irrigation (e.g. trickle irrigation) to make more effective use of limited irrigation water?
- When is the best time to stop planting or harvesting?
- How will the farming system cope if the drought breaks with very high rainfall over a few days?
- Can you reduce the labour force with some confidence of workers returning when the drought breaks?
- If production ceases or is significantly reduced, will markets or contracts be regained when the drought breaks?
- Can you move my production system to another farm or another district where you can get access to irrigation water?
- Will lower water quality affect crop yields and product quality?
- Are there ways to use less irrigation water without significantly reducing yield and quality?

There are probably many other decisions that are unique to each farming enterprise.

Complex decisions

These decisions are complex and will be difficult to make. The need for a decision and the actual decision made will depend on many factors that are likely to be uniqu to each business (or each family running the farming business). Some of these factors could include the following:

- How much irrigation water is available, and for how long?
- How much debt is there to service?
- Which established markets or contracts 'must' be supplied?
- Which good quality staff do you not want to lose?
- How much rain (and runoff) might you get (or when do you think the drought will break)?
- When is the deadline for making some of these decisions?

Drought decisions checklist (vegetables)

The following is a series of questions that may help growers reach a decision about how much of which crops can be grown, and how these crops can be managed under drought conditions.

The answers to these questions will, in most instances, be related to your specific enterprise, or will be obtained by consulting with other people or information sources

This list is not exhaustive and other information specific to your enterprise may be critical to making important decisions associated with the current drought.

Water

If you are faced with a situation where you have reduced availability of irrigation water, your options are to either use less (use techniques that give you better value for the water you use) or find another source of water (i.e. bring the water to the farm or move the farming operation to the water).

Answers to the following questions may help you to decide which of these is possible for your circumstances:

- Do you know how much water you have available?
- Do you know how long this will last if you make no changes to water use?
- Are there ways to use less irrigation water on your crops without significantly reducing yield and quality?
- Do you have control over your water source? (Will you directly benefit from any water savings you can make?)
- Can you cost-effectively pump water from another location?
- Does your irrigation water decline in quality during a drought?
- Do you know if changes to water quality will effect farm operations, such as spraying and packing line operations?
- Are you contemplating using trickle irrigation?
- Do you understand how to manage crops using trickle systems?
- Do you know about improved methods of monitoring the irrigation needs of crops and scheduling irrigation only when required?
- Do you know the costs of installing trickle irrigation?
- Will your current irrigation infrastructure allow for trickle irrigation installation without major modification or cost?
- Can you afford to install trickle irrigation?
- Do you know if your irrigation system is performing to design specifications?
- Is irrigation water available in another location which you have access to? Can you rent land (with water) at another location?

Climate/weather

- Do you know how to source climate information and how to best apply this information to your cropping decisions?
- Do you know what the Southern Oscillation Index [http://www.longpaddock.qld.gov.au/SeasonalClimateOutlook/RainfallProbability/index.html] (SOI) means?
- Have you ever used the SOI as a tool in making cropping decisions?

Financial

- Can you meet your debt commitments if your income is significantly reduced over the next 6-12 months?
- What are your alternatives if you do not grow crops this season?
- Do you know what financial assistance is available for your circumstances and your type of enterprise?
- Do you have another source or potential source of income?
- Do you have sufficient records (or an understanding) of the real costs of production and marketing of your crops? What records do you have? Have you done a gross margin analysis recently?

- Do you know when it is uneconomical to continue harvesting and/or planting?

Crop

- Do you know how long your water supply will last if you reduce production or make no changes to water use?
- Do you know what the critical growth stages are for your crops and when irrigation is essential to maintain yield and quality?
- Do you know when you can reduce irrigation for your crops and have a minimal effect on yield and quality?
- Are you aware of other drought-related issues (e.g. increased activity of insect pests such as thrips; feral animals using irrigated crops as a food source; increased incidence of virus diseases)?
- Do you know the effects of lower quality water on crop yield and product quality?
- Do you know how best to apply lower quality water to your crops?

Markets

- Will the market you normally supply accept lower quality product?
- Is keeping your markets supplied very important for your medium to long term survival, i.e. if you don't supply your market next season, will that market outlet b available to you again after the drought breaks?
- What impact will the drought have on dollar returns and profit? How will this impact on your current financial commitments?

Labour

- Can you maintain the same staffing levels for the foreseeable future?
- Can you get these staff back again after the drought breaks if you have to let them go?

Personal/family

- What are your alternatives for income if you reduce production or do not grow crops at all this season?
- How are you coping with long days and constant work loads?
- Do you have another source or potential source of income?

Alternatives

- Can you rent land (with water) at another location?
- Are you considering growing a new crop, perhaps one you have not grown before?
- Do you know which are the most important crops to your enterprise after considering markets, potential dollar returns, risk level, best available use of water and labour? That is:

    - have you considered agronomic issues (water efficiency, time of planting, pest and disease implications) leading to decisions on whether about to remain with the same crops/season or add/change crops? This leads to practical implications (feasibility of a change in crops, location, length of season e.g. infrastructure availability in new location, costs of leasing land, transporting product to packing sheds, keeping/developing markets etc.) and finishes with financial analysis of different options that appear to have potential.


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