

final report

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the leucaena network
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Ensuring that productive leucaena can help the livestock industry

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Abstract

The Leucaena Network (TLN) was established in 2000 in order to represent all leucaena growers and promote best practice, responsible management of leucaena. This project supported TLN, including its Executive Officer and a committee of volunteers, to pursue four main activities including:

- Updating the leucaena Code of Practice as required to ensure it meets best practice;
- Produce materials to increase the awareness and understanding of existing and prospective leucaena growers with respect to cost-effective and sustainable use of leucaena pastures;
- Develop training materials and sponsor training opportunities for existing and prospective leucaena growers;
- Fostering increases in the area of leucaena-based pasture.

The Code was modified in May 2009 and is acknowledged by all relevant Government Agencies as well as being adopted as the core document for many Shire Councils in preparing their policies on leucaena. TLN has held a number of seminars, 14 Regional Representative and Information days, three successful annual Conferences and produced two newsletters per year. The current area of leucaena pasture is not known precisely but it is estimated to be greater than 250,000ha, with the majority in Queensland.

Executive summary

The Leucaena Network (TLN) was established in 2000 by concerned growers to encourage responsible use of leucaena, thereby reducing its risk as an environmental weed and ensuring it remains as an option for beef producers wishing to increase pasture and animal productivity. TLN acts on behalf of all leucaena growers and aims to promote the responsible establishment and management of leucaena. TLN developed a voluntary Code of Practice, outlining the critical guidelines for establishing and managing leucaena responsibly.

This project supported the four main activities of TLN during 2009-2012, including:

- update the leucaena Code of Practice so it addresses all current issues concerning responsible use of leucaena-based pasture;
- produce information products on the use and management of leucaena;
- develop training materials and sponsor training opportunities;
- assist in increasing the area of leucaena-based pasture by 30%.

The Code of Practice

The Code was updated in May 2009. It is acknowledged by all relevant Government Agencies as well as being adopted as the core document for many Shire Councils in preparing their policies on leucaena. This was highlighted when the Whitsunday Shire Council declared leucaena a weed - growers now wishing to establish leucaena in this area may only do so with an establishment and management application incorporating the Code of Practice guidelines.

Training and Information

During the three years, TLN held a number of producer seminars, 14 Regional Representative and Information days, 3 successful annual Conferences and two newsletters per year. These covered the full range of relevant topics including best practice management, environmental and economic benefits, plant and animal nutrition, management of rundown pasture, fertiliser requirements and the Code of Practice.

The annual conferences were held at Ayr in 2009, Biloela in 2010 and Roma in 2011. The average number conference participants was 80. TLN had a stand at the 2012 Beef Australia in Rockhampton. In conjunction with Qld Dept of Agriculture Fisheries and Forestry, TLN held a hugely successful Beef Australia seminar, with over 200 attendees.

TLN had displays at 10 BeefUp forums which provided ideal opportunities for distributing information on establishment, management and productivity to producers throughout central and southern Queensland.

The newsletters and TLN website are key avenues for relaying the latest updates to growers. Two newsletters are published each year and the website is updated regularly. Visits to the TLN website have more than doubled over the period of the project, from 6395 visits in 2009 to 14715 in 2012.

TLN, in conjunction with the University of Queensland, have conducted a number of two-day Courses named "Leucaena for Profit and Sustainability" (LPS). There have been 25 courses with a total of over 500 participants. In June 2012, TLN conducted an "Establishment and Management" workshop in Rockhampton.

Over the project period TLN has delivered 14 leucaena Information days across central and southern QLD. These on-farm days cover the basics of how to establish and manage leucaena. Being on-farm, practical information was presented in an accommodating environment by both technical experts with TLN and the property owner. Due to the increasing popularity of leucaena, the ABC rural show Landline compiled a story on leucaena called 'The Eating Tree'. Some of the

footage in the story was taken at the Information day held at Terry and David Well's property at Hannaford. The Landline story was aired on the 31st October 2010, and the story can be viewed on the Network's website.

A recent initiative of TLN has been the introduction of Regional Representatives (RR). The RR's are a "port of call" for new and existing growers seeking advice from a successful grower in their region. The RR Information Days have been a very successful way for TLN to have increased contact with growers at a local level. Approximately 6–8 days are held each year with approx. 10 growers on average attending each.

Increased area sown to leucaena

Over the past 3-5 years, there has been a large increase in area sown to leucaena, especially in Queensland. The exact area under production at present is uncertain, however current estimates put it at greater than 250,000ha. There has also been significant interest and sowings in the Northern Territory and Western Australia, and some smaller areas in NSW.

There has been a significant increase in use of irrigated leucaena pasture, with associated very high levels of pasture and beef production. Irrigation systems including drip, flood and overhead systems have all been used successfully. In the past twelve months, TLN has also noted a small number of growers wishing to establish leucaena for goat production.

The release of a psyllid-resistant leucaena, due in 2014-15, will open large areas currently deemed unsuitable for leucaena due to severe damages from psyllids – areas include northern and coastal Queensland and the "Top End" of NT and WA.

The availability of a psyllid-resistant leucaena will greatly increase the need and demand for the services provided by TLN over the next 5 years.

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1 Background

The Leucaena Network (TLN) was established in 2000 by concerned growers to encourage responsible use of leucaena, thereby reducing its risk as an environmental weed and ensuring it remains as an option for beef producers wishing to increase pasture and animal productivity. TLN acts on behalf of all leucaena growers and aims to promote the responsible establishment and management of leucaena. TLN developed a voluntary Code of Practice, outlining the critical guidelines for establishing and managing leucaena responsibly.

Since TLN was established, there has been a dramatic increase in the area of leucaena planted in northern Australia. Conservative estimates (from leucaena workshop participant numbers) suggest that > 500 landholders have planted >250,000Ha, which contributes close to \$50million dollars in annual revenue to the northern Australian beef industry. Of these 500 growers, 300 are on the TLN database and 170 are active members.

2 Project objectives

1. Keep the leucaena Code of Practice in tune with industry expectations so it addresses all current issues concerning leucaena use and management.
2. Produce information materials on responsible and productive use and management of leucaena.
3. Develop training materials and sponsored training opportunities to assist producers increase their skills and knowledge.
4. Assist in increasing the area of leucaena grown responsibly and productively by 30%

3 Methodology

The direction and policies of TLN are set by its membership and Executive Committee and implemented by the Executive Officer (EO). The committee, which consists of the President, Vice President, Treasurer, Minutes Secretary and EO has four meetings per year and an AGM. The committee are all voluntary positions. The EO is a part time position of approximately 16 hours per week. This role is to implement the decisions and policies of membership and the committee. Activities include coordination of the annual conference and Regional Representative Information days, presentations at industry seminars and keeping growers up to date with latest research and developments via newsletters and an informative website.

There are presently 300 growers of leucaena on the TLN database, of which 170 are active members. Membership fees are \$150 +GST per year, irrespective of the acreage of leucaena a grower has on their property. Membership consists predominately of growers, along with research personnel, seed producers, plant breeders and enthusiasts.

The TLN not only attends to its own members, but also addresses enquiries from people around Australia and the world wishing to gain knowledge and direction, regardless of membership. If TLN cannot answer their query, then we will direct them to someone who can.

The TLN organises and conducts a range of activities for beef producers. These activities focus primarily on providing the latest information on establishment and management of leucaena-grass pastures. Numerous on-farm information and field days have been held across southern and central Queensland, along with workshops and seminars at various industry events and functions (see results section for details). Further, the Network is a major supporter of the leucaena for Profit and Sustainability workshops coordinated by The University of Queensland. The Network also takes great pride in delivering an annual conference every year, the flagship event for the Network. Here, speakers provide research and extension updates to members and

other participants, and this information is also made available on the Network's website for future access.

4 Results and discussion

The project objectives have been met and exceeded. The four main activities in this process have been to

1. Keep the leucaena Code of Practice in tune with industry expectations so it addresses all current issues concerning leucaena use and management.
2. Produce information materials on responsible and productive use and management of leucaena.
3. Develop training materials and sponsored training opportunities to assist producers increase their skills and knowledge.
4. Assist in increasing the area of leucaena grown responsibly and productively by 30%

4.1 Promote and review The Code of Practice

Over the last 3 years the Code of Practice has been modified twice, once in May 2009 and again in June 2010. Modifications were made to ensure consistency with Queensland Government weed and Wild Rivers policies. With the recent change in government, the Code might need to be further amended. However at this point in time, the Code is acknowledged by all relevant Government Agencies as well as being adopted as the core document for many Shire Councils in preparing their policies on leucaena (eg Whitsunday Regional Council).

The "Accelerating the Adoption of leucaena" Committee has noted that there are small discrepancies between the Code and the (subsequent) Government document, "Policy to Reduce the Weed Threat of leucaena". While leucaena is highly productive with significant economic benefits to the state economy, the weed threat is still of concern. The government aims to ensure the weed threat of leucaena is reduced, and so the support of management practices such as never planting in areas where rivers, creeks or flood channels can disperse seed are critical. As already noted, the Code is acknowledged by relevant government agencies.

The leucaena Network, as a major stakeholder in this programme has nominated that it will be prepared to review the Code in the future, should this become necessary, but that it wishes that process to remain entirely in the hands of its members, maintaining it as a voluntary Code. Any review will be conducted by the Network in conjunction with relevant government agencies eg pasture and Biosecurity staff in DAFF.

The presence of the Code and adherence to its guidelines is critical to both the leucaena industry in Australia leucaena and overseas. The Code of Practice has had a significant impact on growers in countries such as Indonesia, Philippines, Malaysia, Argentina, Paraguay, Honduras, USA, Papua New Guinea, Vietnam, New Caledonia and Fiji. An example of this came from a grower in Florida who had plans of establishing 50,000 acres of leucaena. He could only do so after submitting an application incorporating the guidelines of TLN's Code of Practice. Closer to home in Queensland, the Whitsunday Regional Council is requesting new growers to submit an application to sow leucaena together with a management plan that complies with the Code of Practice. This positive outcome is a major achievement, as beef producers can continue to sow leucaena-grass pastures and accelerate the economic development of the region while the natural environment is maintained for all to enjoy into the future.

4.2 Information and research about responsible use and management of leucaena.

TLN is a major stakeholder in the DAFF programme “Accelerating the Adoption of leucaena in Queensland”. DAFF are investing a considerable amount into this programme, and TLN’s involvement will be critical to the success of this innovation, which plans to see 350,000ha in Queensland in five years. Appendix 1 outlines the contribution DAFF has made in this programme.

Support, direction and collaboration in research has been a major component of the Network’s activities. The TLN and its membership have played a major role in supporting research into grazing trials, rumen health, management principles, soil health and the development of new varieties. The Network is seen as the voice of the leucaena industry in Australia, and while not directly funding projects, the Network has been a strong advocate for the need of certain research activities. These include the MLA funded projects investigating the efficacy and persistence of the rumen bug; breeding a psyllid resistant leucaena variety; impact of ripping the soil prior to sowing leucaena; comparison of leucaena-grass pastures to other forage or feedlot finishing systems; establishment, management and productivity of leucaena on the southern Downs; and row spacing and configuration comparisons.

TLN was a significant contributor to the development of the Terms of Reference for the scoping study of the development of a sterile variety. It has also played a key role in the commercialization process of new varieties such as Wondergraze and the new psyllid resistant variety (KX2).

TLN has undertaken an active role to support the ongoing expansion and success of leucaena pastures by ensuring the continued use of the herbicide Imazethapyr (trade names include Spinnaker, Impale, Amaze). This herbicide, used for both pre and post emergence control of grass and broadleaf weeds in leucaena, has revolutionised the success of leucaena establishment to the extent now where no leucaena plantings fail from weed competition after this product has been correctly applied. TLN is the holder of the APVMA permit (appendix 3), and this very important document provides the legal use of this herbicide for all leucaena growers in Queensland and Northern Territory.

4.3 Training and Information

During the three year project period, TLN has held a number of seminars, 14 Regional Representative and Information days, three successful conferences and two newsletters per year. There have been many facets of the Industry covered. These include best practice management, environmental and economic benefits, plant and animal nutrition, management of rundown pasture and leucaena, fertiliser requirements and of course the promotion of “the Code of Practice”.

The annual conferences, which have been held at Ayr in 2009; Biloela 2010 and Roma 2011, highlight TLN’s strategy to promote and support leucaena development to as many members and growers as possible in different geographical regions in the north of Australia. The average numbers attending over the three year period is 80 people

TLN has had a stand at the previous two “Beef Weeks” in Rockhampton. These stands have been very successful with large numbers of enthusiasts taking the opportunity to discuss latest industry updates and issues with TLN volunteers who “man” the stand. It has also been a great avenue to inform industry of the Networks “Code of Practice” and of the importance it plays in minimising the leucaena weed threat in northern Australia.

In conjunction with DAFF, TLN presented hugely successful seminars at both Beef Weeks. In 2009 around 120 people attend where as in 2012 a minimum 200 people attend the seminar,

highlighting the incredible interest in leucaena as a great alternative to maximise beef production in the Buffel grass monoculture areas of Queensland and northern Australia.

TLN has had a stand at approximately ten MLA BeefUp forums over the period of the project (see appendix 1). This has been an ideal opportunity for the Network to address key environmental and economic issues that growers may have with leucaena.

There have been numerous case studies that highlight the work that TLN performs is having a positive impact on both the beef industry and the environment. Examples include: _

- The winners of a Royal National Agricultural and Industrial Association (RNA) Red Meat Innovators award who attributed their success to the fact that they established leucaena after consultation with this office and their subsequent attendance at a leucaena for Profit and Sustainability (LPS) Course.
- The majority, if not all of the winners from the grass fed cattle competition at Beef 2012 were finished on leucaena-grass pastures.
- Another grower from marginal desert country in northern WA, with consultation with TLN has developed an irrigation scheme utilizing leucaena.
- Plus there are so many other success stories similar to this where growers have attended an LPS course, conference or Regional Representative Information day, then to go on and establish and manage their leucaena in a way that won't have a detrimental effect on the environment.

The newsletters and the Networks website are key avenues to relay latest industry updates and issues. Two newsletters are published each year and the website is updated regularly. The number of visits to the TLN website has increased markedly during the three year project period, from 6395 visits in 2009 to 14,715 in 2012 (appendix 4)

TLN, in conjunction with the University of Queensland have conducted a number of two-day Courses named "leucaena for Profit and Sustainability" (LPS). There have been in excess of 25 Courses with over 500 participants attending since April 2004. In June, 2012, TLN conducted its own "Establishment and Management" workshop in Rockhampton.

Over the project period TLN has delivered 14 leucaena Information days across central and southern QLD. (Appendix 5, 6). These on-farm days were designed as a one day short-course primarily for the new leucaena grower, and covered the basics of how to establish and manage leucaena. Being on-farm, practical information was presented in an accommodating environment by both technical experts with TLN and the property owner. Established leucaena paddocks were also inspected, along with machinery, cattle, paddock layouts etc. Due to the increasing popularity of leucaena, the ABC rural show Landline compiled a story on leucaena called 'The Eating Tree'. Some of the footage in the story was taken at the leucaena Information day held at Terry and David Well's property at Hannaford. (Appendix 7). The Landline story was aired on the 31st October 2010, and the story can be viewed on the Networks website. While hard to quantify, the national and international exposure obtained from this story was significant, and the Network received a large number of enquiries from producers across Australia enquiring about information on suitability in southern and western environments.

Born out of the Information days, a recent initiative has been the introduction of Regional Representatives (RR). They are a first "port of call" to new and existing growers seeking advice from an established successful grower in their region. Each RR, with the support and input from the TLN, is encouraged to hold an information day each year. This day is an avenue for TLN to convey new key industry developments and also a day where new growers can receive valued information from existing growers in their region and environment. There are 12 RR's in Qld and this number is growing. A list of the Regional Representatives and their contact details are outlined as Appendix 2.

4.4 Increased area planted to leucaena

As reported above the area of leucaena is rapidly expanding with over 500 landholders planted >200,000Ha which contributes close to \$50million dollars in annual revenue to the northern Australian beef industry. Over the last 3 years significant interest has occurred in Northern NSW, Northern Territory and Western Australia. For example a couple from near Broome WA attended the Network's own leucaena information workshop in June 2012, with the intention to sow leucaena on their property 'Nita Downs Station'. After attending one of the Network's information days in 2010, pasture agronomist Suzanne Boschma from the NSW agricultural department is trialling leucaena in NNSW, investigating it's production potential alongside other tropical legumes. Another recent inquiry came from the Little River Landcare Group, Yeoval, NSW whose members had enquired whether or not leucaena will grow in their region.

The future of leucaena looks very promising. The paddock successes of the new variety 'Wondergraze' has increased enquiries from new growers keen to sow leucaena. The area sown to the older variety Cunningham is still increasing, especially with the ready supply of quality grower-grown seed available on the market at competitive prices. More and more producers who sow annual forages eg oats, forage sorghum, lablab are converting forage paddocks to the perennial leucaena-grass pasture system. This is due to the increasing costs of sowing annual forages, especially seed, fertiliser, fuel, and the increasing unavailability of suitable labour to undertake paddock operations. Many enquiries have been received from producers in coastal and northern Queensland, seeking information on the new variety, KX2. These producers are very keen to know when seed will be available, as they are holding off sowing until this new variety is available. For example one producer in the Mackay district phoned recently enquiring if he could get some seed, as he already has a paddock prepared.

A significant increase in enquires about irrigated leucaena and its potential to lift production has occurred over the project period. Irrigation systems ranging from drip, flood and overhead systems have all been used successfully by producers primarily with water allocations from river systems. Due to this interest, both leucaena seminars at Beef 2009 and 2012 incorporated producer speakers who are irrigating leucaena (Ron Carige, formally at Mundubbera, Tom Wagner at Dingo and Brett Coombe at Moura/Gogango). Further, a significant research project funded by Santos and conducted by UQ is underway near Injune, investigating the production potential and water use efficiency of irrigated leucaena compared to 4 other forage types. Results will be available over the next 3-5years. In the past twelve months TLN have also noted a small number of growers wishing to establish leucaena for goat production.

5 Conclusions and recommendations

TLN can justly claim that MLA's investment of \$64,000 for the guaranteed operation of TLN through the period of this P.PPSH.0490 has proven to be a remarkably successful one. The executive committee of The leucaena Network is committed and passionate to the continued cause of the leucaena industry in Australia. With today's added stress and workload in making a sustainable living in agriculture, they simply don't have the time and resources to achieve all that they wish to achieve within the Network. It is for this reason that the role the E.O plays is critical.

A Membership of 150 paying \$150+GST per annum will not cover the minimum salary of a part time employee after operating expenses of the office, insurances, some travel and publicity costs are borne.

This report strongly recommends that, with continued demonstrated funding from TLN membership and corporate sponsorship, MLA supports ongoing funding of The leucaena Network for a further 3 year period through the Partners and Innovation Program to guarantee the successful operations of TLN and to achieve its ultimate goals of leucaena of improving the productivity and profitability of the northern Australian beef industry.

6 Appendix

Appendix 1

DAFF / TLN leucaena information days and extension activities.

| Year | Location | Where | When | numbers |
|------|----------------|-------------|--------|-----------|
| 2009 | Millmerran | Antonio | Dec-09 | 120 total |
| | Hannaford | Wells | Dec-09 | |
| | Chinchilla | Ussher | Dec-09 | |
| 2010 | Dulacca | Johnson | May-10 | 20 |
| | Wallumbilla | Maunder | May-10 | 20 |
| | Dalby | Williams | May-10 | 7 |
| | The Caves | Local hall | Jul-10 | 20 |
| | Richmond | Local hall | Oct-10 | 25 |
| 2011 | Coulston Lakes | Robertson | Oct-11 | 12 |
| | Thangool | Cruickshank | Oct-11 | 12 |
| | Millmerran | Antonio | Oct-1 | 14 |
| | Wallumbilla | Maunder | Oct-1 | 8 |
| 2012 | Nebo | Golf club | Mar-12 | 30 |
| | Wandoan | Peake | Mar-12 | 20 |

General extension activities

| | 2009 |
|---|---------------|
| TGC Goondiwindi | Mar-09 |
| Wowan DPI info day | Apr-09 |
| Beef 2009 leucaena seminar | May-09 |
| Beefup forum Condamine and Boonah | Jun-09 |
| leucaena field day and meeting Mackay | Jun-09 |
| leucaena conference Ayr | Sep-09 |
| Beefup forum Charters towers/Georgetown | Nov-09 |
| Meeting with leucaena group in Mackay | Mar-09 |
| Beefup forum Marlborough and Baralaba | Nov-09 |
| | 2010 |
| Meeting with Leuceana group in Mackay | Mar-10 |
| Leucanea field day at Greycliffe | Mar-10 |
| leucaena field day at Drumburle, thangool | Jun-10 |
| Beefup forums Kingaroy and Gayndah | Aug-10 |
| Field day at Corrs, Biloela | Aug-10 |
| leucaena conference Biloela | Sept/Oct 2010 |
| | 2011 |
| Beefup forum Biloela | Jun-11 |
| leucaena field day at Drumburle | Oct-11 |
| Field day at Corrs | Oct-11 |
| Reef and beef day at Taroom | Oct-11 |
| | Nov-11 |
| leucaena conference Roma | |
| BeefUp forums Dalby and Moonie Wondergraze launch | Dec-11 |
| | 2012 |
| Beef2012(Rockhampton) | May-12 |
| 2 day leucaena workshop | Jun-12 |

Appendix 2

Regional Representatives

Craig Antonio “Borambil” Millmerran

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Mobile 0427 954 208

Email: craigandlex@bigpond.com

Tony Hindman “Cypress Downs” Jackson

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Stuart Maunder “Maccarra”, Wallumbilla.

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Don Heatley, Bryne Valley, Home Hill

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m_bank@bigpond.com

Appendix 3.

Permit for use of products containing Imazethapyr

PER12103 Permit Version 1 Page 1 of 2

PERMIT TO ALLOW MINOR USE OF AN AGVET CHEMICAL PRODUCT FOR THE CONTROL OF WEEDS IN LEUCAENA AND BUTTERFLY PEA PERMIT NUMBER – PER12103

This permit is issued to the Permit Holder in response to an application granted by the APVMA under section 112 of the Agvet Codes of the jurisdictions set out below. This permit allows a person, as stipulated below, to use the product in the manner specified in this permit in the designated jurisdictions. This permit also allows any person to claim that the product can be used in the manner specified in this permit.

THIS PERMIT IS IN FORCE FROM 21 APRIL 2010 to 31 MARCH 2015.

Permit Holder:

THE LEUCAENA NETWORK ASSOCIATION INC
17 BIRAH PLACE
CHAPEL HILL, QLD 4069

Persons who can use the product under this permit:

Persons generally. PER12103 Permit Version 1 Page 2 of 2

CONDITIONS OF USE

Products to be used:

NUFARM SPINNAKER 700 WDG HERBICIDE
AND OTHER REGISTERED PRODUCTS
Containing: 700 g/kg IMAZETHAPYR as their only active constituent.

Directions for Use:

Crop Pest Rate

BUTTERFLY PEA CERTAIN BROADLEAVED AND 70 – 140 g/ha.
(*Clitoria ternatea*) GRASS WEEDS.
LEUCAENA
(*leucaena leucocephala*)

Critical Use Comments:

Apply either pre-plant at least 2 weeks prior to planting (no closer than 2 weeks prior to planting) or post emergent when the legume is at least 7 days old and weeds are very small.
DO NOT add crop oil to any application.
Use the higher rate for longer term weed control.
Apply only ONE application per legume crop during the establishment phase.

Withholding Period:

DO NOT GRAZE OR HARVEST FOR AT LEAST 14 DAYS AFTER LAST APPLICATION.

Jurisdiction:

QLD, NT ONLY.

Additional Conditions:

THIS PERMIT provides for the use of a product in a manner other than specified on the approved label of the product. Unless otherwise stated in this permit, the use of the product must be in accordance with instructions on its label.

PERSONS who wish to prepare for use and/or use the products for the purposes specified in this permit must read, or have read to them, the permit particularly the information included in DETAILS OF PERMIT and CONDITIONS OF PERMIT.

The PERMIT HOLDER should contact the product registrant and pursue registration of this use pattern. Effort in this regard must be demonstrated prior to any APVMA consideration of permit renewal.

Issued by

Delegated Officer

Appendix 4

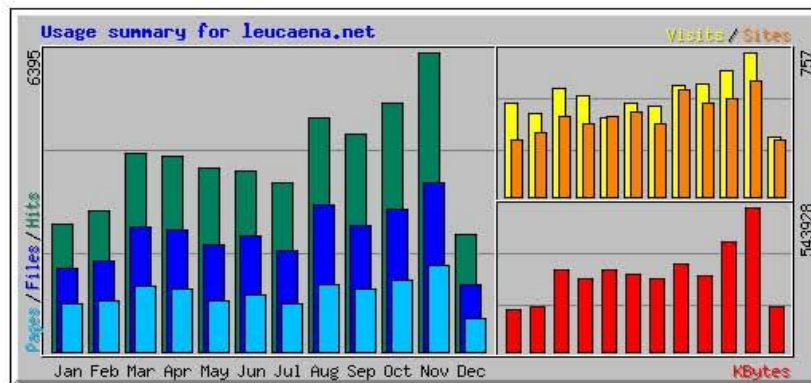
Website "Visits" for the past three years

Usage Statistics for leucaena.net - Last 12 Months

Page 1 of 1

Usage Statistics for leucaena.net

Summary Period: Last 12 Months
Generated 18-Dec-2009 05:27 EST



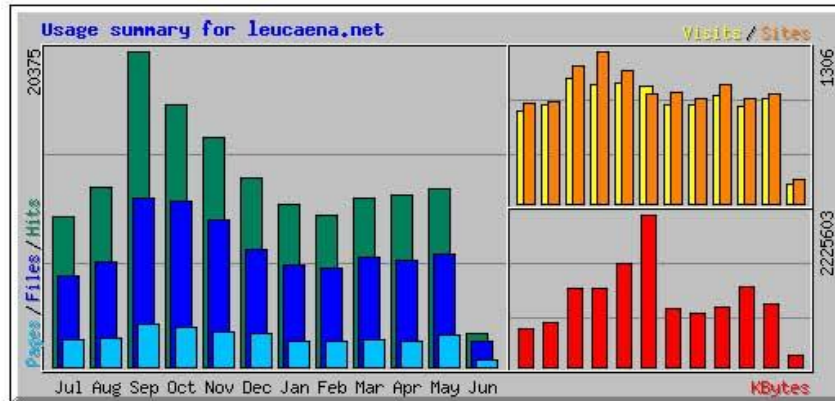
| Summary by Month | | | | | | | | | | |
|--------------------------|-----------|-------|-------|--------|----------------|----------------|-------------|--------------|--------------|--------------|
| Month | Daily Avg | | | | Monthly Totals | | | | | |
| | Hits | Files | Pages | Visits | Sites | KBytes | Visits | Pages | Files | Hits |
| Dec 2009 | 139 | 79 | 39 | 17 | 295 | 169519 | 310 | 711 | 1429 | 2509 |
| Nov 2009 | 213 | 120 | 61 | 25 | 607 | 543928 | 757 | 1833 | 3616 | 6395 |
| Oct 2009 | 171 | 98 | 49 | 21 | 511 | 414585 | 658 | 1530 | 3049 | 5313 |
| Sep 2009 | 154 | 89 | 45 | 19 | 492 | 285088 | 588 | 1352 | 2690 | 4647 |
| Aug 2009 | 161 | 101 | 46 | 18 | 563 | 328263 | 585 | 1445 | 3138 | 4999 |
| Jul 2009 | 116 | 69 | 33 | 15 | 379 | 275870 | 476 | 1026 | 2166 | 3621 |
| Jun 2009 | 129 | 82 | 40 | 16 | 444 | 292689 | 490 | 1219 | 2465 | 3870 |
| May 2009 | 126 | 73 | 34 | 13 | 422 | 309267 | 416 | 1073 | 2292 | 3934 |
| Apr 2009 | 138 | 86 | 44 | 17 | 384 | 277448 | 529 | 1344 | 2599 | 4165 |
| Mar 2009 | 137 | 85 | 45 | 18 | 421 | 305419 | 564 | 1413 | 2665 | 4250 |
| Feb 2009 | 107 | 69 | 38 | 15 | 336 | 168254 | 434 | 1091 | 1935 | 3017 |
| Jan 2009 | 88 | 57 | 32 | 15 | 300 | 160510 | 494 | 1019 | 1795 | 2732 |
| Totals | | | | | | 3530840 | 6301 | 15056 | 29839 | 49452 |

Generated by [Webalizer Version 2.01](#)

Usage Statistics for leucaena.net

Summary Period: Last 12 Months

Generated 06-Jun-2011 22:36 EST

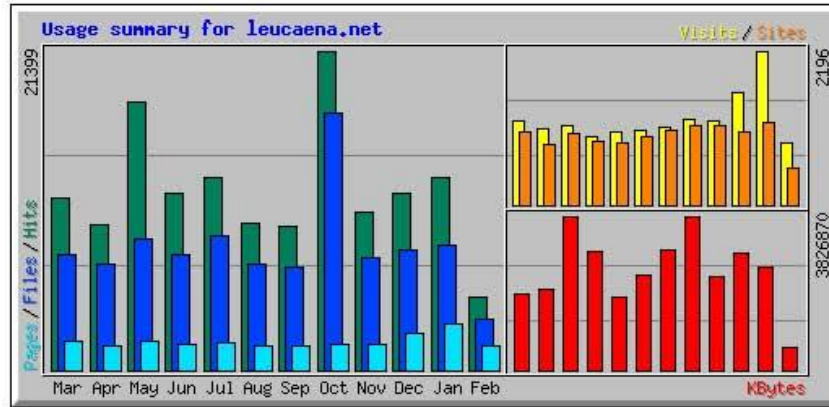


| Summary by Month | | | | | | | | | | |
|--------------------------|-----------|-------|-------|--------|----------------|-----------------|--------------|--------------|--------------|---------------|
| Month | Daily Avg | | | | Monthly Totals | | | | | |
| | Hits | Files | Pages | Visits | Sites | KBytes | Visits | Pages | Files | Hits |
| Jun 2011 | 363 | 269 | 70 | 27 | 213 | 169689 | 167 | 425 | 1617 | 2182 |
| May 2011 | 371 | 233 | 67 | 29 | 936 | 926917 | 902 | 2088 | 7253 | 11528 |
| Apr 2011 | 371 | 229 | 56 | 27 | 905 | 1177243 | 838 | 1702 | 6878 | 11136 |
| Mar 2011 | 351 | 228 | 58 | 29 | 1025 | 868070 | 929 | 1802 | 7082 | 10888 |
| Feb 2011 | 349 | 227 | 58 | 30 | 903 | 779538 | 849 | 1642 | 6371 | 9794 |
| Jan 2011 | 337 | 212 | 53 | 27 | 947 | 860049 | 844 | 1651 | 6594 | 10449 |
| Dec 2010 | 393 | 244 | 68 | 32 | 938 | 2225603 | 1011 | 2120 | 7564 | 12205 |
| Nov 2010 | 493 | 316 | 74 | 34 | 1144 | 1513164 | 1030 | 2235 | 9501 | 14804 |
| Oct 2010 | 546 | 344 | 81 | 32 | 1306 | 1149748 | 1019 | 2527 | 10672 | 16937 |
| Sep 2010 | 679 | 363 | 91 | 35 | 1176 | 1143420 | 1079 | 2739 | 10903 | 20375 |
| Aug 2010 | 372 | 218 | 60 | 27 | 868 | 645070 | 845 | 1890 | 6788 | 11560 |
| Jul 2010 | 312 | 190 | 55 | 25 | 858 | 561324 | 793 | 1721 | 5909 | 9691 |
| Totals | | | | | | 12019835 | 10306 | 22542 | 87132 | 141549 |

Generated by [Webalizer Version 2.01](#)

Usage Statistics for leucaena.net

Summary by Month
Generated 12-Feb-2013 00:20 EST



| Summary by Month | | | | | | | | | | |
|--------------------------|-----------|-------|-------|--------|----------------|-----------------|--------------|--------------|--------------|---------------|
| Month | Daily Avg | | | | Monthly Totals | | | | | |
| | Hits | Files | Pages | Visits | Sites | KBytes | Visits | Pages | Files | Hits |
| Feb 2013 | 446 | 308 | 149 | 80 | 532 | 560649 | 886 | 1648 | 3397 | 4913 |
| Jan 2013 | 417 | 271 | 99 | 70 | 1185 | 2576906 | 2196 | 3084 | 8423 | 12940 |
| Dec 2012 | 383 | 260 | 79 | 52 | 1033 | 2906528 | 1612 | 2461 | 8089 | 11902 |
| Nov 2012 | 354 | 252 | 57 | 39 | 1131 | 2310019 | 1190 | 1735 | 7578 | 10639 |
| Oct 2012 | 690 | 556 | 56 | 39 | 1141 | 3807683 | 1226 | 1765 | 17255 | 21399 |
| Sep 2012 | 320 | 228 | 54 | 37 | 1055 | 2975653 | 1113 | 1644 | 6854 | 9614 |
| Aug 2012 | 316 | 228 | 53 | 34 | 977 | 2364859 | 1071 | 1652 | 7094 | 9813 |
| Jul 2012 | 417 | 291 | 59 | 33 | 891 | 1829262 | 1052 | 1837 | 9021 | 12927 |
| Jun 2012 | 396 | 258 | 57 | 32 | 910 | 2939145 | 970 | 1726 | 7743 | 11898 |
| May 2012 | 581 | 283 | 62 | 36 | 1029 | 3826870 | 1131 | 1930 | 8787 | 18019 |
| Apr 2012 | 326 | 235 | 54 | 35 | 860 | 2010211 | 1077 | 1645 | 7070 | 9799 |
| Mar 2012 | 371 | 250 | 64 | 38 | 1051 | 1913435 | 1191 | 2002 | 7773 | 11505 |
| Totals | | | | | | 30021220 | 14715 | 23129 | 99084 | 145368 |

Generated by [Webalizer Version 2.23](#)

Appendix 5

leucaena Information day, Thangool, June 2010



Appendix 6

leucaena Information day at “Golden Arrow” Hannaford, December 2009,



Appendix 7

ABC Landline program filming TLN member, David Wells, “Golden Arrow”, Hannaford at the leucaena information day December 2009.

