

FARMING CHALLENGES IN A LAKE CATCHMENT – INCHBONNIE

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A presentation providing on the ground insight into the challenges facing farmers who farm in sensitive catchments.

The Lake Brunner catchment is a highly visible one with one of the main highways, and the rail link from Christchurch to Greymouth running through it. This brings the added pressure of many untrained eyes making judgements daily on farming practices seen. Local councils have a strong focus on this area as it has its own chapter in the regional plans governing the West Coast. The lake has excellent water quality at present but the situation of lakes in the North Island has made it clear that we must make sure we act now to ensure it stays that way. Monitoring in isolation has indicated that the lake is phosphorus limited and that there has been some measurable change, but the base data is such a small data set that all predictions should be treated with caution. When the Brunner results are looked at beside other West Coast lakes it sits in the middle through to the better end of the measurements which is encouraging. This also highlights the danger of taking results in isolation and farmers have asked for some monitoring of another lake to act as a control. There is some feeling that the massive variations in rainfall events may have an influence that should be monitored via this method, to give certainty to farmers and other parties of the results.

The environmental challenges facing farmers in this catchment relate to the high rainfall (3.5 up to 7 metres in an El Nino weather year), high numbers of creeks and drains on farm, and of course being situated above the lake. Farmers have been very active with bridging, culverting, riparian fencing, the building of stand off pads, and improving effluent systems and therefore effluent use. This has been in conjunction with a “Farm Plan” project which was run in the area which most farmers were involved with. The main part of the project was to encourage farmers to put in infrastructure like bridges, fencing pond or irrigators etc, and also to improve practices around pasture/soil protection through management methods.

All information gathered and set out for the farmers remained theirs and was not given to the Regional Council so it could remain out of the “Official Information Act” regulations. This privacy was one of the key factors to obtain good honest buy in from farmers, as they felt if other outside parties could obtain copies of what they had volunteered to do on farm, there could be issues arise in the media if not everything was achieved within timeframes set out. Estimated costs for infrastructure were supplied along with the appropriate contacts to get work done and also information on consents etc if required. This was another part of the project which helped ensure it succeeded as some of the work that farmers HATE to do (i.e. paper work and ringing around) was done for them.

The project was reviewed recently to see how much of the planned work had been carried out. There was upward of \$800,000. worth of work completed, and was above 80% of work volunteered. The most interesting thing to come out of the follow up was the fact that farmers who had completed all or most of their farm plan obligations, and some who were never a part of the original plans, had in fact gone on to do a whole lot more work that was

never written into the plans. This outside the plans work totalled closer to \$1.3 million in value. This was an unexpected result but goes to show that when there is genuine buy in and no outsiders pushing rules there can be excellent environmental outcomes.

This is where regulation (although required to some degree) should not be seen as the ultimate tool to use to protect environmental values. Appropriate education, clear scientific facts, offering solutions rather than blame have an intangible value that cannot be readily measured. Unfortunately this good will can easily be lost completely when regulators, planners, and well meaning outsiders with no practical experience write rules into plans that do not take this into account. Willingness to take ownership of a problem and deal with it sensibly, achieves more and quicker than any draconian rule could ever hope to achieve.

New technology used to help increase production may have its own issues which have only just recently been investigated. The process known as “Humps and Hollows” where the land shape is modified to enhance excess water runoff so that more pasture growth, and hopefully less pasture damage can be achieved. Mini wetlands form in the bottom of the system in time and although runoff maybe increased the filter in the bottom maybe of some use in mitigating effects. There have been some trials done recently around nutrients from this system, and more work is on going in the Inchbonnie part of the catchment. This is the “Inchbonnie catchment project” which is one of the sister projects running around various parts of the country.

Some of the economic challenges are never going to be beaten without risk to the catchment of further intensification. Current stocking rates are modest at 1.9 – 2.4 but if regulation down the track forces investment in herd homes, grazing off in winter, the stocking rates may see an increase to help offset the costs involved. TB is another issue as some herds would not be allowed to shift stock due to movement restrictions on stock infected with TB. These types of approaches have been suggested in the regional plan as “to be encouraged” to help reduce the P available to enter the lake over winter. Some care would need to be taken with this as it could lead to a worse result. The latest report on Brunner states that P inputs would have to go up by 70% to have a detrimental effect on the lake. The topography of the catchment means that there are only three more farms that could convert from sheep and beef to dairy milking, so in this respect it is protected by natural boundaries.

Many biodiversity grants are being sought and some have already been received, for further riparian planting to help with nutrient filtering, and further fencing. The further fencing is required as a plan change now states that farm drains are included as waterways. These drains have an excellent habit of over time becoming sandy bottomed and forming brilliant habitat for native fish. A nice spin off for farmers.

Fertiliser types are being trialed by individuals especially around the RPR types, and in fact many have been using RPR’s for some of their P requirements for many years. This has also been mentioned in the regional plan as something that has to be used now on any newly developed land or offset with its use elsewhere on farm if normal P fertilisers are required.

Many of the other influences that affect the lake have not been measured as farming is the biggest activity in the catchment, and is the only one that can realistically be altered. Other factors include river bank erosion, goose numbers that have had a 50% increase in two years in the catchment, slip events in the tributaries, fuel residues from increased summer use due to the opening of the viaduct on the road from Christchurch etc.