

# Katherine Rural Review

Produced by Katherine Research Station

Edition 246 February 2003

## Bacterial Fruit Blotch of "melons" is a pathogen of cucumber and pumpkin as well!

**Stan Bellgard - Senior Plant Pathologist Ph: 89 739 712**

Melons, watermelons, pumpkins and squash are important crops of the Venn Horticultural Area. In April of last year, Bacterial fruit blotch was identified impacting upon watermelon.



The pathogenic agent was identified as *Acidovorax avenae* subspecies *citrulli*. This disease is named after the *Citrullus lanatus* or watermelon, from which this pathogen was first recovered. Now, the host range of this pathogen may be broader than first thought. There are currently two different pathogroups: pathovar 1 infects watermelon and honeydew melons, and pathovar 2 infects rockmelon, watermelon and honeydew melon.

This pathogen has been recovered from plantings of cucumber and pumpkin in Queensland. This means, that the host range of the "melon" pathogen may now include members of the *Cucurbita* species, pumpkin-squash-group. For further information check-out the informative sites below:

<http://www.tpp.uq.edu.au/disease/acido.htm>  
<http://muextension.missouri.edu/xplor/agguides/pests/ipm1011.htm>  
*Plant Disease* Volume 86, Number 12, page 1406. (September 2002).



**Northern Territory Government**

Department of Business, Industry and Resource Development

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## Ecoflex - a smart option to deal with old tyres

Every rural property has a problem dealing with waste tyres, and the largest number of waste tyres are in the car and truck sizes. This innovative and award winning system modifies waste tyres into reusable products for a wide range of construction areas, building on the inherent structural strength in modern tyres and .....saves money by using them as well!

Ecoflex has also initiated an agreement with Landcare at national level to work together to use

the Ecoflex system to reduce the waste tyre problem.

The Ecoflex system is now available in Darwin and is already dealing with waste tyre management. Operations are planned for other areas of the NT and NW of WA early in 2003.

More information is on their web site [www.ecoflex.com.au](http://www.ecoflex.com.au) or contact the NT Ecoflex agent, Above Capricorn Technologies e-mail [pgharr@mpx.com.au](mailto:pgharr@mpx.com.au) or ph:89481894 or the Ecoflex

# Parkinsonia Dieback-whats it all about?

**Rieks van Klinken (CSIRO Entomology Darwin) (08) 89420427**  
**Jim Begley (NTDIPE)**

Parkinsonia is one of twenty "Weeds of National Significance" and is widespread across northern Australia. It is a thorny, woody weed, and forms dense, impenetrable infestations in many places around Australia.

There has been a history of reports of widespread dieback within populations in various parts of Australia. One of the more recent reports has been by Allan Andrews on Auvergne Station (VRD) who observed widespread death of adult plants, all of which had "gnarly" branch tips.

Similar dieback is apparently also occurring on other stations nearby.

The gnarly branch tips are actually caused by a mealy bug (Coccidae), which is probably native, and which feeds on new growth. When feeding its saliva results in distortion of plant growth. It has certainly been common at Auvergne since CSIRO commenced studies on Parkinsonia there in 2000, but

had not previously been associated with dieback. It appears to do best on stressed plants, including

those on riverbanks that are periodically flooded, and those in wetlands that are inundated for substantial periods. Although the effects of feeding damage is dramatic, it is probably just a sign that plants are already stressed, and is unlikely to be the primary cause of dieback. However, research would be required to confirm this.

Dieback observed elsewhere in Australia has not

been associated with mealy bug attack. Typically dieback progresses through parkinsonia populations as a front and kills both adult and juvenile plants. The most likely explanation is that root pathogens, such as fungi or nematodes, reach epidemic levels under certain climatic conditions. Surveys for have been conducted, including one by NAQS (Richard Davis) near Georgetown (north Queensland) in 2001, but so far they have only located secondary pathogens. Further research is therefore required if we are to understand the primary causes of dieback. To successfully identify the cause of dieback, surveys will need to be timed to coincide with an active movement of a dieback front.

Obtaining a better understanding of the causes and consequences of Parkinsonia dieback on infestations around Australia is important, as it will give us a better understanding of the likely long-term spread of parkinsonia. It may also provide us with new, natural, tools for better managing Parkinsonia populations.

We would be interested in hearing other reports of Parkinsonia dieback elsewhere in the NT, and episodes of dieback that have symptoms other than those observed recently in the VRD. Please report to either Alice Beilby (8973 8107; [Alice.Beilby@nt.gov.au](mailto:Alice.Beilby@nt.gov.au)) or Dr Rieks van Klinken (08 8942 0427; [rieks.vanklinken@csiro.au](mailto:rieks.vanklinken@csiro.au)).



*A typical "dieback" Parkinsonia plant on Auvergne station with close up of the twisted growing tips caused by mealy bug feeding. (Photos by Jim Begley)*



*ecoflex- continued from page one*  
waste tyre operator in Darwin - J & B tyre recyclers  
ph: 0438 807 129 for more details.

J & B tyre Recyclers are also developing a repair service for large industrial and earthmoving equipment tyres and if interested in a tyre repair and extending the life of a damaged tyre, call them. It might be economical to fix the tyre! Large tyres from earth moving equipment can also be converted into productive recycled items for farm use, if totally worn out. Tyres are very strong, and very durable, and can be ideal and economic materials for on farm use. Some recycled products available elsewhere include feed and water troughs, items commonly used in the NT too. Disposal and management of waste tyres is a major problem and a national program to deal the problem is being developed. A discussion paper on the problem is available on the following web site [www.ephc.gov.au](http://www.ephc.gov.au)

If in Darwin, phone to arrange a site visit and see how it is done.



*A healthy Parkinsonia tree in the VRD*

# Commercial use of NIRS- setting up an efficient system

**Neil Mac Donald Ph: 89 739 746**

After several years of calibration and testing, the NIRS technique of estimating cattle diet quality from dung samples is getting to the stage of being ready for commercial use. A number of producers in the region are seeing the potential of using NIRS as a way of investigating their cattle performance and assessing their need for supplement. At the last Katherine Pastoral Industry Advisory Committee, we were asked to set up a streamlined service to get stations' NIRS samples prepared and delivered to the laboratory.

The only lab currently able to analyse and interpret faecal NIRS samples is CSIRO in Townsville (David Coates). That facility is really for research, but David has said that he would be happy to process commercial samples at minimum cost until an alternative is available.

Unfortunately I can't see a time when there will be a NIRS lab in the NT. Apart from the huge cost of the machine itself, the calibration equations represent years of research so they will not be handed out for free.

## What NIRS can tell you?

The main information is protein (accurate) and digestibility (less accurate but better than any other method). It also tells percentage grass/non grass in the diet. However, predictions of cattle growth rates from these figures are still pretty wild. That aspect is still being worked on.

## How to collect samples

You need to collect a small amount (spoonful) from a reasonable number of fresh dung piles (at least ten) into a plastic bucket. Mix together well. The lab only needs about a pannikin-full, stored in something like a 20cm x 20 cm ziplock sandwich bag. So long as you have mixed it well, you can throw out the excess dung. We don't need great big bags of it here! Keep samples in fridge or freezer until you can get them to Katherine.

## How often to sample?

A one-off sample is not all that helpful. If you really want to use this technique, you should

create a year's profile by regular monthly samples, and then interpret future results in relation to that profile.

## How the delivery will work?

You will have to get the samples to Katherine. It may be possible to drop them off out office hours by arrangement. We will then dry them for 24 hours, and dispatch by express bag to Townsville. They will grind them, assess them and interpret the results. The answer should come back to you by email or fax, within 5 days of you despatching the samples.

## How much will it cost?

CSIRO are currently only charging \$11 per sample (including GST). This is not a proper commercial charge as it only covers technician's time and not depreciation or maintenance of the machine. Therefore they may increase their costs at some stage. I suspect a future commercial service will charge \$30-\$40.

## Paperwork

We will be printing up some forms. Primarily these will record your contact details and enough collection information to make sure that samples don't get confused. They will also have an optional section giving more details of the cattle, pastures and rainfall, which you will need to fill in if you want David Coates to give you a more thorough interpretation of your results.

Anyone who is interested in using this service, please contact myself or Rebecca Mather-Brown 89 739 770 and we will send you some forms and bags.



*The ideal size bags are zip lock. Something like these sandwich bags are ideal.*

*Don't forget to label bags with the Station name, paddock name, collection date and the letters NIRS.*

# How much chow was for the Cow at Kidman in 02?

**Kieren McCosker - Animal Production Officer - 8973 9771**

The animal results for the Best Bet Management System for Breeding Herds have been well publicised. However, the pasture side to the story has not. A full report will be presented in the yet to be published booklet, "Victoria River Research Station: Research Projects 1995-2002". Here are some of the latest results.

## Background to Best Bet Management System

The Best Bet Management System was found to increase production significantly. It was reported that under the Best Bet System breeder mortality decreased from 12% to 3% and weaning percentage increased from approximately 50% to 80%. These findings resulted from:

- Mustering and weaning twice a year, in April/May and September/October
- Calves weaned down to 100 kg and grazed on spelled native pasture
- All stock were supplemented on an all year round basis, P-based during the wet season and N-based during the dry season. Cost of supplement should not exceed \$20 per breeder per year.
- Breeders culled from 10 years of age, or for barrenness, temperament, or injury.
- Heifers selected at 2 years of age based on temperament, liveweight 280 kg or over and general appearance – selection not to be based on coat colour.
- Heifers mated in January each year and run separately until they wean their first calf.
- Bulls run with the herd on a continuous basis at a rate of 5%. Bulls fertility tested annually and culled for sub-fertility on bull breeding soundness evaluation (BBSE) score, injury temperament, or at 8-9 years of age. All bulls annually vaccinated for vibriosis.
- Annual botulism vaccination with both strains C and D annually.
- Paddocks rotationally burned, 4 year rotation

## Pasture Results

As shown in Figure 1, there seems to be a general decrease in the paddock yield over time. Unfortunately, the data collected during the years 2000 and 2001 has been lost due to computer hardware corruption. These years would have provided the background to how the 2002 paddock yield decreased. The decreasing yield, while receiving relatively average rainfall (Figure 2), is of high interest as it is possibly indicating that the pasture is being over utilised.

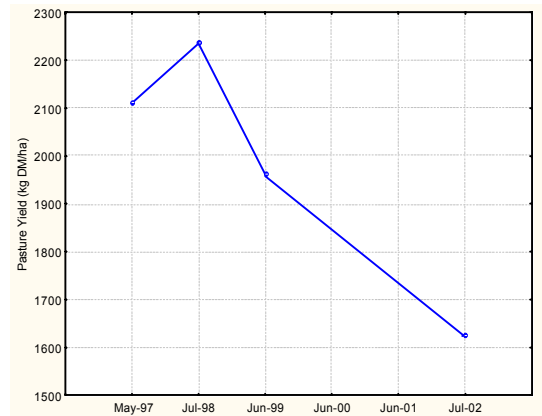


Figure 1: The average paddock yield for Victoria River Research Station from May 97-Nov 02.

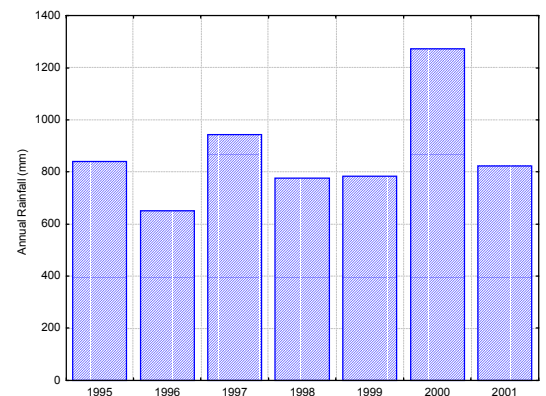


Figure 2: Rainfall history for Victoria River Research Station

Not only has the yield decreased over this period, the proportion of desirable species has also

decreased over time (Figure 3). As was the case with yield, it is unfortunate the data collected during 2000 and 2001 is unavailable, as they too would have provided a background to this slump in favourable species. The increase in undesirable species was due to an increase in feathertop wiregrass (*Aristida latifolia*) and black speargrass (*Heteropogon contortus*), while the decrease in desirable species was due to a decrease in Queensland bluegrass (*Dichanthium fecundum*), native couch (*Brachyachne convergens*) and flinders grass (*Iseilema* species) (Figure 4).

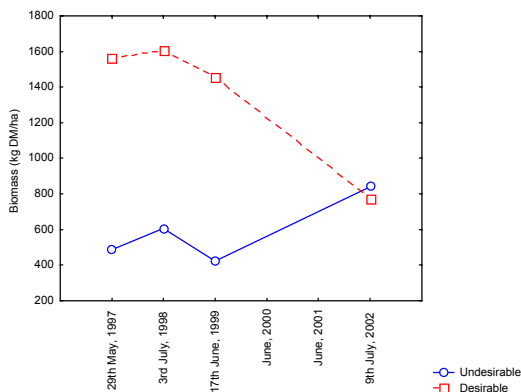


Figure 3: The biomass of undesirable vs. desirable species

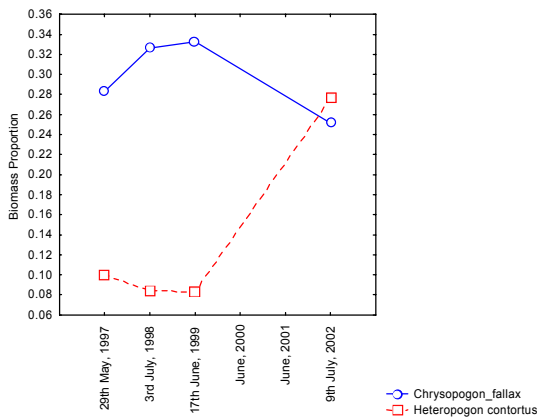


Figure 4: Changing species proportion; yield corrected.

The proportion of annual and perennial species can be said to have remained relatively constant across time, despite the slight decrease. As the minor decreases in biomass, depicted in Figure 5, does not seem to be significant and may have resulted from variation within the sampling procedure.

It appears that there was some deleterious effect on pasture over time. However, in saying this it

is not clear what is causing this effect, possibly seasonal variation or some other animal dependent factor such as grazing. Nevertheless, the results received are of concern and it is imperative that future monitoring be completed, with the findings used to best manage the pasture.

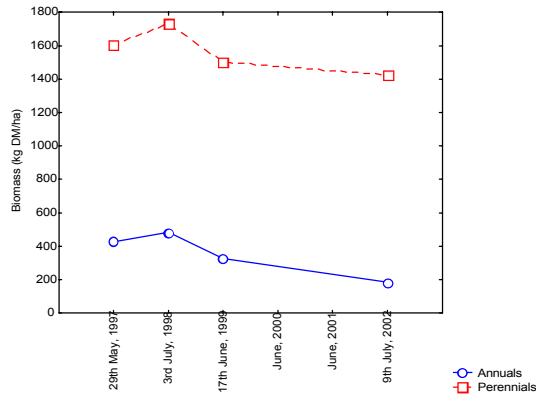


Figure 5: The biomass of Annual vs. Perennial species.



## WEEKLY NEWS DIGEST

### February 5: The ABC Country Hour in the Northern Territory

reported that the Territory is unlikely to adopt mandatory electronic identification of livestock, even though it is already mandatory in Victoria. Roger Smith, general manager of Primary Industries with DBIRD, said a compulsory approach would not work. Experiments on some properties had shown a 15 per cent loss of electronic ear tags.

He said branding and compulsory weigh billing provided an efficient trace back and trace forward system in the Territory. He noted, however, that cattle moving from the Territory to Victoria would have to be tagged, and that a better strategy may be needed for camels and buffalo.

**February 4: ABC national rural news and the ABC Country Hour in the NT, NSW, Qld and Tasmania** reported that a Federal Government Report has recommended establishment of an Australian Veterinary Reserve to be utilised in the event of a major exotic animal disease outbreak. The committee that prepared the report was chaired by Livecorp chairman, **Peter Frawley**.

# Pastoral Market Update

January, 2003

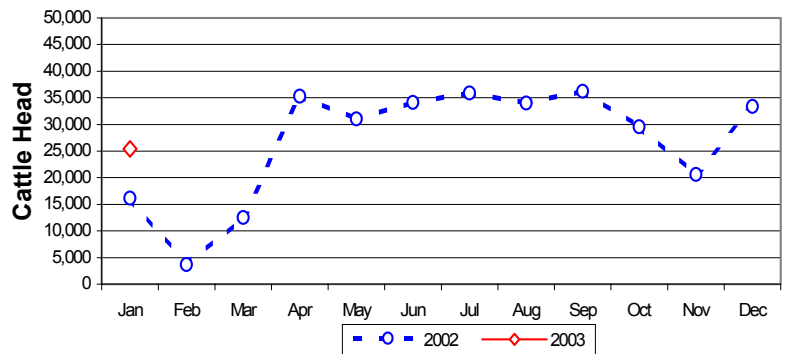
## LIVE CATTLE EXPORTS VIA DARWIN PORT

Destination	Total Cattle (including interstate)							NT Cattle only						
	2001	2002	Last year 31.01.02	YTD 31.01.03	1-31 Jan	Previous Month	Difference	2001	2002	Last year 31.01.02	YTD 31.01.03	1-31 Jan	Previous Month	Difference
BRUNEI	16,155	19,085	2,189	2,521	2,521	2,479	+42	11,003	12,012	1,987	1,959	1,959	2,289	-330
EGYPT	52,692	10,873	0	0	0	0	0	30,376	10,873	0	0	0	0	0
INDONESIA	151,190	199,327	4,218	16,797	16,797	22,661	-5,864	121,632	133,763	4,218	11,207	11,207	15,119	-3,912
PHILIPPINES	31,984	65,931	9,775	5,515	5,515	7,056	-1,541	25,701	52,692	9,775	3,615	3,615	7,056	-3,441
SABAH	110	318	0	0	0	120	-120	110	17	0	0	0	17	-17
SAUDI ARABIA	0	6,550	0	0	0	0	0	0	5,066	0	0	0	0	0
SARAWAK	0	1,033	0	320	320	0	+320	0	846	0	92	92	0	+92
VIETNAM	941	0	0	0	0	0	0	0	0	0	0	0	0	0
W-MALAYSIA	5,055	18,765	0	240	240	1061	-821	4,350	13,839	0	0	0	0	0
EAST TIMOR	0	32	0	0	0	0	0	0	0	0	0	0	0	0
JORDAN	0	688	0	0	0	0	0	0	688	0	0	0	0	0
<b>TOTAL</b>	<b>258,127</b>	<b>322,602</b>	<b>16,182</b>	<b>25,393</b>	<b>25,393</b>	<b>33,377</b>	<b>-7,984</b>	<b>193,172</b>	<b>229,796</b>	<b>15,980</b>	<b>16,873</b>	<b>16,873</b>	<b>24,481</b>	<b>-7,608</b>
				+9,211							+893			

### "January at a glance"

- 25,393 head through the Port of Darwin during January. Whilst this figure was 7,984 head less than December it was still a very solid start to 2003 (9,211 more than January last year).
- 66% of cattle exported through Darwin in January were NT cattle, compared with 98% in January last year.
- The graph indicates a good head start on last year – watch for February!

Live Cattle Exports thru Port of Darwin  
2002 v 2003



## 'OTHER' LIVESTOCK EXPORTS VIA DARWIN PORT (incl. NT and Interstate Stock)

Destination	Buffalo			Camels			Goats			Deer			Horses			Sheep			Pigs			
	2002	YTD 2003	1-31 Jan	2002	YTD 2003	1-31 Jan	2002	YTD 2003	1-31 Jan	2002	YTD 2003	1-31 Jan	2002	YTD 2003	1-31 Jan	2002	YTD 2003	1-31 Jan	2002	YTD 2003	1-31 Jan	
BRUNEI	3,359	525	525	144	0	0	2,439	0	0	37	0	0	0	0	0	430	0	0	0	0	0	0
EAST TIMOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W-MALAYSIA	173	0	0	609	145	145	7,182	983	983	0	0	0	4	0	0	1,573	0	0	0	0	0	0
SAUDI ARABIA	0	0	0	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SARAWAK	57	0	0	64	100	100	225	239	239	0	60	60	0	0	0	0	0	0	0	0	0	0
PHILIPPINES	0	0	0	0	0	0	0	0	0	0	0	0	29	6	6	0	0	0	0	686	0	0
INDONESIA	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
THAILAND	0	0	0	0	0	0	0	0	0	320	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>3,589</b>	<b>525</b>	<b>525</b>	<b>935</b>	<b>245</b>	<b>245</b>	<b>9,846</b>	<b>1,222</b>	<b>1,222</b>	<b>357</b>	<b>60</b>	<b>60</b>	<b>44</b>	<b>6</b>	<b>6</b>	<b>2,003</b>	<b>0</b>	<b>0</b>	<b>686</b>	<b>0</b>	<b>0</b>	<b>0</b>

### PREVIOUS 6 YEARS

Total Cattle, Port of Darwin  
1996 1997 1998 1999 2000 2001 2002  
383,535 448,196 219,439 280,011 299,179 258,127 322,602

NT Cattle, Port of Darwin  
1996 1997 1998 1999 2000 2001 2002  
189,918 246,389 160,412 192,441 222,669 193,172 229,796

## EXCHANGE RATES

Key Currencies 1 Australian Dollar =	Current 31.01.03	Previous week 24.01.03	3 months ago 31.10.02	1 Year ago 31.01.02	Pre-devaluation 01.07.1997
Brunei Dollar	1.0217	1.0244	0.9808	0.9342	1.076
Egyptian Pound	3.1757	2.7309	2.5877	2.3584	2.56
Euro	0.5449	0.5499	0.5624	0.5886	N/A
Indonesian Rupiah	5230.24	5312.22	5191.72	5239.83	1830
Libyan Dinar	0.7353	0.7379	0.702	0.3367	0.27
Malaysian Ringgit	2.24	2.2475	2.1045	1.9267	1.9
Philippine Peso	31.7544	31.7687	29.46	26.0166	19.84
Thai Baht	25.2114	25.2754	24.0822	22.4557	18.6744
US Dollar	0.5892	0.5911	0.5535	0.5069	0.752

## NATIONAL CATTLE PRICES - W/E 31/01/03

JAPANESE STEER									KOREAN STEER								
Estimated dressed weight price (cents/kg)									Estimated dressed weight price (cents/kg)								
SALEYARDS					O.T.HOOKS				SALEYARDS					O.T.HOOKS			
	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)		NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)
This week	262	274	243	268	272	283	nq	277	This week	237	253	235	248	242	255	nq	251
Last week	260	276	237	267	275	301	nq	295	Last week	246	252	233	246	253	279	nq	272
Year ago	286	304	290	296	302	304	290	303	Year ago	286	299	283	297	295	296	nq	296
US MANUFACTURING COW									DOMESTIC TRADE STEER								
Estimated dressed weight price (cents/kg)									Estimated dressed weight price (cents/kg)								
SALEYARDS					O.T.HOOKS				SALEYARDS					O.T.HOOKS			
	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)		NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)
This week	176	224	183	204	198	223	170	208	This week	270	272	248	264	258	259	250	261
Last week	181	220	167	198	211	239	190	229	Last week	258	265	237	255	257	274	250	266
Year ago	264	272	264	272	269	271	nq	273	Year ago	312	323	291	309	308	306	270	306
FEEDER STEER																	
Estimated <u>live</u> weight price (cents/kg)																	
EXPORT					DOMESTIC												
	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)									
This week	130	1245	125	140	134	136	133	134									
Last week	138	142	140	140	133	141	130	136									
Year ago	152	nq	170	nq	163	172	179	157									

Prices courtesy of:  
**Meat and Livestock Australia (MLA).**

Prepared by the NT Department of Business, Industry and Resource Development.

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# Free CD Give Away

**Trudi Oxley Ph: 89 739 763 Rebecca Mather-Brown Ph: 89 739 770**

"Technology for Land Management" is a CD-Rom produced by the Department for Business Industry and Resource Development. The CD is a showcase of technology and software available to assist you with management decisions for your property.

In the ever-increasing dynamic environment of the pastoral industry it makes sense to take advantage of the latest management tools to increase profitability and sustainability.

A well presented CD that runs for approximately half an hour. Featuring slide shows videos and

demonstrations of software packages that cover everything from satellite imaging to record keeping and monitoring.

The CD covers all aspects of good business practice and can assist you in choosing the right technical applications for your property thus saving you time and money by avoiding the wrong choice of applications for your business. The CD is available from Trudi Oxley or Rebecca Mather-Brown at Katherine Research Station Ph: 89739 763 or 89739 770. Trudi or Rebecca can send you a CD **FREE!**



If Undelivered please return to:  
PO Box 1346  
KATHERINE NT 0851

## Coming Events

**KATHERINE RESEARCH  
STATION AGRICULTURAL  
FIELD DAY  
SATURDAY 12 APRIL 2003**

- \* Horse Sale
- \* Quarantine Beagles
- \* Industry Information Night
- \* Free Breakfast
- \* Crop Display
- \* Farm Tours
- \* Fruit tasting
- \* Tour of Horticultural Block.

**KATHERINE REGISTERED  
HORSE SALE  
SATURDAY 12 APRIL 2003**

All horses must be ridden and registered meeting ASH or quarter horse standards.

Nomination fee of \$100 applies. Fee includes catalogue advertising,

Venue is supplied by the Department of Business Industry and Resource Development. Pre work area is available on site.

For further details contact Elders or Wesfarmers Landmark.

**KRR**  
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