

Rural Water Use Efficiency Initiative. Horticulture Program.

EXECUTIVE SUMMARY, 2002.

The 2002 Milestone Report marks the end of the third year for the Rural Water Use Efficiency Initiative in Horticulture. The RWUE is funded by the Department of Natural Resources and Mines and for Queensland's Horticultural industry, the program is delivered by Queensland Fruit & Vegetable Growers Ltd.

The RWUE Initiative Horticulture program, which is known as Water for Profit, has been extremely successful in achieving change in irrigation practices in the major Horticultural regions across the State. An independent survey has identified that over 80% of growers are aware of the program. The Horticulture program has progressed substantially towards its target of \$150 million in gains in productivity and water savings, as defined by the 1999 Barraclough Report.

SUCCESSFUL INITIATIVE

By most accounts, the RWUE Initiative has been a success. The success of the partnership approach between Queensland Fruit & Vegetable Growers and the Department of Natural Resources and Mines has largely been due to:

- ◆ A grower interactive approach through the industry representative body, Queensland Fruit & Vegetable Growers Ltd, which has given the program flexibility and credibility.
- ◆ Taking a fresh and proactive approach to implementing change on farm.
- ◆ Field Officers utilising a number of methods to identify growers' needs that would lead to gains in irrigation efficiency.
- ◆ Employing a variety of extension methods, to assist growers making change. These include:
 - ◆ On farm demonstrations.
 - ◆ Trials.
 - ◆ Hands on workshop
 - ◆ Giving growers the resources and knowledge to make change.
 - ◆ Being up to date with technology changes
 - ◆ Linking to grower organisations, researchers, commercial suppliers
 - ◆ Linking improvements to cost reductions and productivity increases.
- ◆ Use of existing resources
- ◆ Field activities backed by a Financial Incentive Scheme
- ◆ Linkages to other government agencies such as the DPI, EPA and private sector interests
- ◆ Following through the processes of change with growers, ensuring that change occurred and substantial gains are made.

Ultimately, growers have had ownership of the changes being made, which has enhanced the activities of the program.

GAINS MADE IN HORTICULTURE

Identifying the changes that have been made through the Initiative and quantifying them can be a difficult process in Horticulture because of the large number of crop types which use a variety of irrigation systems over diverse geographical regions. However, four methods have been successfully employed to gauge change. These are:

- ◆ An independent survey
- ◆ Field Officer estimates of irrigation efficiency gains,
- ◆ Grower attendance at workshops and involvement in the BMP process, and
- ◆ Data from the RWUE Financial Incentive Scheme.

A brief summary of the findings from these reporting methods is given below. The data presented here relates from the start of the program to the end of April, 2002. As a guide for progress of the program, targets for 2003 are given *in italics*.

RWUE INITIATIVE, 2002 HORTICULTURE SURVEY

- ◆ over 80% of Horticultural growers are aware of the program
- ◆ Just over 50% of Horticultural growers have made changes to their irrigation system during the past 2 years. Of these growers, about two thirds of the changes have been influenced in some way by the RWUE Initiative. *The program target is 40% of growers to have made changes in management practices.*
- ◆ From grower self estimates obtained in the independent survey, there has been approximately 10% improvement on farm in water savings and productivity gains, resulting from the changes made. *The program target is 11% in Water Use Efficiency..*

FIELD OFFICER ESTIMATES OF GAINS.

- ◆ As at the end of April, 2002, field officers have estimated that the Horticulture RWUE program has achieved gains equivalent to \$115 million. These gains are largely made up from the opportunity returns of water savings (at \$4900 per Megalitre saved), but also from productivity gains. *The program target is \$150 million of gains in Water Use Efficiency.*

GROWER INVOLVEMENT IN BMP PROCESS

- ◆ There have been over 4600 attendances at RWUE Initiative workshops and functions which have targeted improving growers understanding of irrigation efficiency. Many growers have attended more than one workshop, indicating a willingness to make ongoing improvement.
- ◆ As at the end of April, 2002, almost 30% of horticulture growers had been involved in workshops and the BMP process. It is estimated that this number will be almost 50% by June 2003. *The program target is 40% of growers involved in the BMP process*

CHANGES MADE THROUGH THE FINANCIAL INCENTIVE SCHEME.

- ◆ The FIS has been extremely successful in complementing the Adoption program and has both initiated change for many growers as well as accelerating the rate of change in many cases.

- ◆ For each dollar that the Scheme has contributed, growers have contributed an additional two dollars, with total expenditure by growers through the FIS exceeding \$5 million to the end of April in approvals.
- ◆ At the end of April, almost 30% of growers had been approved to make changes using the Financial Incentives Scheme to improve irrigation efficiency. It is expected that further funding is available for at least another 10% of Horticultural growers. *The horticultural program aims at having 40% of growers making improvements, as defined by the BMP process.*

The sources of data for the above approaches are different and independent of each other. Importantly, the results from each approach supports that the Horticulture RWUE Initiative is on target in increasing irrigation efficiency in Horticulture.

OTHER BENEFITS

In addition to the achievements listed above, there have been other benefits gained from the program, including environmental gains. Not only is irrigation water being used better, but the off farm impacts of irrigation will ultimately be reduced through greater irrigation efficiency. In addition, the program has been able to offer assistance in times of severe drought in many regions. The program is a source of technical information. It has also been used by many growers to assist in the transition process of shifting from low input irrigation crops into Horticulture.

Horticulture has gone from a \$850 million dollar industry (Barraclough, 1999) at the start of the program to an estimated \$1.25 billion industry (DPI estimate) for the current 2001/2002 year. This was during the period that the RWUE Initiative has made a positive contribution to productivity gains and irrigation efficiency.

CONCLUSION

Both independent data and data collected through the Horticulture RWUE Initiative suggest that the program has made positive gains towards increasing irrigation efficiency within the State of Queensland.

Ultimately the RWUE Initiative has heightened the importance of irrigation efficiency on Horticultural farms, with growers making changes where they otherwise would not have.

The program is well on the way to achieving its targets. With a further year of the program to be completed, it could readily be demonstrated that the Horticulture program is expected to exceed its contracted targets by the completion of the Initiative in June 2003.