Wirruna Poll Hereford Stud (est. 1949)

Wirruna News

Newsletter
Summer 2009

Inside this issue:

Wirruna Poll Hereford Stud is one of the leading whiteface performance recorded herds in Australia.

Dates for the Diary:

- **Beef Week Field Day** *Tuesday, 3rd February, 2009 (no. 597)*
- **Wirruna Autumn Sale (60th Birthday)** *Thursday, 19th February, 2009*
- **Wirruna Spring Sale** *Wednesday, 26th August 2009*

EDITORIAL – Wirruna's 60th Birthday

Welcome to the first newsletter of 2009. Now that the dust has settled on another challenging 2008 and following the festive period it is time to look forward to the current year, and all at Wirruna wish you all the best for a prosperous and happy 2009.

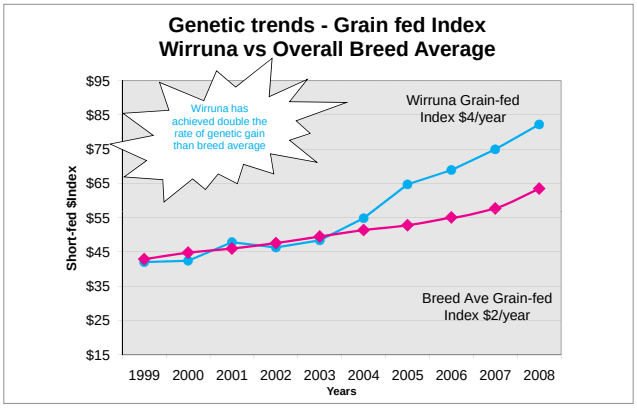
This year represents an important milestone for the Wirruna herd as we celebrate our 60th birthday. The 1st calf registered with the Wirruna Prefix was Wirruna Romeo (No. 2155) born 8th November 1949. Sire: Milton Romeo 2nd (No. 459) and Dam: Wantabadgery Countess 7th (No. 2254). The numerical number indicates that Wirruna Romeo was the 2,155st male calf registered in the Australian Herd Book of Poll Hereford cattle.

The first Poll Herefords were bought into Australia in 1920, it was not until 1935 that any real numbers started to be imported and herd numbers began to build. In 1942 there were about 50 studs, by 1950, this had grown to register of 200 stud names. Wirruna was amongst these first 200 studs. It is sobering to go through that list and find that only 24 of those studs exist today – some having transferred ownership from the original families. It is very difficult for any cattle studs to survive generational changeover with the passion for the herd and the breed not necessarily being passed onto the next custodians.

In our 60th year and in the 3rd generation of the Locke family, Wirruna Poll Hereford Stud has grown to be one of the largest and well recorded Poll Hereford herds in Australia selling some 140 bulls/annum into the commercial industry being bred over some 15,000 cows/annum.

Wirruna rates as one of the largest registered Poll Hereford herds in the country. In terms of performance recording, very few herds can boast the numbers of birthweights recorded (5,662), later weights (6,532), mature cow weights (3,380) and carcase scanning (4,172) data that has been submitted to Breedplan by Wirruna.

In terms of genetics, using Grain fed $Index (Summer 2009), the average $Index value of Wirruna's 486 progeny (born in 2007) rank in the top 15% of the breed. 12 of the top 100 animals (born 2007) are Wirruna born, including the highest rated animal. The following graph shows that, over the last decade, Wirruna has achieved double the rate of genetic gain to breed.



The long history of selection, high quality peformance data, disciplined production system in which the Wirruna herd is run and the high level of commercially focus in genetic selection make Wirruna Poll Herefords unique and a leader in today's seedstock sector.

The February 19th sale is a perfect time to celebrate and reflect on the 60th anniversary achievement, and look forward to what I consider to be a very exciting phase in the Wirruna program. I hope you can share in this celebration.

Ian Locke

EBV Talk – Bending the Growth Curve

"Antagonistic breeding objectives

Many seedstock producers provide the environment to get the best results out of their genetics.

The commercial beef producer, on the other hand, must have genetics that suit their environment."

Dr Reon Holmes

The Wirruna herd has been successful at bending the growth curve over time.

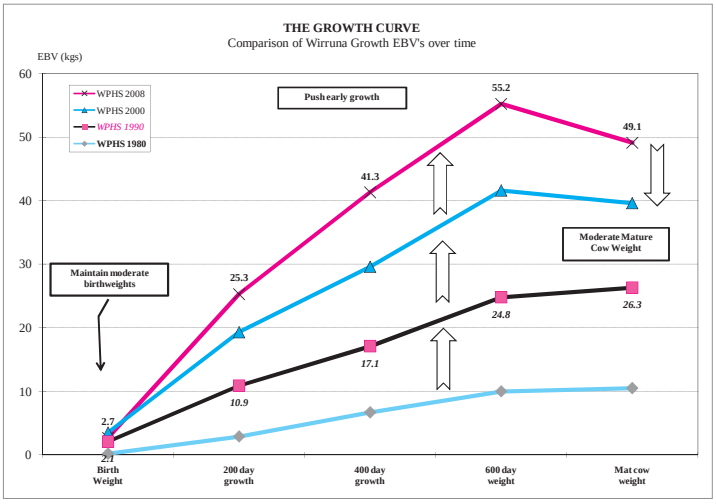
Key Points:

- Bending the growth curve is selecting for growth while limiting unwanted increases in correlated birth weight and mature weight traits
- Many in the industry see big as better: The current run of dry years has seen a change in attitudes at the producer end
- Well managed high beef production systems understand the balance required between operating a highly fertile and efficient cow herd an produce highly marketable steers
- Genetics utilising well recorded Breedplan EBVs is the key

The breeding philosophy at Wirruna is reasonably simple. The focus is to run and select cattle under commercial stress conditions similar to that of the 'average' client aiming to produce beef for commercial gain. Like many clients, we have a disciplined and heavy emphasis on fertility, our high stocking rate and our policy of minimal supplementary feeding (for maintenance) tends to screen out extreme and high maintenance cattle. Strategies such as calving at 2 years and a 6 week joining soon highlight the genetics and maturity types that fail to be highly fertile and efficient. Likewise, our no tolerance approach to dystocia and policy of calving in spring, when the birthweight challenge is greatest in southern beef systems, also highlights the higher cost cattle that fail to raise a live calf every year.

With this in mind, our focus has been to source genetics from similar production systems with an EBV profile that *'bends the growth curve'*. These animals tend to be as follows:

- born easily (of moderate birthweight),
- grows quickly (good early growth traits at 200 & 400 days),
- Has a mid-maturity pattern (moderate mature cow weight and frame size).



The above graph reflects the genetic progress for growth achieved over the last 28 years of the Wirruna herd. The fact that growth has been increased while birthweight has been maintained has bent the growth curve upwards. The downward shape of the curve towards the final Mature Cow Weight reflects the EBV profile of the animals that tend to stay in the Wirruna herd. This is not typical of the average performance recorded herd where mature cow size tends to be ever increasing. Interesting, the Wirruna herd also carries more positive fat traits than other recorded herds.

Why don't we want larger framed cows?

We do not want cows that grow and grow to look (and consume feed) like draft horses at 5 years old. Research has shown that larger cows and cows of higher milk production potential tended to have greater maintenance energy requirements than fatter cows of the same weight. A kilogram of stored fat contains 39 megajoules (Mj) of energy; this five times the 7Mj that is contained in a kilogram of muscle tissue. Once fat is deposited in the body reserves, it takes half as much energy to maintain compared to the same weight in muscle. This is an important factor influencing herd efficiency, the cow calf producer needs cows that can deposit fat reserves in the good times when there is plenty of feed, and mobilise this energy when needed.

The prime lamb industry in New Zealand is a good example where they focus on ewe efficiency being the average weight of lambs weaned to average weight of ewes joined. Often the more moderate ewe that holds body condition and is fecund has a greater efficiency than a big ewe that struggles to maintain herself.

In the years 1997 to 1999, I conduced a high input stocking rate trial using Wirruna spring calving cows, set stocked at annual average of 22 to 27dse/ Ha over 3 years. In this project I analysed cow efficiency comparing the production from the lightest and heaviest cows between weanings at the same stocking rate. The average milk EBVs of the cows were equivalent. The main difference was in the frame size between the two groups of cows.

1997 results	**Cow weight gain**	**% of total**	**Ave Cow efficiency**	**Calf weight weaned**	**% of total**	**Total weight produced (kg)**	**% of total**
6 heaviest cows	**495**	*29%*	*39%*	**1,206**	*71%*	**1,701**	*100%*
6 lightest cows	**350**	*21%*	*53%*	**1,304**	*79%*	**1,654**	*100%*
1998 results							
6 heaviest cows	**415**	*28%*	*33%*	**1,093**	*72%*	**1,508**	*100%*
6 lightest cows	**290**	*20%*	*44%*	**1,149**	*80%*	**1,439**	*100%*
Ave % Difference			*24%*				

Beef Week Field Day

Date: Tuesday, February 3, 2009, *(Day 5)*
Time: 9 am to 6 pm

All welcome to take this opportunity to visit our herd and talk to us about your breeding program and your requirements.

Sale bulls and females and a sample of our breeding herd will be available for inspection.

Bull sale catalogues will be available on the day.

"Getting the right breeding balance between selecting higher carcase yield and maintaining a cow's long term productivity can be a critical factor in reducing the costs of producing a kilogram of beef, particularly as seasonal conditions, and feed supplies, become more variable."

Dr Peter Parnell, Research leader with the NSW DPI

Wirruna Website: www.wirruna.com

EBV Talk – Bending the Growth Curve cont.

My lessons from this trial are that in both years analysed -

- the lightest cows produced more kilograms in calf weight than the larger framed cows
- the larger framed cows put a greater percentage into themselves and less percentage into their calves
- the lightest cows were 24% more efficient at producing calf weight than the heavier cows (weaner calf weight/cow weight at previous weaning).

Although the total production of kilos of the larger cows was greater (including their own weight gain over the year), it is doubtful that on a per/Ha basis the larger frame cows could continue to re-conceive and thrive like the lighter more moderate frame cows. Furthermore, our aim is to produce calves, not fatten cows.

A need for balance

Unfortunately, there are mixed messages about frame size. The feedlotter likes more frame to pack meat onto without wastage of going to fat too early. The stud industry often likes big frame because they receive the market signals from each other and through shows & sales that the bigger ones are easier to sell. In addition, the livestock agent likes frame as he sees those big framed cows making more money at the sale yards. Unfortunately, from the producers perspective, these cows were invariably only at the saleyards because they failed to get into calf and/or did not raise a calf.

At Wirruna, the market signals are far more towards the middle ground. In my travels around client's herds over the past few years, discussions often are about those breeding cows that do not 'do' and fail to re-cycle quickly to get back into calf. It is often remarked that these are the larger framed cows, and during the recent run of difficult years, these have been costly for producers to maintain, particularly if they turn out empty.

As always, we need a balance between the environment in which we expect our breeders to be reproductively efficient and the needs of the market. There is no point producing something that nobody wants. However, we have to be able to do it profitably in our own production systems.

The key is genetics! We all like growth in our cattle as they get turned off faster and/or heavier, however, we do not want the associated calving ease headaches or inefficient breeding cows. With well recorded Breedplan herds, sourcing genetics that bend the growth curve has vastly improved over recent years with a plethora of sire options becoming available. Wirruna's long track record of collecting a full set of Breedplan data including birthweights and mature cow weights has set us in good stead for continued selection along this path.

Maternal Productivity Project

Wirruna Poll Herefords is one of three Hereford herds that are involved with a Beef CRC Research project being funded by the MLA. The aim of the project is to give breeders better tools to balance carcase traits and female efficiency objectives at the same time. In times of ever increasing cost pressures and adapting to variable climate, we see research into improving production efficiency as very important to our industry.

The project involves about 8,000 industry Angus & Hereford heifers and research herds at Vasse (WA) and Struan (SA) Research Stations. It is known that there is a significant difference in the amount of feed consumed by cows per kg of calf weaned. Also the maintenance energy requirements can vary significantly between cows depending on whether they are genetically predisposed to storing excess energy as meat or fat. These traits are heritable.

The long held view at Wirruna is that we must maintain fat for the cow herd as they are cheaper to run. It makes alot of difference whether a cow stores extra weight as muscle tissue or as fat because the tissues have a vastly different concentration of stored energy and have different capabilities to maintain themselves and the additional feed required to supply it may be difficult to provide at critical times in the yearly feed supply cycle.

The flip side is that beef markets are wanting higher carcase yield or improved feed efficiency which are delivered in part by selecting against subcutaneous fat. Wirruna's breeding approach to increasing yield has been to increase muscle, not decrease fat.

The project has involved on-going performance recording of heifers from conception through to 2nd calf. We are now in our 3rd year of the 7 year project and the first two age groups of cows have full records collected (2004 born Z's and 2005 born A's). Females are weighed; IGF & DNA tested, measured for hip height, body condition and structurally scored. Each animal is ultrasound scanned for EMA, fat and marbling four times over a two year period (at pre-calving and weaning). This allows researchers to quantify the amount of body tissue stored or mobilised depending on feed supply and energy demand such as pregnancy and lactation. Detailed reproduction and culling records are also kept.

The project is only in its early stages. When complete, the project should yield a better understanding of the cow maternal productivity traits and how they are correlated to other known traits. It will also help strengthen and test the effectiveness of EBV's under different environments where some cows are pushed hard and others well looked after.

I will look forward to keeping you in touch with findings as they become available.

Key Points:

- Wirruna assesses the maturity pattern of sale bulls to help clients assess suitability to their breeding objectives
- Frame score as an indicator of maturity has been abused with studmasters using it as 'bigger is better' marketing tool
- Frame comparison should only be between animals reared under similar conditions
- You can change the 'market weight to fatness' relationship of the cattle you produce by using bulls of different maturity types.

All Wirruna sale bulls are individually ear notch tested negative as pestivirus carriers.

They are also drenched and fully vaccinated for:

- **Pinkeye (Piliguard)**
- **7 in 1**
- **Vibrio**
- **Pestivirus**

ATTENTION HEREFORD BREEDERS

Wirruna have undertaken some Horned/Polled DNA Analysis through IGENITY® of sires and donor cows used in our program and some potential sires. This test is expensive, however, true-polled animals have obvious benefits, particularly for those wishing to 100% dehorn Hereford cows.

Four homozygous polled bulls are offered in the upcoming Autumn 60th Birthday Sale on 19th February 2009.,

Details are provided in the catalogue due out in early February.

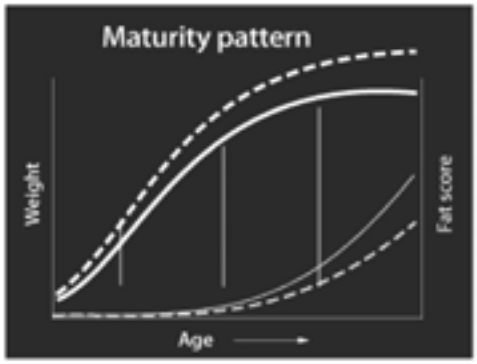
Maturity Type

This article has been compiled with the help of article "Frame scoring of beef cattle" produced by NSW DPI.

Those of you who received the spring 2008 bull sale catalogue will have noticed that we now provide simple maturity information on sale bulls. Each bull is frame scored and categorised according to maturity as follows:

1. Early (Early maturity type)
2. Mid (Medium maturity type)
3. Later (Late maturity type)

'Maturity pattern' or 'maturity type' refers to the age and size at which an animal tends to 'finish' that is, to lay down subcutaneous fat to the level desired by a particular market. This is estimated using frame scoring, measuring the hip height at a given age. Frame scores can range from 1 (small) to 11 (large) and is predetermined by genetics. British breeds and their crosses are generally in the frame 1 to 7 range and mature earlier than European types typically in the 4 to 9 range. The following graph illustrates how some animals are bigger and have heavier carcasses (dotted line) before achieving the same P8 fat depth as a smaller lighter (solid line) animals.



Animals grow quickest up until their physiological maturity (the stage of growth when fattening begins - about 60% of final maturity weight). Smaller framed cattle reach that point earlier and lighter than larger framed cattle. Carcasses that are too fat at a specified HSCW, or too light by the time they comply with specified P8 fat depth, indicate that animals are maturing too quickly for the targeted market. In this case, use of a later maturing bull may improve market compliance.

Maturity is also important in the breeding herd (see EBV Talk article), you may feel that heifers are taking too long to reach puberty or cows are too lean and therefore do not store sufficient energy in the form of fat reserves to be reproductively efficient. In this event, an early maturity bull to moderate frame should be considered.

I have chosen to give a maturity type assessment on bulls rather than a frame score. The problem with frame scores is that it is underpinned by nutrition. Inadequate nutrition or heavy feeding can make an animal score much smaller or far larger than the genetic capability, especially when scored at young ages. For example, Breed show & sale catalogues are full of frame 8 and above bulls, often the feeding regimes reach maximum growth potential and the measured hip height overestimates the ultimate size of the animal. Stud masters can make an 18 month old bull weigh like a 2.5 year old with feed, this does not change the maturity type of potential progeny.

It is important to recognise that frame comparison should only be between animals reared under similar conditions. A hard working cow herd, calving at 2 and every year onwards, will not grow out to their genetic mature size capability. We notice this when a donor cow gets a rest from natural breeding (to collect for embryo transfer). She will often out grow her peers even at an age of 5 years.

Maturity pattern and markets

	Early maturity	Moderate maturity	Late maturity	Very late maturity
Frame score	1 & 2	3, 4 & 5	6, 7 & 8	9, 10 & 11
Description	Low growth Short leg & body Waste Fat	Average growth Good muscle	High growth Often lack muscle - slabby	Extreme frame
Likely Market	Yearling/butcher	Supermarket/ Domestic Short fed (70-100 days) to medium fed (100-150 days)	Japan long fed export (220-300 days)	US lean mince
Market Liveweight	300 - 380 kg	380 - 650 kg	650 - 830 kg	>830 kg
Market carcase weight	150 -180 kg HSCW	200 - 350 kg HSCW	350 - 450 kg HSCW	>450 kg HSCW

In considering the purchase of your next bull you should take into account the maturity attributes of your current cow herd, your breeding objectives and the market end points you are targeting. Previous performance and feedback on previous sale cattle are useful. For example, if you are having trouble finishing steers you may need an earlier maturity type bull.

In the Wirruna breeding program we often mix and match maturity types to result in a moderate maturity pattern. Large framed bulls may be used over small framed cows and vice versa. 600 day weight, Maturity Cow Weight and Fat EBV's are also useful tools to influence maturity pattern.

SIRE PROFILE:

B132 — WIRRUNA BENALLA B132

- ☑ Highest EMA EBV for all Herefords born 2006
- ☑ Easy doing sire used at Wirruna for outstanding carcase traits
- ☑ Grain fed $Index, RBY% and Marbling in top 5% of breed
- ☑ Ideal for moderating frame & adding carcase

"*Rare combination of marbling and muscle in an easy calving package*"

Birth Date:	23-Aug-06
Society ID:	WNAB132
Horn/Scurs/Poll:	Poll

Semen Price $40/straw

FELTONS 524 (IMP USA)
EF F524 FELLIS 821C
EF VICKI SLEW 5X

Sire: **MOUNT DIFFICULT FELLIS Y12 (AI) MTTY12**
MOUNT DIFFICULT SAFEGUARD
MOUNT DIFFICULT TIGRESS U5
MOUNT DIFFICULT TIGRESS S9

KILMORLIE DELIVERANCE ET
WIRRUNA UNION
WIRRUNA GOLDEN VANITY R69

Dam: **WIRRUNA HYACINTH W247**
WIRRUNA NICHOLAS
WIRRUNA HYACINTH Q205
WIRRUNA HYACINTH 50

"*This sire is offered for sale in February 2009*"

Black highlight: Ranks with top 5% of breed
Grey highlight: Ranks with top 20% of breed

SUMMER 2009 GROUP BREEDPLAN EBV's

CALVING EASE				GROWTH & MATERNAL				
Calving Ease DIR (%)	Calving Ease DTRS (%)	Gestation Length (days)	Birth Weight	200-Day Growth	400-Day Weight	600-Day Weight	Mat Cow Weight	Genetic Milk
+1.7	+0.1	**-1.2**	**+2.9**	+22	+37	+48	+30	+10
58%	*45%*	*74%*	*85%*	*77%*	*73%*	*74%*	*65%*	*54%*

FERTILITY		CARCASE						
Scrotal Size (cm)	Days to Calving	Carc Weight	EMA (sq cm)	Rib Fat (mm)	Rump Fat (mm)	RBY (%)	IMF (%)	MUSCLE SCORE
+2.5	-	**+41**	**+7.2**	**+0.7**	**+0.7**	**+2.3**	**+0.7**	B-
75%		*62%*	*52%*	*62%*	*62%*	*59%*	*56%*	

TURAL ASSESSMENT						3-Nov-07		Temp.
Front 7	Back 6	6	6	5	5	4	26-May-08 39	-

INDEX VALUE			
Supermarket	Grass Fed	Grain Fed	EU Index
$71	**$72**	**$85**	**$79**

EYES	
4	*Eye Pigment* 100/100

"*I like this bull's large capacity and the ability to add muscle while maintaining softness*"
Ian Locke

Autumn 60th Birthday Bull & Female Sale 19th February 2009

49 Bulls and a selection of PTIC registered and unregistered cows will be offered in this years' Autumn Helmsman sale on property at "Spring Valley".

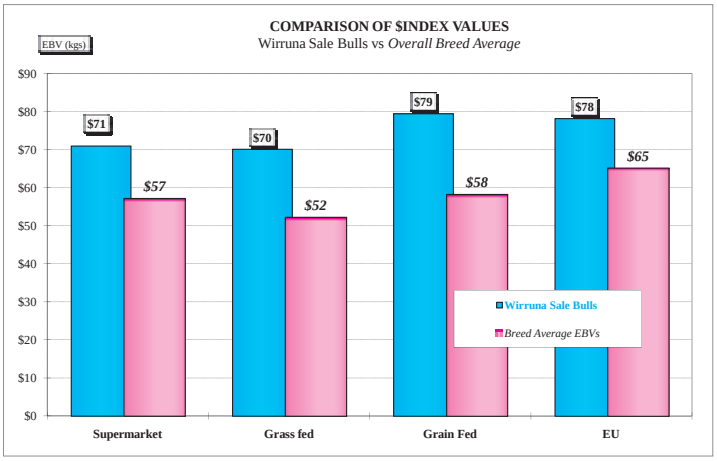
Catalogues will be out by early February, and will include some excellent Wirruna sires and many breed leading genetics designed for the commercial beef producer. The following table shows the various categories of sale bulls offered and previous average prices.

Pen No.	*Purpose*	*No.*	*Selected for ....*	*Prev Average $'s 2005-2008*
1 & 2	Muscle Bulls	14	. . . boosting muscle. High EMA EBV	$3,625
4	Growth Bulls	10	. . . improve growth. High growth EBVs	$3,571
5	Specialist Heifer Bulls	13	. . . ease of calving. Body shape & calving ease genetics	$3,600
6	Good Herd Bulls	8	. . . for various breeding objectives	$2,838
7	Wirruna Sires	4	. . . trait leading sires used at Wirruna	$5,698
8	PTIC Cows	30	. . . sourcing high quality females due to calve in Spring 2009	

Sires represented include:

- Koanui Rocket
- Mount Difficult Fellis Y12
- Allendale National W168
- Heatherdale Opium U78
- Wirruna Abercorn A41
- Quamby Plains Stockmaster Y118
- Markowen Intruder Z33
- Elite J7C X54
- Wirruna Vickery V16

As you come to expect from Wirruna, we are offering bulls that are genetically superior to breed average and are in their working clothes ready for active service.



All Wirruna Sale bulls are independently assessed for structure and fertility including serving ability tests and are backed by Wirruna's guarantee and back-up services. They have been run in a single large management group up until 400 days to best identify the favourable genetics by focusing on the collection of the highest quality Breedplan data.

If you don't normally receive a catalogue and would like one please either ring Ian or fill out the cut-out slip provided and fax or mail to us.

Should you be unable to attend our sale, we do have arrangements such as telephone bidding and placement of pre-sale orders. We are very interested to discuss these arrangements and any other requirements that you may have.

Inspections of the sale bull are welcome anytime by appointment.

Ian & Diana Locke

Spring Bull & Female Sale 26th Aug 2009

Contact Details:

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☐ Please send me a bull sale catalogue:

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Wirruna Poll Hereford Stud
"Spring Valley"
Holbrook
NSW 2644

Name: _____ Address: _____

Phone No. ( ) _____ Fax No. ( ) _____ Email: _____

Or ☐ Please remove my name from your mailing list. *(Please provide name and address details).*