

# final report

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## Pasture Updates NSW 2016 - 2018

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## **Executive summary**

This final report details the outcomes of the Crookwell pasture update, 5 March 2019, and summarises the outcomes of the societies 15 pasture updates from 2016 to 2018.

The 15 updates were attended by 1050 participants an increase of 40 % over the contracted number. Most delegates were producers or producers' staff. This meant the messages delivered at each pasture update were being received at the grass roots level. There were also a significant number of farm advisers, resellers or consultants attending so our messages were further extended through their network of clients.

The pasture updates were a combination of formal delivery and on farm visits to inspect trial/demonstration work or adaptations producers have used to integrate pasture and livestock technologies.

The Grassland Society of NSW took the Pasture Updates to a large cross section of NSW.

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# **1 Background**

## **1.1 Pasture Updates NSW**

The Pasture Update series was to promote extension-based activities on the back of the Feedbase Research and Development Program. The Grassland Society successfully managed the 2013 – 2015 Pasture Update series and was again successful in gaining the contract to conduct the 2016 – 2018 Pasture Update Series in NSW.

# **2 Project objectives**

## **2.1 Pasture Updates NSW Objectives**

1. Coordinate the development and implementation of five Pasture Updates per annum in New South Wales. Locations are to be varied across the State providing broad coverage enabling access by as many producers as possible.
2. Minimum of 50 producers participated at each event targeting a total of 250 producers per year and 750 producers over 3 years.
3. At each event, 50% of presentations are of MLA funded research output relating to increasing pasture (feedbase) production and utilization into product, where possible. Balance is other producer / consultant / advisor contributions to these same end points.
4. Partnerships established in each State (regional producer networks, private sector, agency) to support the development and delivery of the updates.
5. Development of an M&E plan before project start, based on MLAs new M&E framework for extension projects.
6. Annual reporting of monitoring and evaluation results that demonstrate shifts in awareness, knowledge, and where to access information and participant's reflections on direction and research needs around the topics presented

# **3 Methodology**

## **3.1 Coordination**

State coordination was provided by The Grassland Society of NSW Inc. To deliver the updates we partnered with NSW Department of Primary Industries and many of the state's Local Land Services.

### **3.2 Agenda Speakers and topics**

The local committee organised the topics, speakers and agendas. This was then approved by MLA.

### **3.3 Advertising**

There was a range of advertising and we relied heavily on our networks to email the flyers to producers. Flyers were also distributed at retail outlets and other events.

### **3.4 Venues and field trips**

This was organised by the local organising committee, who was also responsible for organising catering. Invoices were sent to the Grassland Secretary for payment.

### **3.5 Evaluation and reporting**

The society provided the organising committee with an MLA approved evaluation form. These forms came back to the Society for collation and reporting to MLA.

The Society completed a summary of each event and provided it to MLA as with names and addresses of those attendees who wished to become MLA members.

## **4 Results**

### **4.1 Crookwell Pasture Update**

The society has completed the last of the pasture updates for 2018, at Crookwell 5 March 2019. It was held on the property “Cadfor” Binda and had an attendance of 82 participants and 55 evaluations were returned or 67%. Most respondents were producers 82% and 7% were producer staff (figure 1). Respondents managed 20,992 ha of land with 4120.5 ha sown to improved pasture or 19.6 % (figure 2). Properties ranged in size from 4 to 3000 ha.

Producers were 82% of the participants with producer staff adding a further 7%. Collectively private advisers, public extension and resellers represented 7.5% of the total attendees (figure 1).

Of the respondents 57% were MLA members and of those who were not members 14% wanted membership.

Field inspections was done differently at this pasture update. Attendees had a choice between two field trips, one to inspect improved pasture and high - performance beef cattle genetics and the second to inspect high input pastures and high - performance prime lamb production.

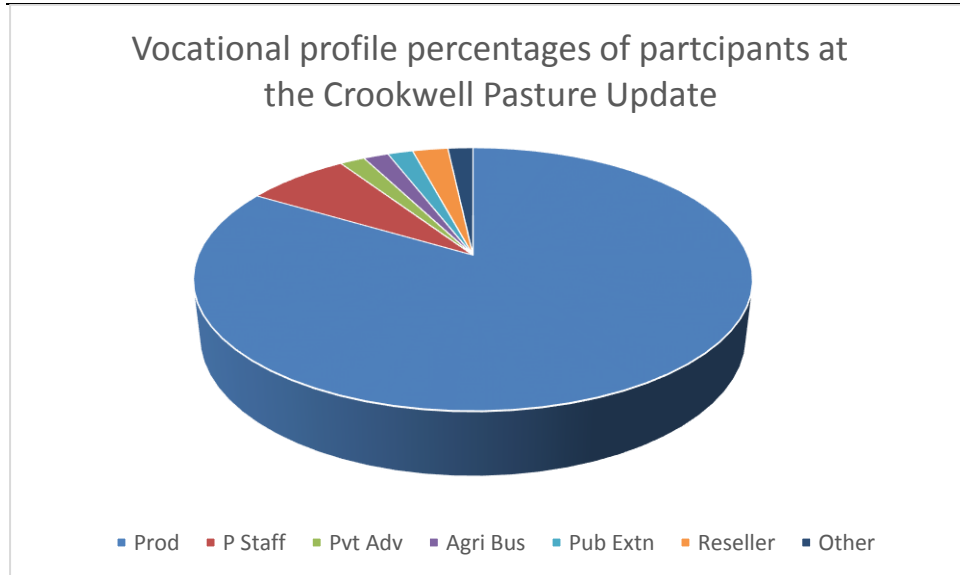


Figure 1: Vocational profile percentages of attendees at the Crookwell Pasture Update

**Table 1:** Crookwell Pasture Update, speakers, topics and key messages

Speakers	Topic	Key messages	Average content	Average relevance
Joe Gebbels, MLA	Key MLA pasture R&D investments	Pasture investment activities, key areas, topics, programs	3.8	3.7
Helen Burns, NSW DPI	Soil acidity - targeting the effort	How widespread soil acidity is. Key developments in potential management strategies	4.4	4.4
Richard Hayes, NSW DPI	The soil and pasture interface	Matching pastures to individual paddock soil parameters and managing them accordingly.	4.4	4.5
Adam Little, Pasture Genetics	Pasture management for production and sustainability from perennial pastures	Key pasture species for the Crookwell area, and management tips for getting both production and persistence.	4.2	4.4
Gordon Refshauge, NSW DPI	Sheep and lamb nutrition	Critical periods of key ewe nutrition management to increase lambing rate and survival.	4.4	4.2
Hutton Oddy, NSW DPI	High performance cattle genetics and nutrition	Long term genetic gains in cattle, how to add such to a herd and benefit the whole grazing business.	4.4	4.1
Cadfor Murray Greys, Binda	Inspection of improved pasture and high-	Matching improved pasture species with paddock attributes to get the best from the cattle genetics being	4.3	4.4



	performance beef cattle genetics	implemented. Use of key pasture species.		
The Ponds Prime Lambs, Binda	Inspection of high input pastures and high - performance prime lambs	Long term use of soil nutrition inputs, fertiliser, lime etc. to ensure high quality feed is generated for peak lamb production. The benefits of tree planting for creating 'lambling paddocks' for greater lamb survival.	4.1	4.0

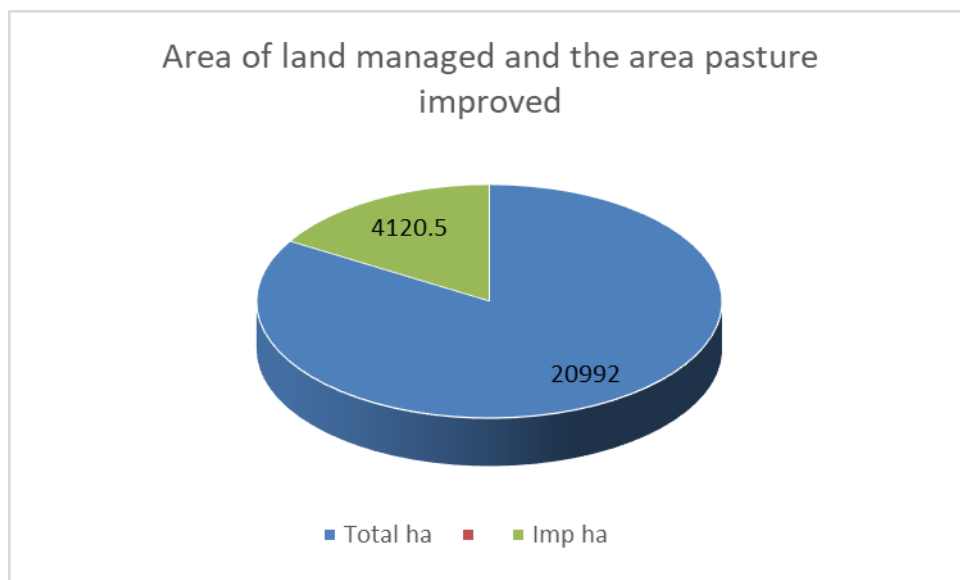


Figure 2: The total area managed and the area of sown improved pasture by respondents at the Crookwell Pasture Update.

## 4.2 Results over all Pasture Updates

The Grassland Society worked with NSW Local Land Services, Landcare, NSW Department of Primary Industries and Agri-business to deliver 15 Pasture Updates. Not all pasture updates attracted 50 participants; however, the total number of participants was 1050, 40 % more than our contracted number.

The numbers attending who submitted an evaluation were predominantly farmers. A trend we have noticed is the number of farm staff attending is also growing.

Email and word of mouth is how most respondents heard about the pasture update in their area. Flyers appear to be of limited use unless they are emailed to producers. Websites also failed to increase those attending.

Most respondents rated the Pasture updates as either excellent or very good.

There were requests for speakers notes and this was an action for the local coordinators

## 5 Discussion

### 5.1 Meeting Project Objectives

#### 5.1.1 Objective 1

**Coordinate the development and implementation of five Pasture Updates per annum in New South Wales. Locations are to be varied across the State providing broad coverage enabling access by as many producers as possible.**

The Grassland Society successfully developed and implemented 5 pasture updates per annum. The locations were varied across the state, being Grafton, Moree, Gloucester, Manildra, Bega, Tooraweenah, Grong Grong, Cudal, Holbrook and Crookwell, which were all new locations. The pasture updates attracted new delegates and they were well attended.

#### 5.1.2 Objective 2

**Minimum of 50 producers participated at each event targeting a total of 250 producers per year and 750 producers over 3 years.**

Over the 3 years the society attracted 1050 participants, a 40% increase above the 750 target.

#### 5.1.3 Objective 3

**At each event, 50% of presentations are of MLA funded research output relating to increasing pasture (feedbase) production and utilisation into product, where possible. Balance is other producer / consultant / advisor contributions to these same end points.**

Where possible, presentations were made by researchers from MLA funded projects, but that was not always achievable. In many areas there was no MLA funded research being undertaken, so expertise was sought from other research projects being conducted in the respective regions. The South Coast, Grong Grong and Tooraweenah were prime examples. Participants at these events indicated they wanted more research in their area.

#### 5.1.4 Objective 4

**Partnerships established in each State (regional producer networks, private sector, agency) to support the development and delivery of the updates.**

The Grassland Society worked with NSW Local Land Services, Landcare, NSW Department of Primary Industries and agribusiness to deliver 15 pasture updates

#### 5.1.5 Objective 5

**Development of an M&E plan before project start, based on MLAs new M&E framework for extension projects.**

Our M&E plan was submitted and accepted prior to the start of the project. In additions SWMS were developed for each pasture update.

### 5.1.6 Objective 6

**Annual reporting of monitoring and evaluation results that demonstrate shifts in awareness, knowledge, and where to access information and participant's reflections on direction and research needs around the topics presented.**

Our annual reporting on monitoring and evaluation was completed and submitted timely following an event. The evaluation forms told that many participants would undertake training as a result of the pasture update. The evaluation also collected information on proposed changes and there was a strong indication of changes being made following the pasture update. However, it was not in the scope of the project to follow up and see if changes were implemented.

The evaluation question seeking future directions and research needs around the topics presented was not answered well and became more a general wish list.

## 6 Conclusions/recommendations

### 6.1 Pasture Updates in NSW

Our 15 pasture updates delivered sound scientifically based pasture science. Most producers attending went home with new knowledge and a willingness to change practices.

#### 6.1.1 Gloucester

This update kicked off our NSW series and was held 7 September 2016. This update attracted 53 participants and 32 completed evaluations. Collectively this group managed 6391 ha with properties ranging in size from 5ha to 1525 ha. On this side of the range beef dominated the livestock enterprises, with the number of breeders being 1453.

32 % rated the day as excellent with another 52% of respondents reporting the pasture update being very good. The remainder 16% rated the day as good. 93% of those responding was going to undertake some type of training as a result of attending, the majority around some form of pasture management, but there were many blanks.

79% of respondents indicated they were going to make a change, again there were uncertainties around what, but it was pleasing to see the use of production zones being identified and reassessing how nutrient inputs would be used across the landscape.

#### 6.1.2 Manildra

The venue for this update was the Manildra golf club, 13 October 2016, for the morning sessions and the afternoon sessions were spread across 3 farms looking at trials by Auswest and NSW DPI and fescue management on the third farm. Attendees numbered 65 and represented producers and their staff, agribusiness and resellers.

There were 23 evaluations returned from 65 attendees or 35%. Of the respondents 74% were producers, 17% agribusiness and 9% were resellers.

This group of respondents managed 33848 ha, 2960 beef breeders. 42850 adult wool cutters and 29974 sheep breeders for prime lambs producing 47050 prime lambs.

Email attracted the most respondents, 45%, and the flier picked up from a previous event attracted 26% of respondents. The average distance travelled to this event was 35 km significantly less than the northern update.

This update was rated excellent to very good by 91% of respondents and 65% of respondents said they would attend some form of training and 78% indicated they would make changes to their business as a result of attending the update.

Pasture nutrient management, attention to nodulation and pasture species were a few of the intended changes. Management of ewes and the use of supplements with grazing cereals were also indicated.

### **6.1.3 Tamworth**

There were 121 attendees who participated in this update held at the NSW DPI Tamworth Agricultural Institute training centre, 28 October 2016. The field trip visited research sites on the institute. The numbers attending this session required the 3 sessions to be run as concurrent sessions. Apart from being able to handle the numbers, this also allowed increased questioning from attendees. The farm visit took place on historic Goonoo Goonoo station and the group was addressed by Mr. Tony Heggarty, owner and his agronomist Guy Burrows.

Of the 121 attendees 72 evaluations were completed (59.5%), this is possibly the highest number of returns, collated for NSW. From the evaluation of respondents, producers dominated the participants and it was noted there was a large increase in the number of producers' staff attending, 55.5% and 20.8% respectively. Collectively agribusiness, private advisors and resellers numbered 22% of respondents. This group has the potential to distribute technology from the updates to a minimum of another 50 producers each, who rely on information from this group.

The respondents from this update managed 123,667 ha and had pasture improved 16,239 ha. This pasture improved area represents 13% of the managed number of hectares or 3 to 4 times the district average.

The producer respondents ran a total of 13,613 beef breeders with 5,504 steers. This group also ran 25,826 adult sheep for wool, prime lamb ewes numbered 7600 and prime lambs produced numbered 39,550 with export lambs numbering 300.

Email dominated the way attendees were made aware of the update, 56.9%, however, word of mouth still has a role, 30.5%.

Respondents rated the update as excellent to very good 63.9%. The good rating accounted for 27.8% of respondents.

### **6.1.4 Grafton**

This update was held 23 February 2017. This update attracted 44 participants and 26 completed evaluations, a return of 59%. Collectively this group of respondents managed almost 42841 ha with

properties ranging in size from 44 ha to 30,000 ha. On this side of the range beef was the only livestock enterprise, with breeders numbering 7488 and steer numbers at 1805.

The field tours were conducted in the morning to avoid the coastal heat and humidity at this time of year. NSW DPI research station was the first site visited to view the grazing standing maize project. The second site showed a range of tropical grasses being trialled by BGA Agri Services and the third site focused on the establishment of signal grass and the difficulties presented in establishing pastures on different soil types and the impact of disease at establishment. Formal presentations were given in the South Grafton Services Club.

Producers represented 76.9% of attendees. The next biggest group were Producers staff, Public sector extension and other at 7.7%. Private advisors, resellers and NRM groups each represented 5.5%. Respondents rated the day as excellent 19.2%, very good 53.8% with another 26.9% reporting the pasture update being good.

Those responding indicated 50% were going to undertake some type of training as a result of attending, training centered around pasture improvement and BMP for grazing management, the majority did not indicate. 69% of respondents indicated they were going to make a change, these included pasture improvement, better legumes and using standing maize.

Communication to participants on the event was predominantly email 62%, while word of mouth 14% and other 10% were the next most common.

### **6.1.5 Glen Innes**

The venue for this update was the NSW DPI Research and Advisory station 22 March 2017. Formal presentations dominated the morning and concurrent sessions were utilised in the afternoon, because of the rainfall that week and reduced access to trial sites. Attendees numbered 127 and 46 completed evaluations or 36%. Producers represented 59% of attendees followed by 30% of producer's staff. Numbers were a little skewed by the attendance of 17 students undertaking Rural Biz training at UNE, who were from a diverse area and fell into both producer groups, owners and staff.

This group of respondents managed 118,288 ha of which only 8% had improved pasture. Beef and sheep producers were both well represented, the respondents totaled 17,098 Cows and ran 46,073 steers. Adult wool cutters numbered 20,650 and 20,100 ewes to breed prime lambs and this group sold 12,270 prime lambs.

This event was communicated 49% by word of mouth, email 34%. This update was rated excellent too good by 95% of respondents and 64% of respondents said they would attend some form of training, namely using drones utilizing pastures and animal nutrition. Respondents also indicated 66% would make changes to their business as a result of attending the update. Drone use was highlighted, as well as better phosphate and legume use. Better animal nutrition was also highlighted.

### **6.1.6 Bega**

This pasture Update attracted 50 participants and was held 24 March 2017. Twenty - three completed evaluations, a return of 46%. Collectively this group of respondents managed 6490 ha with properties ranging in size from 8 ha to 1,200 ha.

Most attendees were producers, 84%. Producers staff represented 8%, 4% were resellers and 4% were others.

Email was the most popular method of communicating the Pasture Update, reported by 40.7%, of respondents. Other communication methods that were not specified informed 22% of the respondents, while a further 11% were notified via websites, posters and flyers.

Respondents indicated they travelled an average of 23 km to attend, but distance travelled ranged from 5 to 40 km.

The pasture update was rated excellent by 43.5% and very good by 43.5% of respondents, and 87% indicated they needed to undertake training as a result of the Pasture Update to learn new skills.

Undertaking changes to management was indicated by 69.6% of respondents and those changes included; planning and improving pasture management techniques, using natives strategically and soil testing.

### **6.1.7 Tocal**

The update, 18 May 2017, was attended by 67 producers and industry representatives. Forty-one completed evaluations, a return of 62%. Collectively this group of respondents managed 8126 ha with properties ranging in size from 60 ha to 1,215 ha. Respondents had 2794 ha of improved pasture or 34% of the land managed

Producers represented 63% of those submitting evaluations. The group who represented themselves in the 'other' category (13%), were landowners and they employed staff to manage their properties for them, and one was in education. Producers who identified as Staff, Private Consultants, Public Extension and resellers each represented 5% of respondents.

Email and word of mouth were the two most popular methods of communicating the Pasture Update, being 60.5% and 26% respectively.

The Pasture Update was rated excellent to very good by 88% of respondents and 85% indicated they needed to undertake training as a result of the Pasture Update to learn new skills.

Undertaking changes to management was indicated by 79% of respondents and those changes included; using ryegrass, improving management of kikuyu for better ryegrass outcomes and using fertilisers, particularly nitrogen.

### **6.1.8 Tooraweenah**

Tooraweenah, 10 October 2017, represented a new location and audience for the Grassland Society and MLA and the numbers attending indicated there was great interest in pastures, however, there was little research work undertaken in this area. There were 82 participants at this Pasture Update, thirty-two submitted evaluations which was a 39% return. Those who submitted evaluations

managed 57,629 hectares. Respondents had improved 21,148 hectares of the land they managed or 37% of the land had been pasture improved. The pasture improvement in this area is predominantly done with lucerne and tropical grasses.

Producers represented 82% of respondents in the vocational profile. Producer's staff, consultants, agri-business, research officers, public extension and other, all represented 3% on the vocational profile.

Email and word of mouth, both 32.5% were the two most popular methods of communicating the Pasture Update, newspaper 15%, Facebook 7.5%, flyers at other events only accounted for 5%.

The pasture update was rated excellent to very good by 83% of respondents and 92.5% indicated they needed to undertake training as a result of the Pasture Update. Undertaking changes to management was indicated by 96.4% of respondents and those changes included soil testing, pH, use of lime, new legumes and tropical grasses.

#### **6.1.9 Bathurst**

This pasture update was back to back with Tooraweenah. Bathurst, 11 October 2017, attracted 56 participants, 28 evaluations were completed or a 50% return.

Eighty-four percent of the respondents to the evaluation were producers 9% were Agri-business followed by producer's staff and resellers at 3% each.

Respondents to the evaluation managed 20,421 hectares of which only 26% of the land had been pasture improved. The largest enterprise across respondents was ewes for wool production (8400), followed by ewes for prime lamb production (5250) (figure 12). Breeders for beef production accounted for 4129 head. The low steer numbers 331 could be indicative of the dry times being experienced.

Eighty-nine percent of respondents rated the Bathurst Pasture Update as excellent to very good. Eighty-eight percent indicated they would undertake training as result of the update and 81% would make a change to their management. These changes included using lime and soil testing to manage pH. Getting the feed and ration right were also among the changes.

Email remains the most popular method to advise producers of Pasture Updates with 62% of respondents receiving information by email. Facebook is now emerging as another opportunity to advertise as 10.8% indicated they were alerted by Facebook. Our websites and flyers accounted for 8% and 5%.

#### **6.1.10 Moree**

This update, 15 February 2018, attracted 40 participants and 31 completed evaluations, a return of 77.5%. Most attendees were producers, 57%, the next largest were Agribusiness 21.5%, which was the combination of private consultants, agribusiness, public extension and resellers. Others accounted for 11% and were predominantly retirees. Producer staff only accounted for 7%, which is different from the trend experienced at earlier pasture updates.

Collectively this group of respondents managed almost 27,127 ha with properties ranging in size from 4 ha to 14,000 ha. Pasture improvement on the properties of respondents represented only 17% of the holdings.

The smaller properties were generally owned by retired producers, but because they had children now running the farming business, they like to be involved in finding the latest information and passing it on.

Most producers ran beef cattle and the total numbered 3141 breeders and 2456 Steers (figure 15). The ewe breeder total was just one producer who ran only 4,000 adult sheep for wool. Adult ewes for prime lambs numbered 2463 and 1200 prime lambs were sold.

The field tours were conducted in the morning to avoid the heat at this time of year. The field tour visited one property and inspected two improved tropical grass pasture paddocks.

The second part of the tour inspected current trial work on the control of mimosa bush (*Vachellia farnesiana*) on a travelling stock route. Herbicide and mechanical treatments were incorporated. Initial trial results were discussed, and some treatments had regrown. The better control was with Graslan pellets and high-volume spraying. The cost of treatments was in the order of \$16,000/ha. A second treatment is warranted in some cases.

Formal presentations were delivered in the Moree Services Club auditorium.

Respondents ratings of the day were excellent by 62.5%, very good by 29.2%, with another 8.2% reporting the pasture update being good.

Those responding indicated 90.9% were going to undertake some type of training as a result of attending, training centered around pasture improvement and BMP for grazing management. Sheep management was also indicated.

77.3% of respondents indicated they were going to make a change, these included pasture management and feeding cattle, new methods of pasture improvement as well as newer legumes.

Communication to participants on the event was predominantly email 43.5%, while word of mouth 30.4% and other 13% was the next most common. The MLA website accounted for 8.7%. It is important to use all forms of media coverage.

### **6.1.11 Grong Grong**

This update was held on Berrembed Station, 20 March 2018 and was conducted as a farm walk. The Update attracted 37 participants and 25 participants completed evaluations, a return of 67.6%. Collectively this group of respondents managed 26,051 ha with properties ranging in size from 100 ha to 5,700 ha.

Producers were 57% of respondents, Agri – Business and Private Advisors made up 35.4% (figure 1). It was good to have the Private Advisors and Agri – Business engaged, as this area was moving from cropping into pastures, so this group were an important audience to value add to other producers they worked with.

Producers and agronomists travelled from as far as Griffith and Caragabal, about 150 km from Berrembed Station, for a half day program.



The respondents carried sheep for wool production (24,125), beef breeders (2,685) and steers (810). Respondents also sold prime lambs (16,600).

69% of respondents indicated they were going to make a change, these included pasture improvement, better legumes and using standing maize. Those responding indicated 50% were going to undertake some type of training as a result of attending, training centered around pasture improvement and BMP for grazing management, the majority did not indicate what area of training.

Communication to participants on the event was predominantly by email 62%, while word of mouth 14% and other 10% were the next most common communication approaches.

#### **6.1.12 Berry**

The venue for this update was the Berry Community Church, 21 September 2018. Formal presentations dominated the morning and a site visit was used to demonstrate the strategic use of nitrogen on kikuyu in the afternoon. Attendees numbered 51 and 32 completed evaluations or a 62.7% return. Producers represented 84% of attendees followed by 6% of other vocations, followed by Private Advisers, Agri-business and Public Extension all at 3%.

This group of respondents managed 1,390 ha and none indicated they had improved pasture, but kikuyu is endemic to the district, management becomes the real issue. Beef producers had 684 breeders. Interestingly respondents also had 90 adult sheep for wool and 12 ewes for prime lamb production.

The respondents, 78%, indicated they found out about this event by other means other than word of mouth, 9%, and email 12.5%.

This update was rated excellent too good by 100% of respondents and 84% of respondents said they would attend some form of training, namely pasture management and fodder conservation. A follow up for this group would be to offer a silage workshop.

Respondents also indicated 83.9% would make changes to their business as a result of attending the update. These changes included; improving grazing management, adoption of rotational grazing and use of leaf number to improve management of feed quality. Target fertiliser use particularly nitrogen and supplementary feeding.

#### **6.1.13 Cudal**

The pasture update was held at the Cudal Bowling Club, 19 September 2018, where the formal presentations were held before a field site tour following lunch. Delegates numbered 100 and 33 returned evaluations, a 33% return.

Of respondents' producers represented 58%, private advisers 21%, producers' staff and Agri – business 12%, public extension 9% and researchers 3%.

Respondents at Cudal managed 26460 ha, of which 27% was pasture improved. The producers attending recognized the importance of high-quality feed as the respondents had 16550 ewes for prime lamb production and sold 28,300 prime lambs. A percentage of the wool cutters, 13,100, were assumed to contribute to prime lamb production. Beef breeders numbered 2842 and steer numbers were at 4210 (figure 5). Beef cattle and sheep were run by 87% of respondents.

Delegates found out about this event predominantly by email 45% and word of mouth 33%.

Reseller/agent and poster were the next highest 9% and 6% respectively. Social media will need greater attention across all pasture updates as websites are not up there anymore.

Most respondents, 94% rated the pasture update excellent to very good. 64% of respondents indicated they would attend training to improve skills in; grazing management of cereals and canola, animal nutrition and fodder budgeting c/kg.

Changes were indicated by 73% of respondents and these included; soil testing and fertiliser choices, enforce sowing dates, make better use of vernalization and photoperiod, refine grazing and trial alternates such as ryegrass.

This group indicated they wanted more pasture updates, simple, longer term trials, apply values, focus on specific regions, that is, more localised information. Other suggestions included; tillage radish, long season canola over summer, cover cropping, grazing multi species mixes over summer.

When questioned on additional information, the trial results were important, but follow up on animal health and crop phenology.

#### **6.1.14 Holbrook**

The Pasture Update was held at the Returned Services Club, in Holbrook, 7 October 2018. There were 75 attendees and 34 evaluations were collected, a 45% return. Producers 50% and Agribusiness 26% were the two highest groups or respondents. This was followed by private advisors 18% and producers' staff at 12%. Resellers and others were 9% and 3% respectively.

Respondents' at Holbrook managed 31,572 ha of land and 14,047 ha has been pasture improved or 44%. The respondents had 24,450 adult wool cutters, 18,820 ewes for prime lamb production and sold 32,850 prime lambs. A percentage of the adult wool cutters were assumed to contribute to prime lamb production. Beef breeders numbered 8,220 and steer numbers were at 3,935. Only 26% of respondents ran beef only.

Delegates found out about this event predominantly by email 76% and word of mouth 26%. The MLA website, flyer at another event, phone call, newspaper and other were all at 3%.

Most respondents 91% rated the pasture update excellent to very good. 65% of respondents indicated they would attend training to improve skills in; grazing management and animal nutrition. Also, the grazing and planting of canola and wheat.

Changes were indicated by 53% of respondents' and these included; tweaking crop nutrition and looking hard at increasing available inputs to crops. Introduce grazing crops, such as canola, grazing cereals and even short-term ryegrass.

#### **6.1.15 Crookwell**

The society has completed the last of the pasture updates for 2018, at Crookwell 5 March 2019. It was held on the property "Cadfor" Binda and had an attendance of 82 participants and 55 evaluations were returned or 67%. Most respondents were producers 82% and 7% were producer staff (figure 1). Respondents managed 20,992 ha of land with 4120.5 ha sown to improved pasture or 19.6 % (figure 2). Properties ranged in size from 4 to 3000 ha.

Producers were 82% of the participants with producer staff adding a further 7%. Collectively private advisers, public extension and resellers represented 7.5% of the total attendees (figure 1).

Of the respondents 57% were MLA members and of those who were not members 14% wanted membership.

Field inspections was done differently at this pasture update. Attendees had a choice between two field trips, one to inspect improved pasture and high - performance beef cattle genetics and the second to inspect high input pastures and high - performance prime lamb production.

## **6.2 What next?**

The pasture updates have been a good model for pasture extension in NSW and promoting the MLA Feedbase Research and Development outcomes. If changes to this model were to be suggested, one would be providing the capacity of the contractor to follow up with additional workshops and/or engage with small groups to assist producers through the change and adoption process.

Targeted extension messages could be developed and delivered post drought as many producers will take many years to recover from this drought.

At this point in time any forward planning is on hold while producers battle the drought.

# **7 Key messages**

## **7.1 Pasture Updates the key messages**

Pasture and livestock management are issues covered across all our pasture updates. Matching pastures to animal requirements remain a major focus because pasture quality changes rapidly and animal requirements change with the class of animal. The managers then must also manage with climate variability.

The key points in this list pick the focus from each pasture update.

### **7.1.1 Gloucester - 7 September 2016**

Our landscapes are naturally variable, and our grazing management can increase the variability with nutrient movement.

Fencing to production zones can improve our nutrient and grazing management.

### **7.1.2 Manildra - 13 October 2016**

Good pastures do persist in this district, we need to concentrate on the basics; nutrition, soil testing, acidity and manage phosphorus (P) and sulphur (S), and correctly inoculate legumes to increase the nitrogen (N) return to pastures.

### **7.1.3 Tamworth - 28 October 2016**

This update included details on how SAMRAC operates for producers and develops research.

Temperate hardseeded legumes and tropical legumes such as desmanthus have shown the potential to improve pastures in this region, but without attention to P and S they will not produce. Healthy pastures provide the highest level of animal nutrition

#### **7.1.4 Grafton - 23 February 2017**

Summer rainfall in this area makes it ideal to grow maize which will produce 20 to 25 tonnes of dry matter compared to a tropical grass of 15 tonne. Three tropical grasses are showing promise Mulato, Signal grass and two panics, Mega Max 049 and 059 (*Megathyrus maximus*).

#### **7.1.5 Glen Innes - 22 March 2017**

The genetic improvement in beef cattle means we need to produce more high-quality feed to reach the genetic potential of our livestock. To do this we need to manage our pastures better than we have been. Our 13 DSE Cow is now a 15 – 16 DSE cow.

#### **7.1.6 Bega - 24 March 2017**

Be very clear and understand what you want the pasture to do within your business, manage legumes within your pasture system to ensure you are getting adequate nitrogen.

Facial eczema and Q Fever risks were discussed.

#### **7.1.7 Tocal - 18 May 2017**

Growing beef on summer pastures is a package. The package includes; ensure pasture establishment, use adapted species, nutrition P, and grazing management. To improve nutrient management fence production zones

#### **7.1.8 Tooraweenah - 10 October 2017**

Tropical grasses have a good fit in our production systems for late summer early autumn feed. In these dry times it is important to conserve feed before feed quality declines.

#### **7.1.9 Bathurst - 11 October 2017**

Understand nutritional requirements for each class of livestock. Nutrition works and plants respond accordingly. However, there is no clear benefit from any fertiliser on soil biology.

#### **7.1.10 Moree - 15 February 2018**

Plan pastures and follow the principles for establishment, don't cut corners. Desmanthus and the suite of hardseeded legumes will help manage in variable climatic conditions.

#### **7.1.11 Grong Grong - 20 March 2018**

The key messages at this update focused on successfully establishing pasture, planning, weed control, species, nutrition and grazing management. This update was pitched at this level because these participants were moving from cropping to grazing.

#### **7.1.12 Berry - 21 September 2018**

There is too much emphasis placed on plant protein and not enough on metabolisable energy (ME). Plant growth stage is important for ME and you need to understand the changes in feed quality with growth stage.

Pasture utilisation is a key profit driver and nitrogen can extend late autumn feed with kikuyu.

#### **7.1.13 Cudal -19 September 2018**

Dual purpose forage crops need to be sown early and to get grain recovery, vernalisation and photoperiod are important considerations in long season wheats.

#### **7.1.14 Holbrook – 17 October 2018**

Need to have feed supply in place when grazing cereals are locked up for grain production and short-term ryegrasses can provide that high-quality feed replacement for stock.

#### **7.1.15 Crookwell – 5 March 2019**

Soil acidity is a widespread issue of the southern and central tablelands. Matching plants species with those acid soil restrictions is critical to plant and animal performance.