



Hill Country Symposium

*Setting a profitable & resilient future
for NZ Hill Country Farming*

Future Pathways for New Zealand Hill Country Farming

A Position Paper based on the 2016 Hill Country Symposium

Summary

- The hill country farming sector is an important contributor to New Zealand's economy and regional communities. It is the nursery of our meat industry and the steward of 5.6 m ha of land and associated fresh water catchments.
- Hill country families which are effectively connected to local communities, national affairs and global markets will influence, understand and deal with future changes. Achieving connectivity of hill country families is a priority.
- Programmes which support the motivation and confidence of individual hill country farmers to change will be most effective. This will be achieved by strengthening practice change capability and capacity.
- Adequate long-term profitability is a major determinant of whether existing Best Management Practices are adopted. By prioritising adequate profitability, the full potential of hill country farming will be achieved.
- Participation in new value chains that generate improved product prices offers significant business opportunity. Promotion of successful case studies is required to inspire farmers to participate.
- Future farm systems will need to achieve the right balance between financial, environmental and social goals. Evidence on the impact of farm system changes on business and environmental performance is urgently needed.
- New innovations will enable hill country farming to realise the full potential of hill land resources. Reinvigorated R&D capability that is relevant to hill country farming and guided by a cohesive and forward looking R&D strategy is required for these innovations to be developed and adopted.
- Hill country farms and associated rural communities are an attractive home to rural New Zealanders; and must be a productive and environmentally acceptable contributor to national welfare. A clear and consistent vision, strategy and action plan that aligns Central Government, Regional Government and Industry aspirations and investments will achieve this outcome.

"We can capture the prize if we work together."

Purpose

It is critically important that farming businesses in New Zealand hill country improve their profitability and resilience, particularly when they are faced with increasing market and climatic volatility. Currently, 70% of New Zealand's lambs and beef calves are born and weaned on hill country and increasingly, less down land is available for meat production. These iconic hill country farms are the nursery of New Zealand's meat industry and will remain so for the foreseeable future. In addition, hill country farming occupies 5.6 million ha of improved grassland and fresh water catchments. Responsible stewardship of these natural resources is important and expected. The hill farming sector is therefore, an important contributor to both regional and national economies and community wellbeing.

The Hill Country Symposium that was held in April, 2016 was a "call to arms" of people who are concerned about the dwindling investment and services that are needed to ensure vibrant hill farming businesses and rural communities. The intent of the organising entities was to catalyse discussion and action that will better position hill country farming in the future. The Symposium placed emphasis on the issues that must be addressed to ensure livestock farming in hill country meets the expectations of the New Zealand businesses and overseas markets; and will help achieve New Zealand's national economic, environmental and social objectives. Other forums such as the East Coast Hill Country Conference (2015) have placed emphasis on the wider issues of future hill land use.

The 320 attendees represented a good balance between farmers from throughout New Zealand; service company representatives; and staff from industry and public sector organisations. A publication containing review and practice papers is a valuable reference document for people wanting to learn more about hill country farming; a series of popular articles will highlight the successes and challenges of hill country farming; and structured discussion sessions during the Symposium provided a range of pan-sector input to develop key messages. This approach was taken in order to generate a clear view of the challenges faced in hill country farming and the necessary actions.

This Position Paper reflects the key messages of attendees and is independent of any formal organisation. It identifies the key issues that need to be addressed to ensure a profitable and vibrant hill farming sector and recommends the actions that are required. Its purpose is to inform and influence public, industry sector and business strategies that will impact on hill farming and associated rural communities in the future. Ultimately, a clear and consistent vision, strategy and action plan is necessary for hill country farming to successfully contribute to national and regional policy objectives.

Vibrant Rural Communities

Hill country farmers and their families are dispersed and generally located in remote rural communities. They need to be connected to both domestic and global stakeholders. This is to ensure that they can contribute to the shaping and implementation of domestic policy; and can understand and participate in the rewards of global value chains. Central and local governments have a responsibility to create and sustain rural infrastructures such as roads and telecommunication if this connectedness is to be achieved.

"We must be efficiently and effectively connected to the world"

"Also remember that urbanites and tourist use and benefit from good infrastructure"

Community networks and mentoring that can facilitate discussion on key issues that will impact on the wider community (eg: environmental regulations) must be encouraged and supported. This engagement is necessary for Regional Action Plans to be effective. Interdependency needs to be emphasised. It is important to recognise that successful hill country farmers are highly motivated; respond to constraints and incentives; and their commitment sustains greater population density in rural communities than other land uses such as forestry. Consider the decay of East Coast North Island communities over the last 30 years. This is particularly important to Maori, as often these communities are their *turangawaewae* that hold their ancestral connections.

“The opportunity to improve the performance of Maori farming businesses is huge.”

A living and working environment that attracts and retains people with both farming and business skills will be essential to future success. This is relevant to both farm owners and employed staff as we are now dealing with multi-million dollar farming businesses. Good housing, effective telecommunication, rewarding wages, professional development and a safe and secure environment for families and employees are important ingredients in employment packages. While much of this is the responsibility of the farm owner, access to good schools, health care and gainful employment for spouses is a regional and National responsibility that urgently needs attention.

While the above emphasises individual and community responsibility and action, there is a glaring need for leadership. Hill land must continue to be both an attractive home to rural New Zealanders and a productive and environmentally acceptable contributor to national welfare. This is so important, that consideration should be given to establishing a Central Government Standing Committee for hill lands and associated rural communities. This committee should be supported by a working party, as was done with the National Land & Water Forum.

Dealing with Change

Given the uncertainties and variability of the operating environment that hill country farming will face in the future, change will be inevitable and necessary. The rate and extent of change will largely be determined by the individuals, not institutions. While traditional extension processes can support change, it is the collective action of farmers which generates the confidence and momentum to change. Simply relying on general sector initiatives will not be good enough to meet the significant challenges that hill country farming will face in the future.

“Consider the people factor and be inclusive of key stakeholders”

“In farming hill land there are multiple issues that overlap and it will be important to look at each one within the context of the whole farm system and local community”

The challenge for programmes that seek to support change is that they must invest more into understanding motivations to change (or not to change) and supporting confidence to change. This requires both inclusion (of stakeholders) and deep engagement that is sustained by effective communication. This will be critical given the complexity of hill country farming and the need to deal with multiple and often conflicting objectives.

“We need to build facilitation capability and capacity.”

Effective change processes must strengthen the confidence of farmers to decide and act. This requires evidence of the benefits and risks of change, examples of successful change, consistent messages and easy access to support, information and tools. This means that the change process must be interactive and action orientated. To ensure successful co-development and implementation of innovations greater interaction of early adopter farmers, research champions and progressive service providers is required.

“Advance Parties seem to have the right ingredients.”

“Farmers and scientist need to be more actively engaged to exchange knowledge and experiences.”

“Social media will play a much bigger role in supporting change.”

Significant crown and industry investment is currently being made into the Red Meat Profit Partnership to address these issues of change in the sheep and beef sector. People who govern and manage this programme need to consider the above messages.

Implementing Best Practice

The attributes of high performing farmers are diverse as revealed in work undertaken by the Red Meat Profit Partnership. They are not risk takers, but are confident in what they do. Before doing something new, they will carefully test it over part of the farm before rolling it out across the whole farm. They have a strong and interactive support team and are prepared to seek out and pay for specialist advice. In hill country, these types of farmers have achieved high biological and economic performance despite the land class and climate in which they farm. Shining examples are the recent winners of the Ahuwhenua Trophy - these people implement best practice.

The review and practice papers in the Symposium highlighted many of these best practices, for example:

- Knowledge and tools to manage soil fertility are available, but fertiliser still remains a significant ongoing and constraining cost of production.
- Improved pasture species, cultivars and forage crops are available for increasing forage supply of easier contoured land.
- Pregnancy scanning, body condition scoring and improved nutrition of multiple lambing ewes can markedly improve animal performance.

However, expectations need to be balanced with reality. For many farming businesses, adequate profitability is a pre-requisite to being able to implement many best practices.

“We need to remember that there are a lot of ‘basics’ which need to be addressed by a large group of farmers. During the 80’s and 90’s, infrastructure and soil fertility were run down – these farms are now playing catch-up. The reality is that these farms are not fit for purpose and it’s important to think about the lower performers where focus needs to be on first principles: subdivision, stocking policy and pasture management.”

While the challenge is to get wider adoption of these practices across the sector, there still remains the need for further refinement of these practices. For example:

“More efficient use of nutrients can be achieved by identifying land manage units and applying different rates of fertiliser”

“As our systems intensify and become more demanding, we need better feed supply from the hills.”

“We must reduce mortality in our high fecund flocks – this is high on the agenda of high value customers”

For new practices to be developed and adopted, it will be essential for research institutions, commercial companies and early adopting farmers to work together. The recurring plea at the Symposium was for more collaborative effort by all parties.

Value Chains and Improved Profit

Farmer-processor linkages have evolved so that there is now a range of possible relationships between livestock farmers and processors. Currently, there is much discussion and expectation that new value chains will lead to improved profitability. If this is to be the case, farmers will require good knowledge of their own businesses and choose a partner whose aspirations and systems align. This will require sustained communication between farmers and processors that builds an appreciation of the markets and results in the ability to deliver livestock to specification and on-time. Both parties will have to accept risk through contracts that are honoured and as a result, build shared values and trust.

“Be clear and consistent around what is expected.”

“Know your business and your partners business – do good due diligence.”

With one exception, it must be noted that there was a glaring absence of attendees at the Symposium representing the meat companies, the entities which purportedly provide the vital connection of farmers

to overseas markets. This was surprising given that hill country farms are the nursery/foundation of the New Zealand meat industry. Inclusive captains of these new value chains are urgently needed. Our farming businesses and industry structures need to align much more directly with market and customer needs.

“B+L NZ should not be the arbiter of commercial relationships”

Successful value chains must enable farmers to connect with customers and for this to occur, open and transparent communication throughout the value chain will be essential. For hill country farmers with predominantly breeding systems, these connections can be more difficult. For this reason, it is important that these farming businesses participate in supply networks and share in the financial rewards.

In developing value chain specifications, and the technologies and practices that enable successful supply, it will be important that all of these components are considered in a systems context. Unfortunately, the necessary skill sets and resources for farm systems R&D are rapidly eroding – the loss of Whatawhata and Ballantrae research farms is symptomatic of this erosion.

However, there are opportunities to document and disseminate case studies of successful farming systems that fulfil the requirements of new value chains. These should be used in industry education programmes – again a challenge to partners in the Red Meat Profit Partnership.

Environmental Management

Managing our hill land in order to care for our environment is not new. Consider the soil conservation and land management efforts to reduce soil erosion from the 1950's through to the current day. What is new, are the different indicators of environmental quality (eg: nitrogen, phosphorus, sediment, and E coli in fresh water systems) and new environmental regulations. In dealing with these new challenges, it is important that we consider passed learning and experiences. Importantly, hill country farmers have and must participate in shaping and influencing community-led policies.

“History demonstrates that changes to resource management takes time and requires financial support and technical guidance.”

Tension exists between the goals of profitability and environmental care in hill country, yet they are increasingly becoming interdependent. Unfortunately, there is insufficient evidence and information available on the impact of farm management changes on the desired and necessary balance of these two goals. For example, how will profitability be affected if we satisfy society's environmental goals; will these changes make any real difference to environmental quality; will customers pay more if these expectations are met; what are the unintended consequences if we just focus on one single environmental issue? These are the questions that need to be answered by a multi-institutional research effort. Issues such as nitrogen, phosphorus and faecal dynamics and the long term effectiveness of mitigations in hill country need to be understood; and improvement of integrated tools to help clarify trade-offs and synergies is needed.

“We need evidence of the benefits and consequences of management changes.”

“We need clarity around what is expected – consistent industry standards and environmental plans.”

Farmers expect that by complying with environmental regulations, they will be rewarded with a social licence to operate. They also hope that they will be rewarded through increased product price, although there is little evidence of this operating in existing supply arrangements. For this expectation to be realised, a much more effective link between farmers, processing companies and regulators will be required.

“There is a glaring gap in expertise to help deal with future environmental regulations”

Recent experiences in formulating environmental regulations in Horizon One and the Waikato-Waipā catchments indicate that hill country, mixed livestock farmers have been inadequately supported in the negotiation process. There is a call for B+LNZ to strengthen its technical capacity to support future negotiations – these are changing times. It is also clear that there will be a significant demand for

adequately trained and experienced rural professionals to develop and certify environmental farm plans. Do we simply leave that responsibility to Regional Councils?

Importantly, we must not lock our financial and biophysical resource into a one way, possibly dead-end street. It is important to all stakeholders that we maintain these resources as a platform for future land use opportunities.

New Innovations for Hill Country

Current R&D investment and capacity that is relevant to hill country farming is close to non-existent. The steady erosion of innovation capacity over the last 15 years reflects the absence of a cohesive and forward looking R&D strategy. Yet there many solutions that are urgently required if New Zealand's hill country is to be a productive and environmentally acceptable contributor to national welfare.

“A clear and cohesive research, development and adoption strategy that deals with the needs of hill country farming is required – B+LNZ must take a stronger leadership role.”

The first obvious need is outlined in the previous environmental management section. There is a demand for evidence on the impact of changes in land use and management practices on farm productivity, profitability and asset value; and in the environmental improvements that are being sought. There is an urgent need for robust analyses of case studies where such changes have been implemented in the past. Importantly, transformational solutions that will generate more sustainable production systems with smaller environmental footprints in hill country will require long term public funding and the restoration of essential research capability.

As demands placed on hill country farming systems intensify, greater levels of and more consistent production from hill pastures will be required. There is an informed view that the basics of fertiliser, subdivision and grazing management must be addressed first; and that useful pasture species/ cultivars are available for some landscapes. However, for difficult soil and climatic conditions that are common to many hill farming system, there is a concerted call for better adapted plant types, particularly legumes.

“We want to see something transformational such as plants that take hill country pastures from 7 to 10 tonnes; do not need an Olsen P of 30; have long taproots and drought resistance; and are tolerant of high soil aluminium.”

It is recognised that the current market size is small for these types of plant species and that a more innovative way of plant development will be required compared to the existing commercial model. For example, an alternative approach could involve a collective of farmers working with a plant breeding organisation in a PGP programme. For this aspiration to be realised, restoration of R&D capacity in the plant ecology-management-plant improvement triangle is necessary. This capability will also be critical to improving the confidence of farmers that technical and financial success will accrue from the over sowing of new seed into hill pastures. The cross sector strategy on Forage Supply will need to place emphasis on the expectations of the hill farming sector.

“The inglorious quote of “spray and pray” is not acceptable.”

Given the scale and topographical variability of hill country farms, the potential applications of precision agriculture are exciting. The work being undertaken by fertiliser companies to develop tools that link variable rate applications of fertiliser to land management units will benefit not only farm productivity and profitability, but also improve environmental outcomes. Importantly, aerial sensor technology has other applications such as plant species identification which can lead to better control of weeds, such as thistles.

Monitoring methods, information management and decision tools that assist more timely and accurate decisions and actions will be necessary in order to improve resource use efficiency, supply of product to specification and environmental performance. The challenge for these innovations is for them to be developed and used in a way that reduces work load, not increase it. This is particularly so for the smaller, owner-operator farmer.

“At a sector level, innovations must be scalable and transferable across farms.”

To achieve these innovations, we must be ambitious about gaining long term funding. If we do not, then we will continue to lack coherency and R&D will continue on a hand-to-mouth basis. These achievements will take time and will require taxpayer funding. B+LNZ’s support is pivotal – without it, the concept of innovation in hill country farming will not fly!

Prepared on behalf of the Hill Country Symposium Organisers and Attendees

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