



FITZROY BASIN FOOD & FIBRE
ASSOCIATION INC.

Fitzroy Basin Food & Fibre
Submission to the Australian Government
Productivity Commission on:
Rural Water Use and the Environment:
The Role of Market Mechanisms

Introduction

The author will attempt to provide the Australian Productivity Commission with as much information to assist with its Water Study both through local examples and general knowledge of the Irrigation Industry. Assistance has been given in the compilation of this submission by various local irrigators.

Submission

Type of Irrigation and Crops

The Fitzroy Basin takes in a wide variety of crops and irrigation techniques. The predominant irrigation method and crop is row irrigated cotton. Other crops grown are peanuts, pulse crops, cereal grains, forage, table grapes and orchard crops. Emerald irrigation until recently had a significant citrus industry, which was wiped out by a citrus canker outbreak.

Water-use efficiency and externalities

Water use efficiency (using the economic meaning) is possibly one of the greater issues facing irrigators in the Fitzroy Basin. It receives a great deal of focus by all irrigators. When deciding which crop to grow, irrigators always consider gross margin per megalitre. As the value of water rises, greater consideration is given to the gross margin per megalitre.

Irrigation farms in the Emerald area could be considered to be at the best return per megalitre that the infrastructure, markets and the development of their area will allow. For example, in Emerald there were significant orchards (prior to citrus canker). Although it was a higher use per delivered megalitre, it could be said that it was not necessarily a more efficient user of water. To grow perennial crops such as orchards and vineyards, a much higher reliability of irrigation water is needed. It has been shown in this area, that to provide 1 megalitre of medium priority, 2 megalitres of water must be stored in Fairbairn Dam, but to provide 1 megalitre of high priority water, at least 6 megalitres of water must be stored in Fairbairn Dam. By this calculation orchards and vineyards may be more economically efficient per megalitre delivered, but not per megalitre of overall resource. If the whole irrigation area was to convert to orchards and vineyards, it would mean that it would have to be a significantly smaller area than is currently irrigated to achieve the reliability of water delivery that it would require to remain viable. Orchards and vineyards do fit well as a portion of the overall irrigation system. There is a buffering effect of the medium priority water – as the level of the Fairbairn Dam falls, the medium priority has reduced allocation, therefore giving security to the smaller proportion of high priority.

Due to the capital value of water, irrigators feel the need to extract as much production as possible out of their asset. Wastage is continually being reduced by various methods. Many irrigators have been steadily converting supply channels to polythene pipe, considering the water saving over the long term to make it a viable exercise. Water use efficiency has been steadily increasing over the years as irrigators strive to create more efficient ways of using their water.

Recirculation systems to prevent losses of tailwater are a standard part of infrastructure. This has the dual purpose of prevention of loss of a valuable resource as well as preventing potential effluent issues outside the farm. This does not appear to be an issue for urban areas, who allow their stormwater effluent to flow into watercourses, creating known environmental problems.

One issue that significantly effects the efficient use of water in the Emerald Irrigation Area is the cap on carrying water over from one year to the next. Prior to the ROPS process that the Fitzroy Basin has recently been through, irrigators were allowed to carry any unused irrigation water over from one year to the next, with a percentage subtracted to allow for evaporation from Fairbairn Dam. As a result irrigators had more choices as to what they could irrigate with their water, and could plan ahead by holding a surplus of water for future years. Having the cap has meant that irrigators with surplus water (for example this year if there was inflow into the dam after the cotton crop and the allocation went from its current 61% to 100%) have to use it or lose it, causing irrigators to grow crops that are not the most economically efficient, but they prefer to do that than lose their water for no benefit.

The effect of market forces on water use efficiency

Of all of the market forces affecting water, scarcity value is the strongest driver causing price increase. As long as the cost of delivery (be it through the irrigator's own infrastructure or through Sunwater) is kept to a realistic level, the price of water should steadily increase. If the price of water increases, irrigators are constantly under pressure to find more economically efficient uses for their water so as to maintain an economically viable return on assets.

If the value of their asset is steadily rising, irrigators tend to take a longer term view on the ownership of their asset, thinking in terms of long term sustainability and the ability to pass the farm on to their children (a goal of a significant proportion of farmers), as well as being a part of their community in the long term. This gives them a custodial mentality which is a great motivator for environmentally sound management in terms of their own farm as well as their community. The rising value of their asset also gives the equity to undertake such capital improvements necessary to make structural changes to their enterprise, an example from the past being installation of the sumps, pumps and dams necessary to fully recycle tailwater. In summary a rising asset value has a positive spiral effect on increasing water efficiency and environmental management.

If cashflow cannot be maintained there will be a downward pressure on capital values of water. Once asset values start to fall, there is a negative spiral that is exponentially faster than the positive spiral. All spending on anything not immediately related to cashflow ceases, no improvements are done, and capital works are allowed to run down as there is neither the equity or the cashflow to repair them. Banks start to be wary of the industry, and an equity crisis looms. At that stage it would be very much like the wool crash or any other major agricultural economic crisis. Suicide rates in the industry rise significantly and the Government is obliged to spend significant amounts of money attempting to soften the fall of an industry in crisis.

At this point the single most significant threat to the capital value of irrigation water is the Queensland State Government.

Security of Tenure

Security of tenure is the keystone to allowing market forces to work. It is also a given that allowing market forces to work is one of the key elements to the increase in water use efficiency.

To take the extreme view, the Queensland Government agencies categorically state that irrigators do not own water. On that basis there is apparently nothing to have security of tenure over.

To take a more moderate view, these same agencies state that irrigators for all of these years have been buying a right of access to water, and not the water itself. The water is apparently owned by the government. This has come a quite a surprise to most irrigators.

The water reform process promised security of tenure for irrigators. The Queensland Government will categorically state that this has been achieved. In practice the general consensus of irrigators is that there has been a loss of security of tenure. Prior to water reform irrigators had a lot of rights encased in common practice and precedent. They felt secure in the knowledge that the water once purchased was theirs to use under the existing regulations until it was sold. Water would be delivered at a fair price and things would continue as they had since their particular scheme was commenced.

The water reform process has steadily eroded these rights. The State Government has informed irrigators that it wants to be paid for imposing significant unwanted bureaucracy on them. Sunwater has shown that it cannot contain its expenses and is expecting irrigators to pay for them. The State Government has informed irrigators that it intends revaluing all of its infrastructure at today's prices (with some adjustment) and extracting a rate of return on those infrastructure assets from the irrigators. The confusion over who owns the water is taken one step further by this. This principle has been explained by an irrigator as "just like selling and investment house and expecting to keep the rental return". It is just not economically possible without a major collapse in the capital value of irrigation water. It is not possible to have two different entities (irrigators and government) both believing that they own an asset and expecting to achieve an economic rate of return without a severe adjustment in capital value.

In summary the water reform process has significantly eroded the effective security of tenure of irrigators.

Trading experiences

Having followed very carefully the price of water in the Emerald Irrigation area, the following pattern has been observed. The capital value of water attached to land has been steadily rising for some time. It was predicted by most irrigators that once water was allowed to trade on an individual basis separate from land, the price would rise significantly. At the first auction of water where it was allowed to trade separately, it did. From then on the irrigators have had a lack of confidence in the water market. This has been caused by a strongly perceived lack of security of tenure over that water, as well as lack of confidence in the future of the irrigation industry caused by planned continual increases in water charges by the State Government. The water market has lost liquidity and price has been in decline. The capital value of water licences is currently falling in the Emerald Area.

The Temporary Transfer water market has a very different dynamic. It fluctuates in price from \$300 per megalitre when it is needed to finish a crop down to \$30 per megalitre when there is a surplus of water. For example when the dam had significant inflow in early 2005 and allocation increased significantly, temporary transfer would have been very difficult to sell. As the cotton crop was almost complete and it was late in the water year (July to June) there were not any efficient crops to use the water on. As a result irrigators either had to use it on inefficient crops, sell it for base value \$20 to \$30 or lose it as the cap on carry over was activated.

The higher value of \$300 per megalitre is only justified by being a very small proportion of the total water used to grow the crop and is was historically paid in an unusually high water usage year where some irrigators were looking like running out of water just before the crop finished, which would have resulted in significant yield loss. It is by no means a viable price to pay for irrigation water.

As temporary transfer water is not yet used to grow whole crops, but more used as an opportunity when prices are low to plant more acres, or to prevent a yield disaster due to shortfall, it would be difficult to use these prices as an indicator for an annual value of water.

Comment on why irrigators see government price increases as continual and inevitable if the system is not changed

Irrigation water is delivered in Queensland by the Monopoly Government Owned Corporation, Sunwater. The words Monopoly and Government strike fear into the heart of most irrigators when either or both of those structures have control over how much is charged for the delivery of a service. There appears to be little or no control over how much the irrigators are charged by Sunwater. Over the past 2 years, Sunwaters expenses have increased by 21% while providing no perceived increase in level of service. Sunwater has refused to rule out increased charges. Irrigators are wondering if Sunwater is going to continually have a 10% increase in expenses per annum and continually pass that on to irrigators. At that rate it would not be long before irrigation is no longer viable due the inability of Sunwater to control expenses. Irrigators cannot see any mechanism in the current structure which will control this.

Resource Management is supposedly provided by the Department of Natural Resources and Mines. Governments historically have been very poor managers of resources. The resource management provided by the State Government is considered by the irrigators to be continually flawed. If the draft ROPS had been taken through to completion without change (brought about with great difficulty by the irrigator groups), Fairbairn Dam would have had no irrigation water in it for past 2 years, with this significant cost to the community and the viability of the irrigation scheme would having a negligible positive effect on the environment.

An example of poor resource management on a smaller scale would be the salinity issue which received much press from the Queensland State Government in recent years. The map very publicly held up by Premier Beattie at press conferences has since been soundly discredited. This is one of many instances of the State Government managing resources for political reasons rather than sound environmental reasons. An ironic situation in the Fitzroy Basin is that the only salinity problem in the area is caused constant seepage out of delivery

channels owned and run by Sunwater, the monopoly GOC responsible for the delivery of water. It has only been due to severe pressure from irrigators that Sunwater has started to do something about the problem by lining the channel with polythene. Sunwater is now proposing to estimate the water saved by this lining, and then sell it on the open market, with no suggestion of compensation to the irrigators whose land the seepage has damaged over the years.

Irrigators have little or no faith in the Queensland State Governments ability to manage the environment for environmental rather than political reasons. An example of their lack of management is the water quality monitoring in the Fitzroy Basin, which under the ROPS is an obligation of the Queensland Government. At this stage the only water quality monitoring being done in the Fitzroy Basin by the Queensland Government are some fish counts, which would be considered to be a very minor proportion of what needs to be done. Irrigators have voiced strongly that they would like to see more environmental monitoring of the waterways, to identify any environmental issues if there are any, and prevent them from becoming a problem through better management of the resource.

Summary

Until the National Water Initiative was implemented, natural market forces (despite the fact that water was attached to land) were causing water values to steadily rise, and irrigators to become steadily more efficient, with recent history showing irrigators in the area significantly improving their environmental awareness and continually improving their environmental management.

Since the full implementation of the ROPS, the capital value of water has fallen, and irrigators are developing a lack of confidence in the long term viability of their industry. This is due to the perception that the Queensland State Government will steadily charge irrigators more and more for the rapidly growing, uncontrolled bureaucracies which supposedly manage the delivery of water and the water resource, until their industries (which are giving some rural communities the only growth they have seen for decades) cease to be viable.

To add insult to injury the Queensland State Government is continually claiming that it has to implement these charges as part of the National Water Initiative, when in fact it is these very charges which are the greatest threat to the National Water Initiative's goals. It appears that the goals of the National Water Initiative are very open to interpretation.

A steadily increasing proportion of irrigators are suffering a loss of confidence in the National Water Initiative, due to the States' using of its goals for their own political ends. To restore irrigators' faith in the process, there needs to be a strong public clarification of these goals.

To prevent capital values of irrigation water from continuing to fall, and to prevent an equity crisis in the irrigation industry with all of its dire consequences, confidence must be urgently restored in the security of tenure of water.