



25 September 2015

Committee Secretary  
House of Representatives Standing Committee on Agriculture and Industry  
PO Box 6021  
Parliament House  
Canberra ACT 2600

**RE: Inquiry into Agricultural Innovation**

The Victorian Farmers Federation (VFF), Australia's largest state farmer organisation and only recognised consistent voice on issues affecting rural Victoria, welcomes the opportunity to contribute commentary to the Agricultural Innovation inquiry.

Victoria is home to 25 per cent of the nation's farms. They attract neither government export subsidies nor tariff support. Despite farming on only three per cent of Australia's available agricultural land, Victorians produce 30 per cent of the nation's agricultural product. The VFF represents the interests of our State's dairy, livestock, grains, horticulture, flowers, chicken meat, pig and egg producers.

Our members are well aware of the challenges they will face over the next two decades; having to produce more than ever before on less land, with fewer inputs and a more volatile climate. They too are aware of the opportunities that exist with Australia's unique position in relation to the Asian market and the ability to produce safe, traceable, high quality food and fibre. New technologies, underpinned by access to quality telecommunications infrastructure, will enable Australian farm businesses to capitalise on these opportunities and mitigate the challenges.

Access and quality of telecommunications is currently a significant barrier to the uptake of many of technological advancements that can and will revolutionise agricultural productivity. Earlier in the year, the VFF conducted a survey of membership on the adequacy and quality of their internet and mobile telephone service, resulting in 533 detailed responses. This survey was used to inform the VFF *Submission to the Regional Telecommunications Review*, which has been attached below. This submission provides insight into how poor telecommunications service is severely limiting the productivity, growth and efficiency of farm businesses across Victoria.

Inadequate download speeds continue to be a source of significant frustration for our members. The mean download speed recorded in the VFF telecommunications survey was 6.18 mbps, with 72 per cent of respondents recording a download speed less than 6.18 mbps. A staggering 13 per cent of



respondents found their download speed was below 1.0 mbps. This is a significant contrast to the comparative trials that the VFF ran in central Melbourne, where download speeds exceeded 60mbps. The impact that poor connectivity is having on the productivity of farm businesses is demonstrated by the comments from respondents below;

“Slow connection speeds are restricting growth of the farm business – there [are] things we’d like to be doing online regarding banking, investment, marketing and research and we are at a competitive disadvantage [because] the slow speeds mean we drop out and just can’t do things others with better speed can.”

“We have a farm business that covers several sites. We can only get tower internet from one site. The others can only receive mobile phone internet which is slow and unreliable. We have alarms and computer systems that rely on internet to alert us to animal feeding and emergencies. The internet affects how well we can respond to these alarms. We could also stop having a person on call 24hrs if we had reliable internet.”

“Some days I have no access at all [to internet]. This makes running my business very difficult seeing I rely on internet banking and a cloud based accounting software package. If I have a day where there is no internet service or it is so slow that the server times out, I cannot pay bills or do my book keeping...We were wanting to put a cow tracking system into the dairy, but it would be a waste of money at the minute if it is only going to work a couple of days a week.”

“How can you run a business in this day and age with snails pace! We have to do our banking after 11pm at night, otherwise can’t do it. Mobile phone reception, we have to go out to the back paddock to send text messages.”

Aside from farm business productivity, poor telecommunications access leaves rural communities hamstrung in their ability to innovate as they do not have access online tools and resources that allow them to learn, share, network and research. Additionally, without adequate mobile and internet services, these communities are limited in their ability to attract and retain the increasingly skilled labour force they demand. If Australian agriculture is to innovate and make headway on productivity growth, the industry needs an intelligent, capable workforce – with access to the resources that allow them to grow and flourish.

The VFF is optimistic that the rollout of the NBN will improve access for many living and working in rural and remote areas. Nonetheless, it must be highlighted that the majority of our members are yet to realise any commercial viability of the NBN. The rollout must be prioritised in rural areas, where internet is currently inadequate, as opposed to upgrading adequate services in metropolitan areas. Furthermore, as only households are being connected to the NBN – not land mass – the extent of the productivity gains provided by the NBN for agriculture are narrow. The VFF is seeking assurance that the future demand, generated by the farm sector on the back of precision agriculture



advancements, is being considered when designing telecommunication solutions. This is paramount for those who are, or will be, adopting satellite technology, given the significant costs associated with this form of technology.

Thank you for the opportunity to provide comment on this inquiry into agricultural innovation. We keenly await the outcomes of your review. Should you have any further questions regarding this submission please contact Melanie Brown, Policy Manager

Yours sincerely

**Peter Tuohey**

President

Victorian Farmers Federation



*Submission to the*

**Regional Telecommunications Review – Issues  
Paper**

*15 July 2015*

## **The Victorian Farmers Federation**

The Victorian Farmers Federation (VFF), Australia's largest state farmer organisation and only recognised consistent voice on issues affecting rural Victoria, welcomes the opportunity to comment on small business in Victoria.

Victoria is home to 25 per cent of the nation's farms. They attract neither government export subsidies nor tariff support. Despite farming on only three per cent of Australia's available agricultural land, Victorians produce 30 per cent of the nation's agricultural product. The VFF represents the interests of our State's dairy, livestock, grains, horticulture, flowers, chicken meat, pigs and egg producers.

The VFF consists of a nine person Board of Directors, with seven elected members and two appointed directors, a member representative General Council to set policy and eight commodity groups representing dairy, grains, livestock, horticulture, chicken meat, pigs, flowers and egg industries.

Farmers are elected by their peers to direct each of the commodity groups and are supported by Melbourne-based staff.

Each VFF member is represented locally by one of the 230 VFF branches across the state and through their commodity representatives at local, district, state and national levels. The VFF also represents farmers' views on hundreds of industry and government forums.

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# 1 Introduction

The VFF welcomes the opportunity to provide feedback to the Regional Telecommunications Review issues paper.

Adequate and appropriate connectivity is essential for the efficient operation of farm businesses and increasingly for inter-personal relationships.

The Terms of Reference for the review of rural telecommunications include:

1. consideration of the adequacy of telecommunications services in regional, rural and remote parts of Australia, and
2. whether people in these areas have equitable access to telecommunications services that are significant to them, and are currently available in one or more parts of urban Australia.

The Committee will also consider the following:

3. the impact of infrastructure and service improvements, including what will be delivered by the rollout of the national broadband network (the NBN) and the Mobile Black Spot Programme, and
4. the relevance going forward of the current universal service obligations, and the associated consumer safeguards and protections that relate to service connection, repair and maintenance.

In approaching this submission, the VFF will first address the terms of reference three and four, on infrastructure and service improvements before returning to terms of reference one and two on the adequacy and access to telecommunications in rural areas.

As part of the consultation process the VFF has conducted a survey of membership, resulting in 533 detailed responses from members. The full results from the survey are attached as an appendix to this submission. The results of the findings for this survey were presented back to our membership at the VFF Conference, held in Bendigo on June 26. Members were joined by committee member Su McCluskey, who briefed VFF members on the structure and terms of reference of the review.

The survey highlights the following matters:

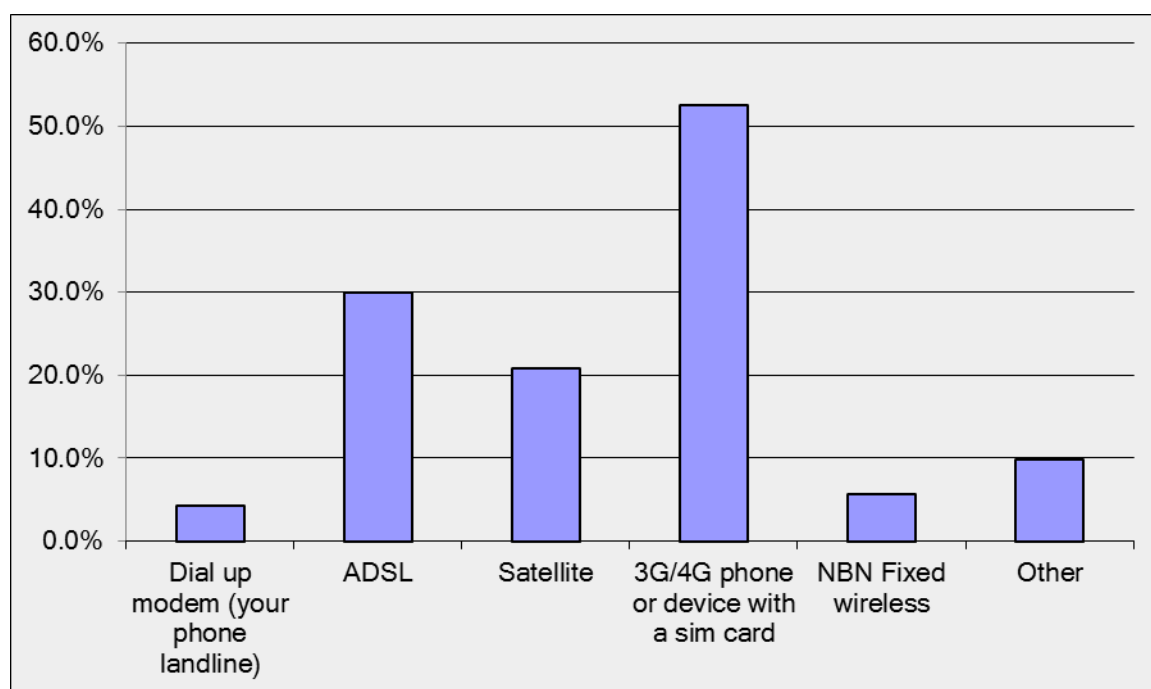
- Telecommunications services in rural areas are monopolised by one company
- Increasingly, VFF members are connecting to the internet through portable devices, rather than a fixed computer and landline.
- VFF members are averaging download speeds of 6 megabits per second, in comparison to their city counterparts who have downloads in excess of 60 megabits per second.
- As a result of poor connectivity, VFF members are disadvantaged in as well as in education and social scenarios.

## 2 Discussion of key issues

### Connecting to the internet

VFF members are showing an increasing preference toward internet connection 'on-the-go', by connecting to the internet through various mobile devices equipped with a sim card. Figure 1 below outlines the breadth of feedback from members.

**Figure 1: How do you connect to the internet?**



Less than 10% of survey respondents reported that they connected to the internet through the dial up network. This trend to mobile devices for both voice and broadband is set to continue and raises questions about:

- The relevance of the existing \$253 million annual investment in the Universal Service Obligation (USO) to maintain the existing copper landline network, for seven per cent of the population until 2032.
- The need to spend \$44 million annually to supply, install and maintain increasingly redundant public payphones.
- The commitment of an average of only \$40 million annually (\$160m over four years) to the nation's mobile blackspot program.
- The exclusion of mobile service delivery from the NBN rollout to rural Australia. NBN towers are being built without antennae capable of carrying the mobile spectrum nor equipped with backhaul capacity.

## **Re-directing Universal Service Obligation funds to the Mobile Blackspot and satellite programs**

As the recently released (July 4, 2015) Federal Government Agricultural Competitiveness White Paper – *Stronger Farmers Stronger Economy* - clearly states:

*“While mobile carriers claim to provide coverage to 99 per cent of Australia’s population, around 70 per cent of Australia’s landmass does not have terrestrial mobile coverage (Commonwealth of Australia 2015j). Traditionally, analogue phone services to regional Australia were funded via the Universal Service Obligation levy, however, these traditional policy responses need to be updated so that internet connectivity can be funded as an essential service.”*

The challenge is to identify how internet and mobile connectivity – from voice to broadband - can be combined and delivered to rural Australia with limited resources.

It seems obvious that a portion of the USO \$297m (\$253m for landlines plus \$44m for payphones) needs to be re-directed to the Federal Government’s Mobile Blackspot and satellite programs.

The Federal Government has currently committed \$160 million, which has been allocated over four years to the Mobile Blackspot program (\$100 million under Round One and a further \$60 million, from July 1, 2016, for Round Two).

The VFF appreciates that the Federal Government has been able to leverage additional blackspot funding from the states and telecommunication companies (\$165m from Telstra and \$20m from Vodafone) to make a greater contribution. However, it is the VFF’s view that a Commonwealth Government commitment averaging \$40million a year towards removing mobile blackspots falls well short of what is necessary to provide for a more equitable mobile phone service for rural and regional customers.

Obviously re-directing funds from the USO into the mobile fixed wireless and satellite technologies is dependent on guaranteeing farmers and their rural communities that these technologies are fully capable of delivering high quality phone services. It is a reality for many VFF members that their negative experiences with mobile phone coverage have led them to conclude that the copper landline network must be retained and maintained, especially for emergencies.

The Commonwealth Government would need to ensure that if USO funding were to be diverted to boosting the mobile blackspot program, then farmers would need assurances that they would still have reliable access to emergency communications during fires and other emergencies.



The following VFF member's survey response exemplifies farmer frustration in regard to the reliability of their mobile service and reliance on the copper landline as a backup:

*"I have to have both a mobile and land line because the mobile doesn't work well so we need the landline to call the caller back on. We double pay because we can be standing next to the phone and it won't ring and goes straight to message bank yet we have to pay to retrieve the message and have to pay to call 101. We have an abundance of internet available but cannot use it because it is so slow it's impossible to utilize..."*

The reality is that the NBN will be replacing phone and internet services provided over the existing copper network with fibre optic cable to the node for 93 per cent of Australia's population.

Meanwhile rural and regional communities that make up the remaining 7 per cent of the population will only gain access to the NBN's internet services, via a fixed-wireless network of 2,700 towers or satellites, at a total cost of \$6 billion. NBN Co has been blocked from offering mobile coverage from its towers or satellites.

## **NBN tower rollout must be extended to mobile spectrum**

Australia's ability to extend our regional mobile coverage is being hampered by an NBN policy that prevents it from offering mobile coverage or even third-party access to its NBN towers.

The VFF understands that while the NBN can support voice services, it has been excluded from competing in that market. This means the NBN Co is not able to provide the voice, payphone and other USO component that are currently available to consumers.

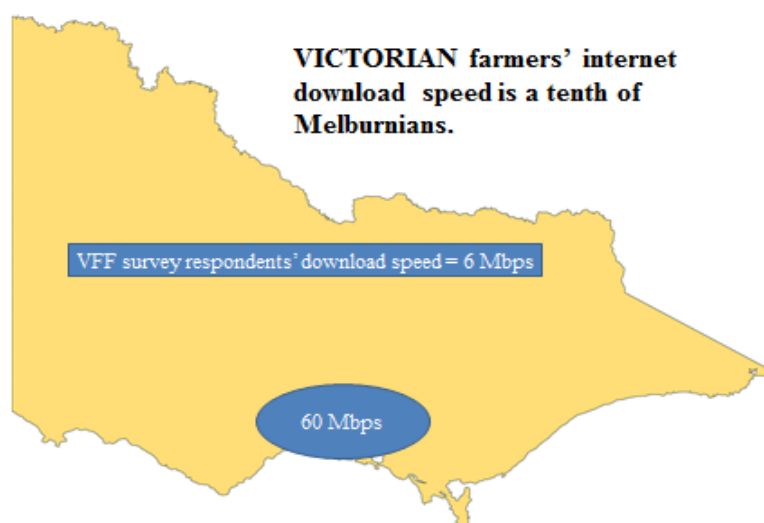
The VFF does not possess the resourcing capacity to fully analyse the technical and backhaul issues associated with expanding the NBN's role. However it would seem logical that even if the current restrictions on the NBN offering mobile voice services is restricted, it should at least be able to offer telecommunication companies such as Telstra and Vodafone access to its towers. Third party access to NBN towers would further extend Australia's mobile coverage.

## Poor Connectivity and High Cost of rural telecommunications

VFF member feedback, both direct and via our survey, clearly shows they face grossly inadequate mobile and broadband access. Residents in regional areas are at a substantial disadvantage to their metropolitan counterparts who experience a far superior service.

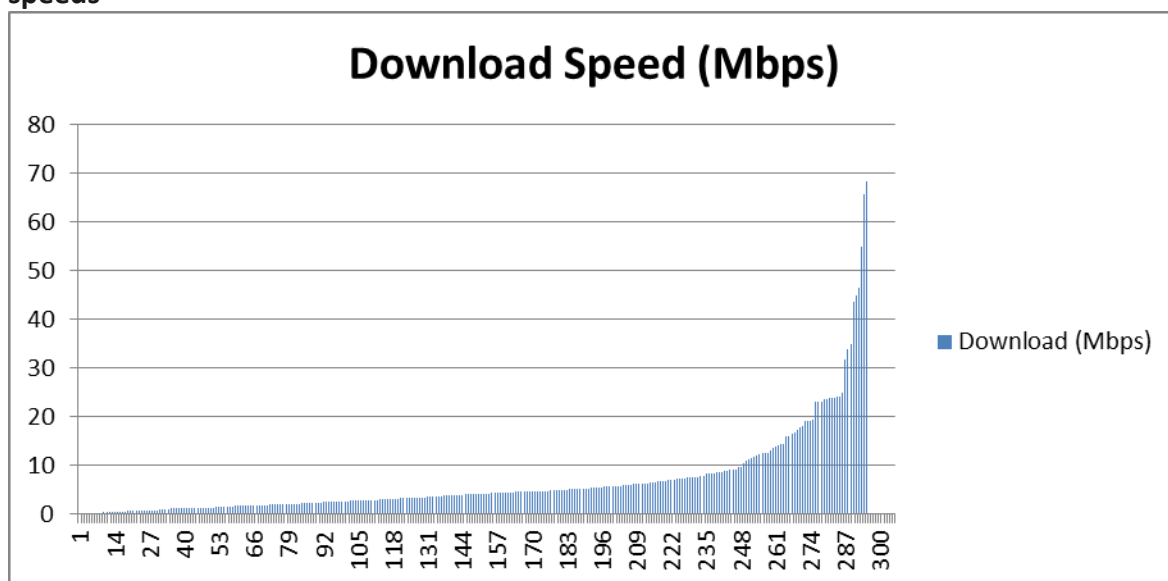
As part of the survey the VFF asked members to test and record their internet download and upload speeds. Figure 2 provides a graphic representation of the alarming results.

**Figure 2: Mobile telecommunication download speeds**



VFF members average download speed was 6 to 7 Mbps (Megabits per second), compared to metropolitan Melbourne download speeds of 50 to 60Mbps. The distribution of the download speed experienced is represented in figure 3 and upload speeds depicted in figure 4.

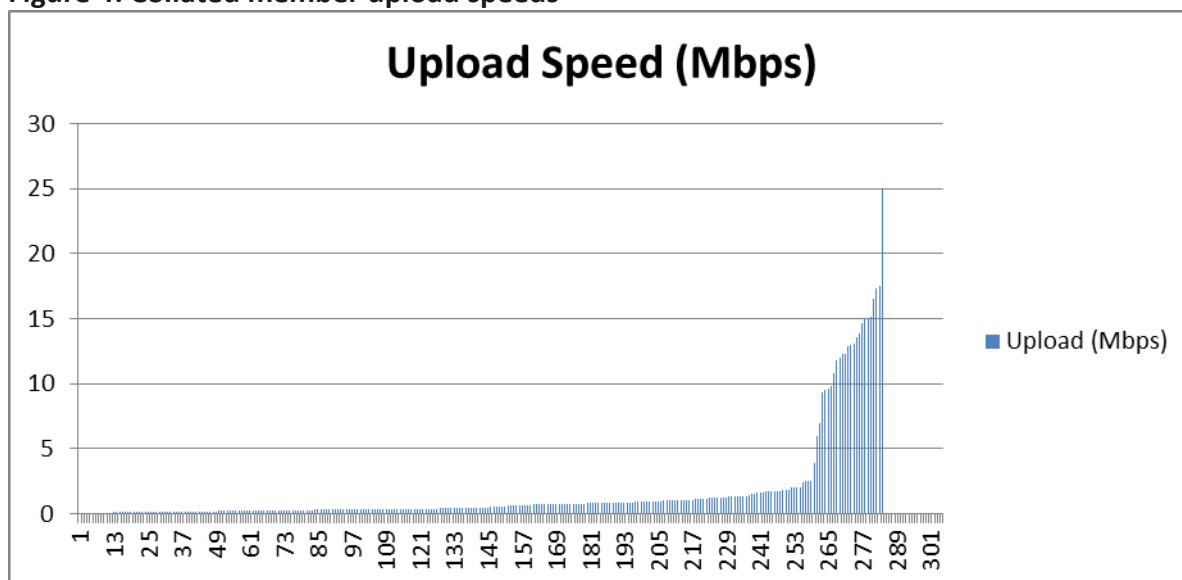
**Figure 3: Collated member download speeds**



Of the 295 VFF members who tested their download speed, 206 had download speeds of less than 6Mbps.

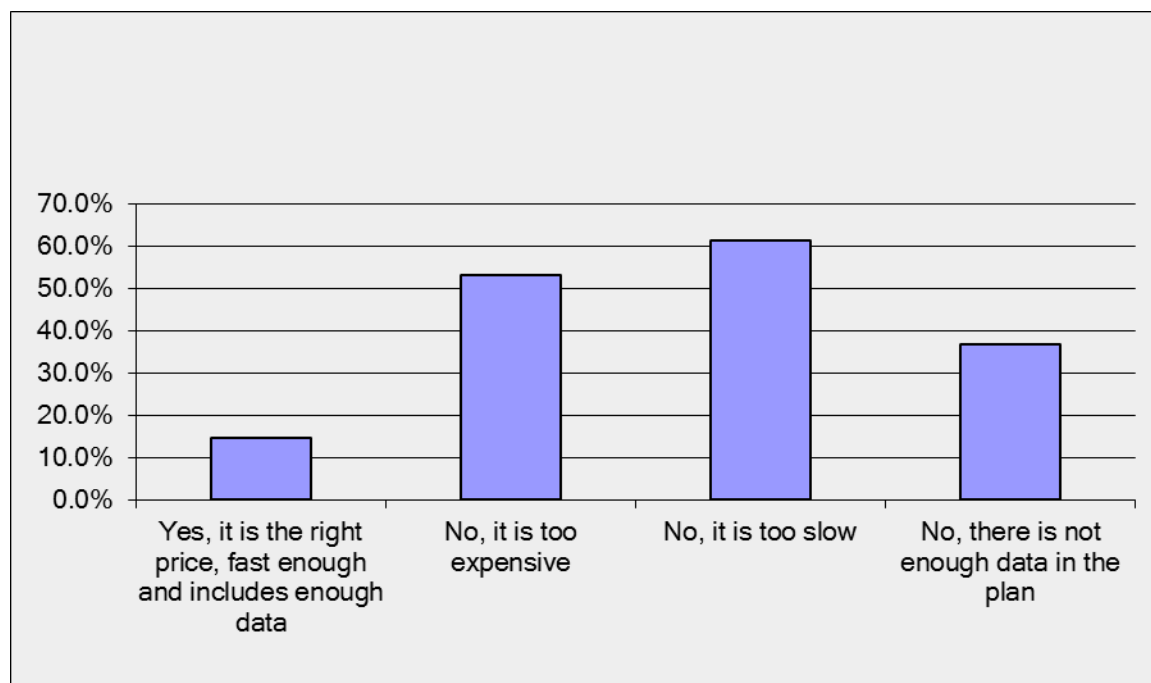
Upload speeds were generally lower than download speeds in rural areas. Once again the majority experienced upload speeds of less than 5Mbps.

**Figure 4: Collated member upload speeds**



The VFF found that most members are dissatisfied with their internet and mobile service costs, speed and data allowance.

**Figure 5: Do your current internet and phone plans meet your needs and expectations in price, speed and data allowance?**



### Poor connectivity – What are the impacts?

The Australian Communications and Media Authority found that in the seven years to 2013, mobile broadband contributed 2.1 per cent of productivity gains in the agriculture sector (CIE 2014).

Precision agriculture, remote sensing technology, irrigation automation, farm biosecurity and livestock monitoring are just some of the technologies reliant on decent broadband connectivity. The technology also promises to deliver massive labour savings in the future with the prospect of driverless tractors and spraying equipment.

However poor connectivity is stifling agriculture's ability to make far greater productivity gains. And it's also affecting farming families.

VFF members have highlighted that the poor connectivity which they experience:

- Restricts their farm business access to internet banking, market & financial information.
- Limits the functionality of and their ability to invest in broadband reliant machinery and technology.
- Affects farming families' access to online educational tools and social media.
- Health, Safety & Emergency response.

Members have commented about the variability of the service available to them across the course of a day – in response to the demand on the system. During peak times of the farming calendar, such as harvest or sowing, there is likely to be an increased demand on the telecommunications network - as technologically enabled machinery and devices are used consistently across a region. The more towards more efficient and effective farming machinery can be handicapped by the ability for this equipment to connect.

More than 268 VFF survey respondents took up the option of writing comments in response to our last question about their broadband connectivity. A full list of these responses can be found in appendix 2.

We have used these comments to highlight some the impacts of poor connectivity.

### **Farm Business Impacts - Banking and accounting**

- “Some days I have no access at all [to internet]. This makes running my business very difficult seeing I rely on internet banking and a cloud based accounting software package...”
- “How can you run a business in this day and age with snails pace! We have to do our banking after 11pm at night, otherwise can’t do it.”
- “Slow connection speeds are restricting growth of the farm business – there [are] things we’d like to be doing online regarding banking, investment, marketing and research and we are at a competitive disadvantage...we drop out and just can’t do things others with better speed can”

### **Adoption of internet-reliant Technology**

- “We have alarms and computer systems that rely on internet to alert us to animal feeding and emergencies. We could also stop having a person on call 24 hours if we had reliable internet.”
- “We were wanting to put a cow tracking system into the dairy, but it would be a waste of money at the minute (with unreliable internet) if it is only going to work a couple of days a week.”
- “To expand my business I need a faster & reliable internet service.”
- “We are becoming extremely limited within our business due to unreliable and slow internet. We have a lot of computer programs which we are unable to use to their full potential due to the internet, and any that are cloud based are unusable which puts us behind our competitors. We would consider relocating our business to an area better serviced if it was a possibility.... it is extremely difficult to get any help with regards to this issue, and we have tried continually over the past 8 years. Can you please help us to somehow access better service??”

### **Educational Access**

- “I have a daughter in year 11, and she has had to go to school with her homework incomplete because of lack of service.”
- “With three teenage children in the house, internet is vital to our lives. We all need it for learning, homework, pleasure and business.”
- “Our children require internet access to complete school work. This is impossible, as they are unable to connect to the school website to work on assignment and puts them at a significant disadvantage to their peers...when coupled with a 3+ hour journey to/from school each day, it seems more than a little unfair!”

### **Social Impacts**

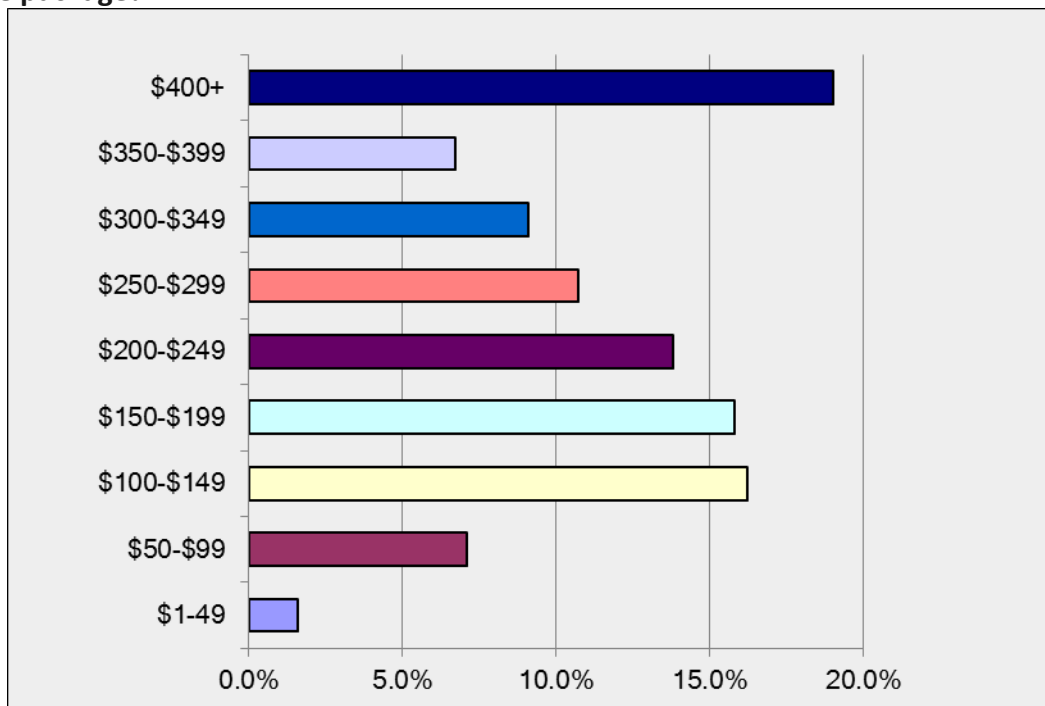
- “We feel we are being left behind in business and socially due to our poor internet service! I don’t watch movies because it is too unreliable and would take [our entire] download.”
- “If we had faster download speeds we could access books, films and other entertainment that we at present have to drive 5 hours to access in Melbourne.”
- “Recently tried to book tickets online but was unable to due to time outage of site, rang my son in Ballarat and over the phone he was able to access the same site and complete the transaction while I continued to time out.”

### **High Cost of Connectivity - Equitable access**

VFF members generally expressed concern that they were paying far more than urban users for mobile and internet access. While rural users’ monthly fees may be similar to those in urban areas, farmers are gaining far less in terms of content access and data allowances.

Members clearly highlighted the disparities in quantity and cost, with one member paying \$130 per month for 25 gigabytes on a wireless service – where in metropolitan areas some service providers offer unlimited service for less than half that price.

**Figure 6: On a monthly basis, how much do you spend on your bundled internet and phone package?**



Comments on cost include:

- “Pretty slow internet, pay more than people who live in town and they get more internet data and for less!”
- “The small size and big price of data on mobile devices is excessive.”
- “We pay \$120 per month for 15 gigabytes on a fixed wireless device service. It's so unfair to country people, as city people get a range of providers at competitive prices and can often get 100gb for less than half of what we pay for a measly 15 gigabytes.”

Some farmers have been forced to invest in additional infrastructure to gain access in mobile blackspot areas.

- “Our speeds are only faster because we had to purchase and spend \$730.00 on a yagi antenna and a smart antenna due to blackspot area.”

### **Satellite an expensive option**

Many VFF members have access to satellite services, but have reported variances in the service which they are able to receive:

VFF survey respondents stated:

“Satellite is all that is available to us and it is slow and expensive when compared to other broadband options.”

“We cannot get a broadband plan, only satellite at an exorbitant price...we have to carefully monitor our phone and data usage all the time.”

Others stated that satellite connectivity has changed over time and that the level of access is highly variable on the basis of the system burden. Comments include:

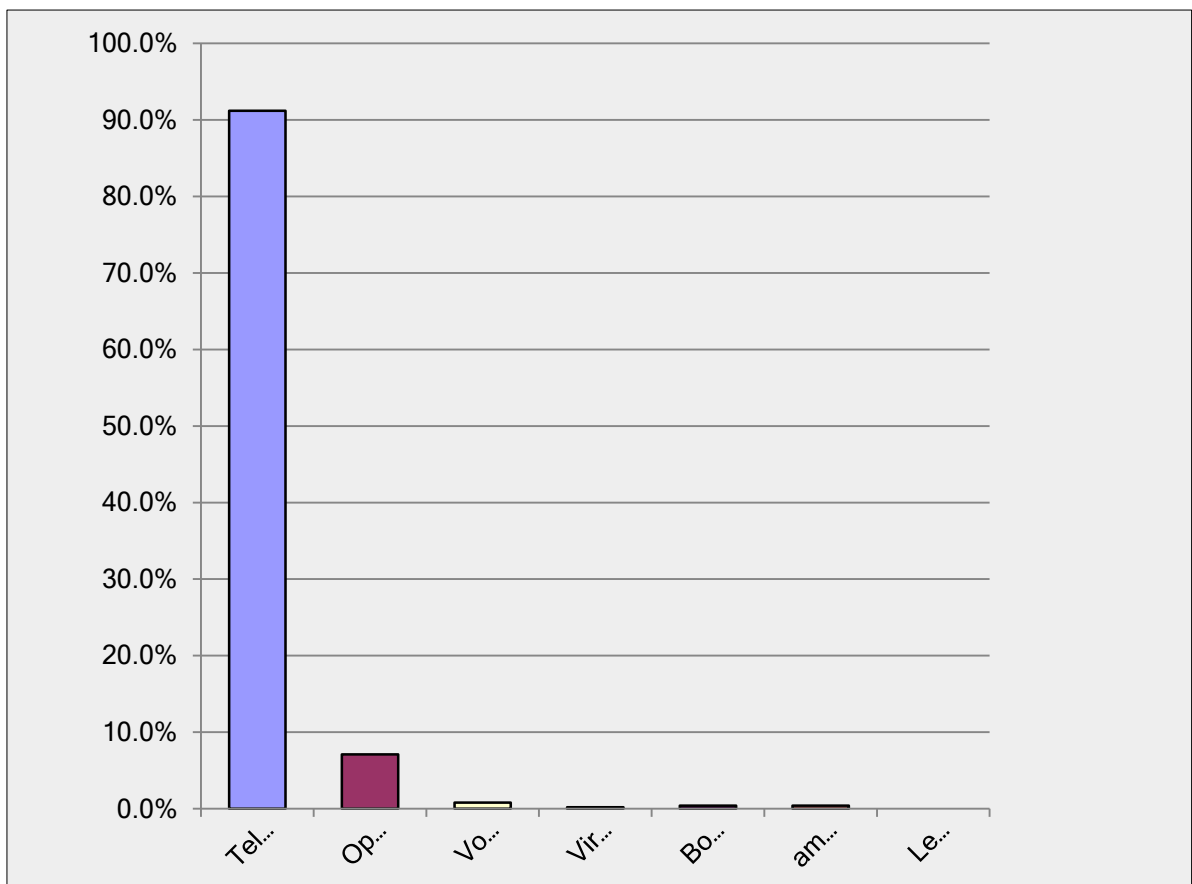
- “Over the years the satellite connection has become progressively slower.”
- “Satellite connection will not function at all during busy periods e.g. weekends / school holidays. Activ8me technicians advise that the satellite is oversubscribed. This situation did not exist 3 years ago when it functioned well.”
- One question not asked in the survey is how much data we purchase per month. We pay \$105 for 15 Gb. We have been advised by both Telstra & NBNCo that our area will never have wireless NBN and that only Satellite will be available. We have used Satellite before & will not use it again - also from what we understand, the pricing & data will not be much different to what we currently get. We would love to be able to download movies, use a 'Smart' TV, allow our university kids to watch their lectures & download notes when visiting home and Skype relatives, but our data does not allow for this. We fear that as NBN is fully rolled out - we, the 2% not covered will not have the data to keep up with technological communications & increased data requirements of the future.”

### **Telstra's dominance is having impacts**

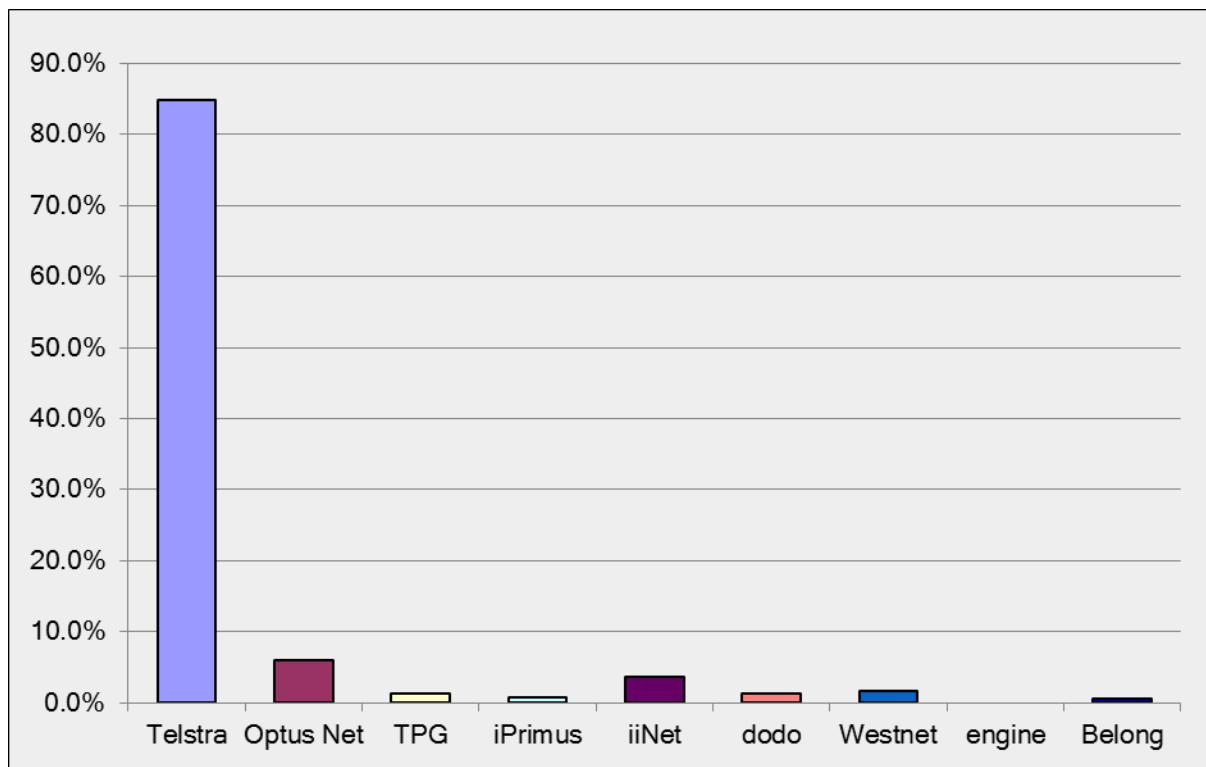
The VFF survey found 91% of mobile users surveyed used Telstra as outlined in figure 7. Similarly, Telstra also has a monopoly on the provision of internet, with 85% of surveyed members using Telstra Bigpond internet.



**Figure 7: Who is your mobile phone carrier?**



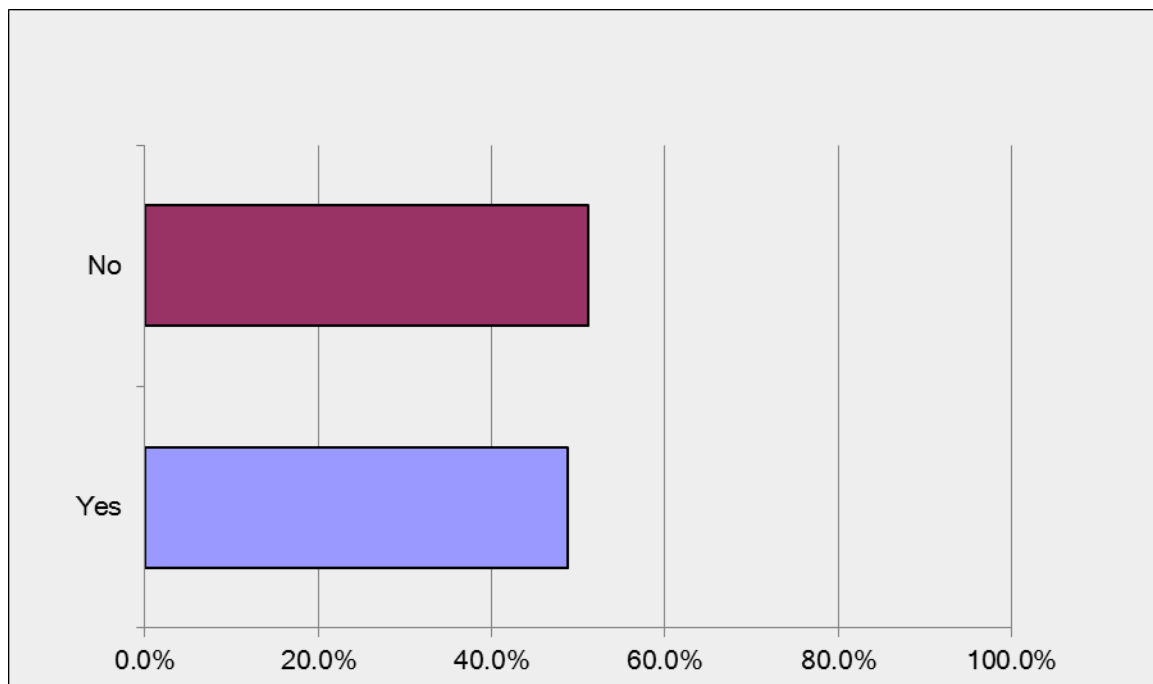
**Figure 8: Who is your internet provider?**



The VFF Survey then asked the question: Is your internet and landline/mobile phone package bundled? 52% of respondents are not bundled. The VFF is concerned that Telstra's dominance may have led to a lack of market pressure to bundle farmer customers' mobile and internet packages. Bundling saves customers money.

Respondents said lack of competition resulted in expensive plans, with little choice over the size of plans, and a lack of incentive to respond promptly and sufficiently to complaints.

**Figure 9: Is your internet and landline/mobile phone package bundled?**



### **3 Conclusion**

The evidence is clear that there is a significant and increasing disparity between the telecommunication services available in rural and regional areas, and the services which are available to metropolitan customers.

Access for regional customers, specifically the quality of access, is far from equitable.

The VFF strongly recommends that the outcomes and recommendations from this review are considered and adopted by the Commonwealth Government as soon as is possible. With three years provided between each review, the speedy consideration and adoption of the review outcomes by government will be essential in consistently improving performance.