

# MGUS presentation to PC7 Hearings October 2020

By Sarah Hawkins and Hamish McFarlane

## Introduction

Kiora,

Thank you for the opportunity to present on behalf of the McCain Growers Unincorporated Society. My name is Hamish McFarlane and I am a member of the committee that administers this group. I am also a potato process grower for McCain Foods whom I supply through McFlynn Potatoes Ltd, a company owned by Guy and Jane Slater and myself.

For some background, I have made a separate submission on behalf of McFarlane Agriculture, McFlynn Potatoes and myself. Please can you take note of some of the points made in that submission. Guy is also speaking to you today.

I refer to the original submission on PC7 lodged by MGUS in 2019 and assume we can take that as read. Today, I will be speaking to some key points from this and will endeavour to answer any questions you have. Please feel free to raise questions on photos or points I make as we proceed or at the end.

McCain Growers Unincorporated Society (MGUS) is a self-funded group dedicated to research and development for the benefit of the potato industry and sustainable agriculture. Membership is made up of McCain Foods and all the farmers who supply the Timaru plant. The committee that administers the society consists of farmers, McCain Staff, seed growers plus independent agronomists. Funding of the group is equally shared between the growers and McCain which results in a significant yearly spend on science. It represents the largest sole supply group of process potato growers in New Zealand.

The group has a history of achieving clear results for both growers and processor through delivering economic and environmental gains as a result of the R&D carried out. MGUS membership farmers grow approximately 2000-2200 hectares annually for McCain Foods in an area encompassing Timaru to Darfield. More often than not an individual grower will have paddocks scattered over a hundred km plus. The 6-7,000 tons of potato seed required to allow this to take place each year are also mainly sourced and grown in the Canterbury region – mainly by separate growers who have specialised in this field of potato production. As an entire group we grow across many different nutrient allocation zones and source water from multiple water schemes and sources. As a group we are heavily reliant on all parts of our supply chain performing in order to operate into the future.

Some key considerations when making your decisions around the environmental management of potato growing in Canterbury are

- Future expansion is realistically limited by commercial reality – produce is all contracted – it has to have a home and there is no requirement for McCain to accept uncontracted volume.

- Potatoes that don't meet quality specifications are not paid for and crops that are over watered or fertilised will generally fall out of specification – therefore a successful operation becomes self-regulating to a degree
- Potato production has a very high cost structure which results in major spinoff for the community beyond farm gate and processor off a relatively small area
- Due to the high cost, any efficiency gain achieved through minimising fertiliser or other inputs is significant and therefore a goal for every grower and processor; on the flip side of this, excess nutrients and water often have the effect of reducing quality and yields and therefore returns to the grower
- We are under constant commercial pressure to perform and exceed international expectations – we can only achieve this through lower inputs per ton of product. This helps meet the needs of PC7 planning expectations.
- We recognise that our international markets require us to meet environmental standards, and we recognise that our country needs us to – as a group we are committed to achieving these. We are conscious that measures put in place to achieve planning outcomes have to be real and mitigate our environmental footprint
- Land used for potato production can't be used for potatoes again for 6-8 years therefore placing a limit on the area any landholding can sustainably produce
- The infrastructure investment, whether that be seed, transport, storage or machinery is significant in comparison to most other types of farming operations
- There are few new entrants to the industry due to the complexity, risk and requirement for contracts, but the industry needs them – there are enough barriers to entry without requiring historic baselines
- Canterbury process growing is not the same as winter table production in Pukekohe and should not be treated with a one size fits all solution
- Potatoes are one of the most efficient food producing plants known to mankind

All McCain growers are Canterbury based, family owned and operated businesses. The McCain grower group employ roughly 100 permanent staff and another 100 - 150 seasonal staff in Canterbury for potato production. All existing growers are also involved in other diverse farming operations which work in with or alongside potatoes. Generally, these are based around traditional mixed cropping and livestock with some operations also growing onions, berry fruit, or dairy. These farms support a multitude of other local business sectors such as science and technology and research, consultancy, engineering and building, transport, compliance and resource management.

All of these operations must meet Global or NZ GAP certification to supply product. This means they must meet standards around ethical treatment of staff, accurate recording of products, inputs and abide by applicable environmental legislation. These certification schemes are renewed annually and audited at least every three years. This is in addition to the current LUC requirements in Canterbury that ensures strict adherence to nutrient management (GMP) and recognising current environmental and cultural practice. Farm Environment Plans are required by irrigation schemes or consents.

Often potatoes are grown on leased land. The ability for a farmer to lease a percentage of land to a potato grower for reasonable return and zero business risk without the investment in labour, machinery and infrastructure allows many farms to continue with a traditional mixed operation. This is as opposed to converting to another type of farming system that offers less diversity. Most leases are for the length of crop only and are made up of a base price per ha plus a fee charged per mm of water applied per ha. This fee for water is a direct cost on the growers' bottom line. Another direct

cost of over applying water is rotten or out of spec potatoes that are not paid for. An inch of water applied at the wrong time can result in a quarter of your product not making grade due to internal defects or rot.

If I can give you a brief intro to the crop and some of the challenges faced.

Generally process potatoes in Canterbury are planted from mid-September to early November and harvested from Mid-January to the end of May. The irrigation season is relatively short and sharp with applications generally starting in mid – late November and ending in February. Water restrictions or irrigation being cut off on a potato crop can lead to significant yield, quality and environmental problems in most Canterbury summers.

For example, if a 70 T/ha crop is targeted as realistic, then nutrients are applied accordingly. Most of these have to be applied at the start of the season. If certain factors impact growing conditions significantly, this crop can be reduced to 50T/ha or less in the blink of an eye. Some of these factors are

- Limited water
- Reduced rotations resulting in disease pressure and requirements to fumigate
- Location – process potatoes don't perform at higher altitudes
- Inadequate or poorly timed nutrient inputs

This lower yielding crop would generally

- have the same amount of cultivation
- use the same amount of seed and chemical and fertiliser
- have the same number of sprays
- have incurred the same costs of land and other overheads etc
- potentially generate lower payment per ton for quality spec's not being reached
- have lower transport costs at harvesting
- have lower irrigation cost

as a high yielding crop.

The consequence of the lower yielding crop of potatoes is a larger environmental footprint per ton due to leftover nutrients and higher carbon emissions at completion of crop and, long term, more area required to grow the same volume. Reliable water is a key component here and additionally, provides resilience to the potential effects of climate change.

Reliably storing potatoes from March- December to allow for year round French Fry production requires good quality potatoes, experience, plus quality sheds and climate control. Excess irrigation, high disease pressure, short rotations or incorrect fertility can cause significant losses during storage.

Growers and agronomists therefore use various soil moisture monitoring systems, sampling and assessment in the field plus rigorous attention to weather forecasts before applying water to ensure the correct amount is applied when required.

The same level of attention is paid to nutrient levels and introduced fertiliser. As previously stated, fertiliser is expensive and when used in excess, often results in lower returns, quality and yield. It can lead to increased vegetative growth, reduce the growth of the potato tuber and result in high moisture potatoes that cannot be processed.

**All of this comes with a penalty to the grower and processor.**

A lot of work has been done, and is ongoing, to manage nutrient inputs for potatoes. Some of these examples are the potato calculator, by the ha soil testing and variable rate applications, petiole testing (which is leaf samples), real time nutrient probes being introduced, drone and satellite monitoring. While no one of these tools can offer a catch all solution, the combination of some or all allow us to fine tune inputs and mitigate adverse environmental effects to the best of our ability.

Alongside these examples, there is a constant search by MGUS and McCain for more efficient varieties of potato that can grow more from less but also meet buyer expectations.

In conclusion MGUS would seek the following outcomes

- flexibility to choose soil types and locations that are the best fit for the timing and type of potato crop we are growing
- flexibility to work across farms, catchments and zones to prevent overloading any one of these
- simplicity around the rules when working in different catchments and zones
- the ability to use input modelling systems that accurately reflect nutrient use of a potato crop
- the opportunity to sustainably expand a crop which is incredibly important for food security and also has relatively low environmental footprint when farmed correctly. This has to be done in a way that respects the spirit of Te Mana o Te Wai and aspirations of PC7 outcomes.
- not have existing suppliers, new entrants or possible opportunities limited by historic and irrelevant baselines
- the ability for our member growers to work collaboratively with planning authorities at a catchment level to develop workable, reliable and environmentally positive outcomes for our water resources
- investigation into a collective consenting model for the industry
- involvement if the opportunity arose as a result of these hearings to help form rules or policies for the plan

Thank you for your time. I appreciate the hard work you have ahead. I am sure you have listened to our concerns, but also our pride in being part of an industry that does have the tools and ability to sustainably continue farming into the future.

Nga mihi, Hamish McFarlane.

**Questions.**