BIO DYNAMIC AGRICULTURAL ASSOCIATION OF AUSTRALIA

LIVESTOCK MANAGEMENT

‘An unedited excerpt from…’

A PRACTICAL INTRODUCTION

TO THE AUSTRALIAN DEMETER BIODYNAMIC METHOD OF FARMING.

CHAPTER VI

LIVESTOCK

LIVESTOCK MANAGEMENT

Dynamic rotational grazing resulting in sheet composting of pasture (refer to pg 24) is the cornerstone of Bio-Dynamic livestock management. The farm layout must be designed to allow at least 5 paddocks for each mob/herd normally managed on the farm. More paddocks will be required for dairy farms. Management also needs to consider if any extra mobs/herds are created especially at lambing/calving or mating times. Paddock size should cater to feed production capacity rather than 'fixed' acreage blocks. Fencing should also account for wet and dry areas, thereby allowing the most efficient use of land over the whole year's seasonal changing cycle.

Pasture species should include as wide a variety of plants as possible and definitely aim to include permanent species. Always seek the older plant varieties, as many of the modern varieties are hybrids developed for artificial pasture conditions. The hybrids often have big leaves and little root systems, which is not what you want in your bio-dynamic pastures. Your experienced regional BDAAA member can provide advice on specific species for your area. Once your soil has developed Bio-Dynamic activity and structure, a further refinement to your pasture is the inclusion of pasture herbs in the sowing mix. (It is difficult to obtain such seeds, but can be well worth the effort. - Juliette de Bairacli Levy's book *"Herbal Handbook for the Farm & Stable",* is a most informative read.)

Due to the extreme climatic conditions in Australia, it is strongly recommended that livestock are always provided with access to a range of mineral licks. (This can be as simple as the provision of Blue Metal dust.) In this way stock can better utilise any dry standing feed or hay/straw. Additional mineral requirements may also be sought by stock during very wet conditions.

One of the fundamental tools in managing stock health is based on your breeding program. In the same way that pasture species developed for artificial conditions often do not perform under natural conditions, livestock selected under artificial conditions may not perform under their new environment. Time is needed for stock to re-adjust and regain their health.

A. BEEF CATTLE SELECTION

By Albert Hancock ©

The most important thing in producing beef is to have females that are femine – that produce a suitable calf within a 12-month period. For a female to be able to do this for up to 10 years, she must be maternal. Of course there are other factors that come into cattle selection such as body structure, but to have a maternal female is most important and the other factors will fall into place.

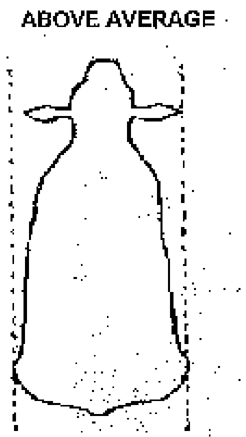
Maternal Animals

An animal with a high maternal trait can be expected to reproduce frequently without problems and rear a similar or better calf showing trait consistency, with an even, positive growth rate.

Females with strong maternal traits will show the following characteristics at any age:

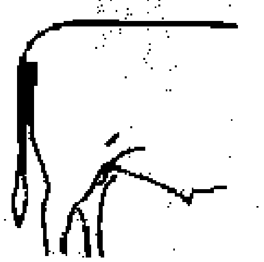
- Long angular body, low hips, and sloping rump.
- Thin neck and angular shoulders at the point and over the chine, with pointed ears and sharp facial characteristics.
- Flat bane and smallish feet
- Petite shaped udder with small slender teats
- Strong suspensory ligaments and fine textured udder skin
- Shorter hair and sleeker coats under all environmental conditions
- Longish shaped vulvas

The pictures below show an above average maternal female.



Basic Form

Angularity



Muscle Shape

Femininity

Terminal Animals

On the opposite end of cattle breeding is a terminal animal. These are animals that only have a short or no breeding life. They should be the first to go for slaughter. Animals showing stronger maternal traits can replace them.

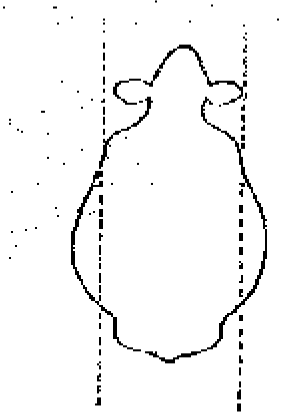
Terminal animals have more masculine characteristics such as the following:

- Short, thick body
- Beefy shoulders or heavy joints in both back and front legs and big feet
- Hairy udders and fleshy, thick shaped teats
- Weaker suspensory ligaments

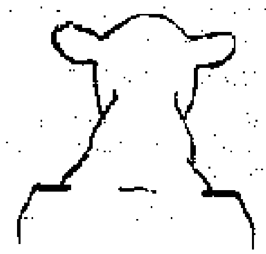
- Hairy coat during some environmental conditions. Hairy necks show slow hormonal activity.
- Vulva's that appear small and tight with muscular, rather that maternal rumps.

The pictures below show a below average animal.

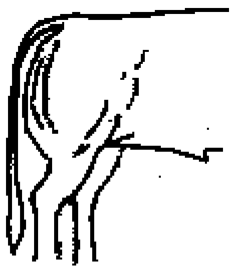
BELOW AVERAGE



Basic Form



Angularity



Muscle Shape

Femininity

Cattle selection is a skill that must be developed. Selecting the wrong type of breeding animal can quickly lead your breeding stock into terminal animals.

B. CATTLE CONFORMATION, TEMPERAMENT AND HANDLING

By Trevor Hatch ©

Temperament and handling

When selecting future breeders or sires the importance of temperament is paramount. Aggressive animals, particularly if it is towards humans are dangerous and should be culled.

Flighty animals can sometimes be quietened by skilled handling. Animals that remain flighty are a problem to handle and less efficient than docile ones. i.e. if the head goes up, the eyes widen and the animal starts to move nervously then that animal should also be culled from the breeding herd.

A docile animal will show a placid eye and quiet breathing. She will readily chew her cud in the presence of humans and move quietly when prompted to do so by the handler.

It is important to handle animals quietly, calmly and at their own speed. Always leave plenty of time to do the job at hand. If you are in a hurry the cows immediately sense this and do not muster and draft well.

If you are retaining calves after weaning from the mothers, this should be done in a small paddock or yard. Quietly hand feed for a week to ten days. For the first two days let the calves get a bit hungry before feeding. This will encourage then to come towards the feed and consequently you. Gradually increase the amount of noise i.e. gates banging, or buckets rattling etc. Slowly bomb proof them. Draft off the quietest and identify those that need more time and effort.

Head & jaw/muzzle/nostril size

The head should be balanced in height, neither too short or too long and narrow. The width of the muzzle should be at least nearly as wide as the distance between the eyes. The nostrils should be large enough to allow the animal to take in air for its oxygen requirements and to regulate the heat built up within the animal by the fermentation of large quantities of plant material.

The lower jaw should be visible looking from the front when the animal raises its head to the normal level for walking. When viewed from the side the chin should be visible below and slightly behind the top lip.

Eye set & channeling

The eyes should be well hooded and pigmented with drainage channels.

Shoulder – position on spine

The shoulders must be located in the correct position fore and aft on the body. If the position is correct the brisket will carry well through and forward of the front legs. This will also allow a smooth flow down the side of the neck onto the shoulder.
The shoulder blade should not stand too upright and should not protrude above the spine. The lower end of the shoulder blade should not be easily visible in an animal in good condition.

Wither and chine

The transition from the wither to the chine (the area behind the shoulder blades) should be smooth and not dip in at the side of the body.

The chine should be full and wide in a beef animal, not narrow and razorbacked.

Spine

The spine should be of an optimum length for the depth on the animal. It should be straight, neither dipped or arched (roached) nor have bumps and hollows.

The neck should not look short on an animal that has correctly positioned shoulders.

Tail setting

The tail head setting should allow the tail to hang cleanly over the rump and just past the back of the hock when the animal is standing normally.

A recessed tail head in cows increases the risk of soiling of the vulva and this may set up infections of the reproductive tract.

Spring & angle of ribs
The ribs should arc out from the spine to form a rib cage that appears close to a circle when viewed from the front. The rib cage should not appear like a squashed oval. The ribs should angle back as they flow down the side of the body. The rear ribs should be longer than the fore ribs (see capacity).

Body capacity & depth
The body should be deep and wide and exhibit a wedge shape towards the rear when viewed from the side or the top. This allows the animal the capacity to process a large amount of low quality feed such as grass leaf and stem into the high quality products milk and meat.

Muscling / fleshing ability
In a bull the muscling must be at least enough to express masculinity. The seams between the muscles should be easily visible in an animal in reasonable working condition. Too much expression of muscle (rather like a Mr. Universe) lessens of the ability to lay down fat for insulation and eating quality. The exact opposite applies in animals which tend to lay down too much fat.

In females smooth fleshing is much more desirable than muscle expression. Females exhibiting real muscle expression usually lack femininity with a resultant negative effect on fertility.

Loin – depth & short rib angle / loin – length
The loin should be long, deep and wide so as to produce the best possible volume of high value cuts. It is a very good indicator of eye muscle area.

The short ribs should run parallel with the spine and not angle up as they near the ribcage.

Angle of pelvis / – height of pins
The height of the pins is determined by the angle at which the pelvis is attached to the spine. A line from the top of the pins should cut through the bottom one third of the hip.

If the pins are too high increased calving difficulty and the previous mentioned reproductive infections may result.

If the pins are too low the gait of the animal will be affected leading to foot and leg problems.

Length hip to pin
The distance from hip to pin should be long this not only increases the volume of valuable meat yield but it also increases the area of the birth canal and lessens calving difficulty.

Hip – thurl – pin placement
The thurl should be located at a point between the hip and the pin, 60% from the hip, 40% from the pin.

If the thurl is too far back towards the pin the gait will be effected leading to foot problems.

Thurl height
The thurl should be located below the bottom the pin but not so low that it creates a steep gable appearance of the rump when viewed from the rear.

Thurl width
When viewed from the rear the thurl should be close to, or as wide as the hips. Again this increases yield of rump as well as increasing the birth canal area.

Udder – texture & shape / udder suspension
The udder should be of soft texture with visible veining. When sucked out it should be visibly smaller than when full. Fleshy udders that do not reduce are undesirable. The floor of the udder should be level front to back. An udder that hangs down at the front or more commonly the back is due to weak suspension (see bull testicle section).

Teat – size & texture
Teat size should be moderate and parallel. Small tapered teats, large bottle teats, very short teats and floppy teats are all undesirable. Teats should be pigmented and soft. White, dry teats are prone to cracking and photosensitivity.

Teat – placement
The teats should **not** be close together when seen from the side. The front teats in beef cows are normally further apart than the rear teats. Very wide udders are undesirable and difficult to breed out. When viewed from behind the teats should hang in slightly. Teats that stick out are prone to constant contact with the legs and more susceptible to dirt and bacteria penetrating the teat canal.

Sheath
The sheath should not be too pendulous not should it be overly tight. An overly tight sheath can be an indicator of a tight skin.

Scrotum – suspension / scrotum – shape & segmentation
When viewed for the side, the scrotum should curve backwards as it goes down. This is an indicator of good suspension, very important for the udders of daughters.

The neck of the scrotum should be well defined with the testicles swelling out below it. The testicles should not appear to hang in two separate sacks with cleavage between. Rather there should be a slightly wrinkled conjunction of the scrotum below the testicles.

Front leg set
The front legs should carry down from the shoulder in a fairly straight line. They should not be turned out too much (5 minutes to 1 on the clock face is too much) however some turn out is normal in most four legged species, this is to aid shock absorption. They should not be turned in.

Front feet – size & shape
The front feet should be of an optimum size. Large dinner plate feet, particularly on bulls, is undesirable.

The toes should be straight with a small gap between. Open toes are undesirable as are badly curved toes. Slight curvature is acceptable.

Depth of heel / angle of pastern
When viewed from the sides the pasterns should not appear weak nor be too upright. Some angulation is necessary for shock absorption, however too much causes lack of heel depth and failure of the feet to wear properly resulting in foot problems.

Hind leg – hook & stifle angle
The hind legs when viewed from the rear, should have enough angulation to provide shock absorption but not too much as to cause the animal to walk under itself, or overstep. If the back leg set is correct and the overall length of the body is in balance, the back foot will place in the mark left by the front foot.

If the hind leg is too straight hip and stifle problems will result and the animal will understep or walk short.

Width of hock
The hock should be wider from the side than from the rear. This is an indicator of bone quality.

Rear feet – size & shape
Rear feet are as the front feet. Small "pig trotter" back feet are undesirable.

Depth of heel / angle of pastern
See front feet.

Hind leg – rear view
When viewed from the rear the hind legs should track straight and be far enough apart to walk past the udder.

The hind legs should not appear turned out (cow hocked) as this leads to many problems including feet and udder due to contact from the legs when walking.

Coat & hide
The hide should be straight, fine and soft and of sufficient density for insulation. It should shed in the summer and regrow for winter.
Hard, dry curly coarse coats are undesirable.

Note:

- **Some parts of an animal can change. Particularly legs, feet, udders, pelvic angle and spine.**

- **These changes can have many causes such as injury, environmentally caused hoof cracks, mastitis or poor structure elsewhere or simply due to ageing.**

- **Honest wear and tear is factored into this appraisal**

C. DAIRY CATTLE CARE

By Mark Peterson ©

Calves

One of the most important health issues with dairy cattle is prevention of illness. It all starts with raising healthy vibrant calves. They must be raised in warm, dry, well ventilated housing. Insuring adequate colostrum is fed within 6 hours of birth is vital. Using colostrum from mature cows is a good way of ensuring high levels of antibodies are given to new born calves. Hand reared calves can successfully be fed once a day from about the age of 1 week. Fresh drinking water and clean straw or cereal hay should be available from birth. A mix of grain containing a high protein source should also be offered. (Wheat, Triticale or Barley mixed with 10 to 20% Linseed meal, Lupins or Soy Beans works well.) Once calves reach approximately 100kg live weight, they can be weaned off milk provided they are eating plenty of hay and at least 1kg per head of the grain mix per day. The grain mix should be fed for at least one month post weaning and longer if good pasture is not available. Calves should be grazing fresh pasture daily using an electric fence to strip graze and teach them respect of the fence at a young age. (This will make controlling them as older animals much easier.) It can also be beneficial to offer young stock ad-lib hay. Good quality clover based or Lucerne hay if not much or poor quality pasture is available. If pasture is good, then a fibre source such as cereal hay or straw will help the calves digest/utilise the pasture better. As all young stock are the future of the herd, they should be offered the best available feed to ensure adequate growth rates are obtained.

Heifers

Training heifers to enter the milking shed should be done well before first calving. By running several heifers at a time with the milking herd, they quickly learn the routine of the older cows and learn not to fear the milking shed. Once they calve they will happily walk into the milking shed looking for some grain as a reward. The training period only need to be a few days usually.

Cows

Providing a balanced diet for milking cows is vital for good health and milk production. A large framed milking cow will need about 20kg of dry matter feed per day. Most of this should be made up with good quality pasture grazed on a strict rotation (allowing for seasonal variation). It could also contain good quality grain, never more than 4kg per cow (1 to 2kg only is ideal) and a fibre source like hay and silage if the pasture is lush.

The best way to observe a cow's diet is to monitor their manure. If it is brown and firm there is too much fibre and not enough quality in the diet. Loose and runny manure means inadequate fibre. The ideal manure consistency should be porridge like.

The correct grazing rotation should be that the cows are leaving approximately 2 inches (4 to 6cm) of plant stubble in the hardest grazed areas, in between the clumps. This will ensure good plant regrowth and optimal grazing pressure. If cows are leaving more residual, a smaller area should be offered. If they are grazing lower than 4 to 6cm, supplementary feed should be offered. If all this advice is followed, health problems in cattle will be minimised. However, should treatment be necessary here are a few hints:

- Homeopathic solutions are helpful.
- A 300mm square of copper sheet (old hot water unit cut up is good) placed in water troughs is a good way of reducing liver fluke. It helps to wire brush clean once a year for best affect.
- Chopped carrots fed to infected cattle will reduce worm burden.
- For lameness, check and clean between hooves. If infected place a small wad of copper sulphate in a piece of dishcloth and tape between claws of the hoof. Run the tape around each claw, not around the leg, to hold in place. The wad only needs to be held on for a couple of days.
- Mastitis can be difficult to treat. Prevention is the best method here. Using a teat spray disinfectant such as tea tree oil mixed at a rate of 40ml in 25lt of boiled water (out of the hot water service is fine). Also adding 2 to 4lt of glycerine will stop teats from drying out.
- Wearing disposable gloves during milking will help reduce the spread of infection.
- -When cows are calving, make sure it is in an area that is clean. Move springing cows to a fresh area every few days.
- -Massaging tight udders after calving with udder mint can also help soften them.
- Treatment such as fresh garlic and/or garlic extract can also help cure mastitis.
- Cows showing signs of milk fever need quick treatment with under skin calcium injections -
- To help prevent milk fever, two weeks before calving, springing cows must be removed from grazing green grass. Ad-lib cereal hay and a small amount of grain (1kg per cow) should be made available. This will help the cow metabolise calcium from the bones to help meet milk supply needs, thus reducing the risk and/or severity of milk fever. Older cows, fat cows and high producing cows are the most susceptible to milk fever.

Note from Alex: When I enter a paddock of Jerseys, or even Frisians, I look for the few real cows and they soon look at me (a fact recorded in Switzerland with Swiss breeds), often the shape of big little cows with plenty of spirit shown in carriage, head roundness of body and the eye. Those, unaffected by hot or cold, visitors or dogs, which give the same amount of milk – regardless.

The vessels are not the longest, of show type, but the forequarters carry even milk with the rear, the bone is fine, hip bones stick out wide, thurles are near as wide and pins of the finest, high, wide and far from hips, offering plenty of room for the udder, which is attached high and into the sides above the legs. The udder, full, shows per fine skin – all milk, and milks out evenly to a glove. The head shows calmness, both of eye and beauty. It can talk and understand, love and is loved. One has to put the arm round her; but I wouldn't do it with an equal Jersey bull; a little more caution – one never can tell. I forgot the finest of skins of a bio-dynamic glow. That was my "Baroness", bred from one Island cow and 2 Island bulls as grandparents, and Belgonia Junette, and fine curved horns, herself an Eileen....I long for her....

D. SHEEP NOTES

by Vince Heffernen ©

I clearly recall a long telephone conversation with a [patient] Demeter sheep farmer when I first broached conversion. Most of my questions focused on how he reacted to problems that beset him. “What do you drench with? What do you treat lice with? What do you do with fly strike?”

These are all valid questions and showed how my thinking was in those days. As a conventional farmer I’d see a problem in my flock and respond with a ‘solution’. Thinking ‘biologically has a very different paradigm [lens] through which I see everything now. Whereas once I would see fly strike as something to ‘treat’ now I see it in biological terms – the symptom of other issues. Sure, treatable in the short term but symptomatic of deeper issues.

Likewise with worms. I now understand the worm cycle better and the reasons why my sheep might have worms that affect production. With greater knowledge there are cultural methods I can apply to avoid heavy worm infestations/burdens and early-intervention approaches I can implement if I am concerned my sheep are infested and need treatment. Parasites need to be understood rather than pointlessly attacked with chemicals.

Long term strategies are in place to ensure that sheep with poor immune systems are eliminated from my flock. Sheep are the end product of a long biological trail – starting with sunshine & water consumed by a living soil with a vast array of soil micro-organisms that I cannot see, perceive or [truly] comprehend. That relationship is the base for all that flows from it. These organisms shape the soil; cycling nutrients, building structure, eliminating disease & pathogens, creating habitat for roots & a greater array of micro organisms. This healthy, aerobic soil is ideally suited to maximise the infiltration rate of water – ensuring the benefit of rainfall is fully realised. H_2O is the greatest limiting factor in our soil environment and is likely to remain so in years to come. Having captured rain, the bio-dynamic approach ensures that this moisture is retained in the soil for as long as possible allowing growth either until more rain arrives or to a maximum length in a growing season. This is critical as extra, high quality feed is grown at the most crucial time.

So my sheep now eat quality pasture, free from parasites, that maintains healthy body weight levels – limiting the likely collapse of their immune system. In this way health issues such as worm infestations, fly strike or succumbing to disease are sidestepped.

Sheep have access to a sea salt lick 365 days of the year – however only at certain times do they intuitively consume this supplementary lick.

Over the last few years I have developed a method of rotational grazing that is easily changed with more or less favorable seasonal conditions. Many ‘practical’ issues have needed to be considered, & implemented with this approach – but the introduction of ‘animal impact’, the allowance of adequate rest and an even graze have been essential for our pasture growing success.

After a few years of Bio-Dynamic farming practices, the soil is structured and pasture changes from clover cape weed dominant to clover and natural pastures plus any permanent species e.g. phalaris. The effect of this change is that dust particles are held in well structured soil and the permanent root structure of natives and perennial species. When wool is tested for sale the yield is measured and vegetable matter, and micron. Generally the micron will be lower, but more noticeable is the luster, hence the softness. A more noticeable feature is the increased yield, in my case, 63% - 67% was the norm, and now it is 67% - 73% and each % increase can return 15 to 20 cents per kilogram increase in price, as the buyer buys more wool and less dirt contamination. This equates to $40 - $60 per bale produced and over say 50 bales is a useful gain.

The pasture has for less erodium or cork-screw, a surface feeding nature grass does well on superphosphate pasture, but fails on BD farming as it does not have deep root system. The vegetable matter in our wool is now down as low as 0.4% in main lines, once it was as high as 4-5%, having a beneficial effect on bale value, not to mention the benefit of less downgrade wool skirted from the fleece and the discomfort to the wool handlers in the shearing shed at shearing time.

Another aspect of BD sheep farming has been the lambing percentage. This is critical as to the profitability of wool and meat production. In this district the general lambing percentage is 60% - 80% average which I used to achieve. However I grew rape as a summer crop for a few years and the first year the lambs were very loose with manure, and a product called Mineral Plus was used, and it was recommended to dry the lambs up and increase their body weight gain. It did just that and I use it for all the sheep 3-4 times a year. The Plus has the inclusion of Silenium, which has a huge effect on increasing the fertility of the sheep, hence my lambing last year was 86% average and I achieved 100% with Merino's in one mob for the first time last year under dry conditions.

Selection of Rams is important in the case of wool production. Pick open faced upright Rams. Especially look for long stapled, loose skin sheep. The more the skin can move the more nourishment it can store under the skin to grow the wool. Look closely for good feet and long bodies. With fat lamb production choose long bodies, with depth and good muscle rather than short thick set animals which usually don't have free loose skin. Naturally always favour the more placid animals rather than flighty nervous types.

E. POULTRY NOTES

By Kathy Barrett ©

Chicks (bought in at day old)

Leave a light on for the first 48 hrs to make sure all chicks find food and water. Then reduce lighting making sure they have natural dusk, as this encourages them to roost.

- Make sure water and feed is available at all times and kept uncontaminated.
- Monitor temperatures (Listen to your chicks they will let you know when something is wrong)
- Watch that the chickens are given enough space. Overcrowding will encourage feather pecking
- Let outside when fully feathered approx 4 weeks (weather permitting)
- ***Pullets***

- Make sure there are perches available as soon as possible
- If mobile sheds are used start moving sheds short distances, if moved too far the hens will camp on the spot where the shed was.
- ***Layers***
- Make sure nesting boxes are available from 14 weeks of age
- Mobile sheds to be moved no more than 40m per shift
- ***Egg handling***
- Make sure eggs are collected daily and stored below 20°C
- All eggs to be candled (It is illegal to sell cracked eggs as this increases the chance of Salmonella.)
- Eggs to be sold in new packaging

For further information the Code Of Practice for the shell egg, production, grading, packing and distribution is available from www.aecl.org (Australian Egg Corporation Limited) this is the minimum standard that we need to comply with.

General Point

- Hygiene is of the utmost importance. Make sure all sheds, feeders and waterers are cleaned thoroughly between batches of chickens.

F. NOTES ON RAISING PIGS

By Jenny Fawcett ©

There are few specialised bio-dynamic requirements for raising pigs. The general provision of good food, fresh water, shelter from heat and cold, mud for wallowing, ample space to roam and forage lead to happy and healthy pigs. The health and welfare of your pigs is governed as much by your observation of their needs than any particular "recipe" for growing a healthy thriving pig.

Housing Requirements:
Adult sows (between litters) boars and weaners (growers) need only an old corrugated iron tank cut length ways and re-enforced with a strong pipe frame. Build it strong enough to be dragged around to fresh ground occasionally.

Nursery area
Establish individual grazing areas with permanent housing consisting 3 x 3 metres of concrete panelled walls with iron roof . A steel bar set off the wall about 30 cm aids in the prevention of piglets being accidently rolled on by sows. Have bare earth floors with fresh straw bedding. Allow access to the

outdoors for farrowing on fresh ground if the sows chooses, however this may cause problems for new born piglets exposed to excessive heat or cold. Other people have great success with mobile iron clad housing. The provision of many shade trees are also beneficial.

Food

A biodynamic grain mix supplemented by access to pasture with treats from the orchard and vegetable garden give a nutritionally balanced diet.

Roller mill a mix of barley, wheat, rye, oats, every couple of weeks. For additional protein linseed, sunflower seed and pulses offer variety. Bran is also a valuable addition to their rations.

Quantities required for a daily feed regime.
Pregnant sows: 2kgs increasing to 2 .5kg in the last couple of weeks of pregnancy.
Boars: 1.5kg
Weaners (growers): at weaning 2-3 months 1 kg up to 2 kg at 6 mths.
Introduce fine ground mix to piglets at 3 weeks.
A nursing sow requires 2.5kg plus 0.5kg for each piglet being suckled.
Additional minerals and supplements added daily to rations as per suggestions of Pat Colbey, her books are a great source of information and certainly are a part of keeping our pigs happy and healthy. These include Dolomite lime, seaweed meal, yellow dusting sulphur, copper sulphate , cod liver oil and apple cider vinegar.
All feed rations are adjusted to seasonal conditions and individual requirements, daily contact and observation of the herd will help recognise any potential problems.

Water

Pigs love clean fresh water, a nozzle system with a failsafe supply of water would be ideal.
Work towards small shallow troughs with auto fill that are easily flushed out daily. Big troughs tend to get fouled quickly. Underground water pipes are soon dug up and then possibly totally destroyed.
During warm weather the pigs love mud and you need to keep a wallow (they soon dig it themselves if you wet an area) topped up but not to become too boggy.

Fencing

Electric fencing, three wires hot and an earth wire are ideal, pigs gain great respect for electric fences very quickly. Although it does have its problems with grass growing and dirt being pushed up and shorting out.

In the nursery compounds we have cyclone 8 wire and a barb on the lower wire, this has been quite successful as long as they are happy and content.
Lane-ways to move pigs about is also a great asset in the layout design. The best way to move pigs is when they are hungry and will nearly always follow a bucket, although there are exceptions – eggs are a great treat for a stubborn sow.

Handling

Pigs respond to calm but firm handling, plenty of patience is required when moving them, always done best on an empty stomach (pig's that is).
When weaning piglets take the sow away whilst piglets are feeding. It is near impossible to steer piglets away. When presenting a new sow to an established group allow the new sow to have contact through the fence for a day or two, as this reduces the likely-hood of fighting.
Sows usually come back into season 3-7 days after weaning so can be re-introduced back to the boar straight away (This also gets their mind off their piglets!).
Weaned piglets are best left in their familiar surroundings for a week or so until they are settled, before introducing them to larger groups. Separate guilt's and boars by the age of 5 months if they are being keep longer, unless boars are castrated.

Farrowing

Signs of a sow preparing for farrowing can be an amazing sight, often building a nest from anything they can collect together, branches, grass, hoses and anything lying around. This can go on for many hours or they may just settle down indoors and get on with it. Farrowing usually goes on for several hours with about 20 mins between each piglet. Each piglet has its own separate umbilical cord which separates quickly after birth. Sows are generally quite passive during this process but may become extremely protective after the event.

Internal and external parasites

On arrival to your farm all new stock should be quarantined for 2-3 weeks and treated for parasites. Externally a good wash and rub down top to toe and inside ears with sunflower oil then dusting with yellow dusting sulphur should get rid of any lice or mites .Checking regularly behind the ears, underbelly or around rear end for any signs of eggs. Internally there are several types of worms pigs are susceptible to. Using Pat Colbeys recommendations of copper sulphate and the dusting sulphate worms are kept at a manageable level. We also add garlic to rations randomly to assist with internal health. If there is a problem with ill thrift a faeces sample to the vet indicate any problems.

Breeds

When choosing a breed suitable to for your farm visit as many different breeders as possible. The Durocs the Fawcetts use are an American breed, dark brown in colour, hairy and boisterous, ideal for the outdoors. All breeds have different traits as do individual animals so look for good natured, docile temperaments for easy handling.

G. TREATING LIVESTOCK PROBLEMS

Once a farm has undergone the transformation of soil structure and plant health, Bio-Dynamic livestock are less prone to suffering health problems. Any problems that do arise are then usually the result of a climatic upset to the finely tuned farm ecosystem. It is a constant challenge to determine the weakness as a result of the upset and to SUPPORT the system until it can again regain harmony.

Worm Burden

Ensure the provision of high quality feed and access to mineral licks.

When climatic conditions result in an increased worm build-up stock may need to be rotated more frequently, or in the case of Barber's Pole, sheep may even be rotated before cattle.

The following drenches have shown success with stock:-

Rhubarb Drench

One medium sized leaf of Rhubarb (Dinner Plate size) for every 400 to 500 Kg liveweight beast.

Vitamise leaf finely, then dilute the substance with water and administer as a drench.

It is very important to follow up this process **twice more** at three weekly intervals.

Kelp & Apple Cider Sheep Drench

Apply 20ml kelp plus up to 20ml apple cider vinegar as an oral drench
Note: The vinegar should be mixed with the kelp just prior to drenching. Mix only enough kelp and apple cider vinegar drench as can be used on the day.
In severe cases there may be no signs of improvement i.e. scours or loose faeces still prevalent, so repeat dosage up to 4 weeks later.

Early autumn drenches can be used when available feed starts to deteriorate. Better use of the feed is made when kelp is introduced as it is known to aid digestion and absorption of feed. Timing of kelp drenches will be influenced by your farm management and seasonal conditions, but the following periods have produced good results.

- 5 – 6 weeks before sales or shows may help the sheep present better
- 5 – 6 weeks before joining may improve cycling and conception rates
- In the lead up to lambing, as may improve the provision of micronutrients for the unborn lamb(s) and ease lambing especially when apple cider vinegar is used.

Fly Strike

Under correct Bio-Dynamic management stock odour becomes sweeter and fly problems reduce. Where humid and wet conditions occur weaker stock may succumb to strike.

Using Earth itself
Trevor Terlick (who has a clay loam soil) has found that rubbing a handful of his biodynamic soil into the fly struck area has been sufficient to heal the wound.

Garlic or pyrethrum sprays or citronella oil has also proven effective and healing.

Pyrethrum Spray

Cut up into small pieces 1kg of pyrethrum plant when it is in full flower. Place in a sealed container with 8 litres of water. Allow to brew for 3 weeks or so, shaking occasionally when you walk past to encourage extraction process. (The smell is not pleasant, but worth the effort!)

Strain and add the following to 1 litre of the pyrethrum mix:

1 cup garlic oil
2 tablespoons eucalyptus oil
½ cup pure soap flakes

Bottle and keep in cool, dark place until required.

Dolomite & Sulphur
Inclusion of dolomite and sulphur licks may also reduce stock susceptibility to fly strike.

Lice

A good buffer zone/fence between you and your neighbour reduces possible infestation.

Sulphur licks
Provision of sulphur licks is often enough to overcome this problem. Pyrethrum or Garlic sprays may also help.

Diatomaceous Earth
Use of diatomaceous earth (a naturally occurring microscopic phytoplankton, very high in silica) is also very effective. It acts on the lice by its abrasive action on the lice cuticle.
Dust masks and care needs to be applied when using this dusting powder.

Ticks

Interesting to note that BDAAA members often find that introduced non-Bio-Dynamic stock take about a year to gain in health and naturally overcome the problem of ticks. During this time you may try a mixture of Pyrethrum or citronella oil mixed with either vegetable or paraffin oil poured along the cow's back, or provided as a back rubber in the paddock.

Milk Fever

This trouble is becoming increasingly common in cows and must again be associated with forced unnatural modern feeding and herd management. There appears to be no record of milk fever among the wild herbivorous animals during lactation. For instance, i have never yet on all of my moorland wanderings found the dead body of a hind killed by milk fever, and yet large numbers of domestic animals die annually from this ailment. Therefore, before a cow calves down, much attention should be paid to her diet to ensure that it is not too immediately milk-stimulating, and thus likely to cause overstrain of the system, already strained to full capacity by the last stages of pregnancy.

For the same reason the cow's diet should be watched very carefully immediately following parturition; it should for a week or more be preferably a meagre diet, rather than an over-rich one. Let the diet be very laxative and green. The green element provides the abundance of calcium, the sudden over-drain of which is a basic cause of milk fever. Molasses being very calcium rich, and not at all overheating as some farmers state, should also be given freely. Steamed hay (hay heated gently over a bucket of water to soften it), handfuls of watercress and water mint, crushed nettles, are all beneficial in the early days after calving. Preventive treatment in a threatened case of milk fever, or in cows known to have a tendency to the ailment, is a small daily dose of Epsom salts, to discourage immediate over rapid production of milk. Two tablespoonful of salt given in one cupful of the cow's own milk is sufficient.

Symptoms Development of milk fever in the cow is usually very rapid. It must also be stated that it is not always associated with calving, although it is generally a subsequent ailment. Milk fever can sometimes occur many months afterwards, although such an occurrence is rare in cows. The cow becomes feverish, lows almost incessantly, and appears very uneasy. She rapidly loses control of her legs, and lies down and is unable to rise. Her eyes become very congested and her breathing and pulse rapid. If immediate and effective treatment is not then given, coma rapidly sets in, and death may follow. The horns and extremities usually become very chill.

Treatment this must be immediate. The cow must be prevented from stretching herself our upon the ground and getting her head down, by supporting her with bales of straw or hay. She should thus be kept propped up in a sitting position. If coma has not already set in, she should be given an immediate calcium and iodine rich drench of two big handfuls of powered seaweed mixed into two pounds of molasses, the molasses being mixed with warm water or milk to make it of running, drinkable consistency. The drench can be repeated at hourly intervals. This treatment alone in mild cases of milk fever, taken in its very early stages, has restored cows to normal. The more orthodox treatment, essential in all cases of complete collapse of the animal, is inflation of the udder with air. This treatment has been in use in cattle medicine for half a century or more and is very effective. All firms who sell cattle foods and medical instruments, supply an apparatus for udder inflation, with full instructions for its use. The main points to watch when giving such treatment are; the absolute sterile condition of the needle used, so as not to cause any infection of the udder, and care that the air is not injected too rapidly into the udder, so as to cause inflammation. Air injection should be given very gently, if necessary the operation can be repeated three or four times. The principle behind the udder inflation is to prevent immediate further flow of milk into the udder, and thus to stop further loss of calcium and hormones from the bloodstream.

An alternative treatment to udder inflation and much used in orthodox practice, is the injection of a strong dose of calcium solution into the bloodstream. This treatment requires skill and is best administered by a veterinary surgeon.

Mastitis

The basic cause of mastitis is much the same as that of milk fever: unnatural rearing, especially dietary. The cow in total health experiences no lactation difficulties. Many farmers blame the use of milking machines. Personally I think that a chief cause is the deprivation of the cow of the pleasure and stimulus of suckling her calf. American farmers have proved that the quickest way to cure a cow of all udder ailments is to let a vigorous calf suckle her, making sure that the calf feeds from the affected quarters.

When machine milking is used, the cows if possible should be finished by hand. Also always massage the udder after milking, and bump it up and down in the way that calves do when feeding.

Herbal treatment has proved particularly successful in cure of mastitis. It was this disease, cured speedily and completely by my herbal treatment, which first interested Sir Albert Howard in herbs for cattle, and caused him to urge me to develop the work as fully as possible. It is my opinion that animals with mastitis, treated by orthodox methods with chemical drugs, and neglect of all fasting and special dietary treatment, never again possess normal health of the udder, a quarter of the udder very frequently being lost. Also unnatural treatment of mastitis often leads to later development of tuberculosis of the udder. While use of the sulphonamide drugs in large quantities – and even the modern over refined or concentrated or synthetic substance into which the chemist has turned the natural mould penicillin – will often produce disorders of the kidneys, also foot diseases, and even help to induce abortion. These remarks apply likewise to most of the modern antibiotics. But herbal treatment is a tonic to the whole organism and will leave the cow so treated in better health than she enjoyed before the onset of the disease.

I first used the mastitis herbal treatment as long ago as 1939, for goats, and in 1946 adapted the goat treatment for cows, with the same successful results. By 1947, Sir Albert Howard was sending me all cases of mastitis whose owners had applied to him for advice. Treatments were always successful and herbal medicine for veterinary use grew rapidly in prestige.

Symptoms The disease begins with attacks of shivering, and general unease of the animal in manifest. Appetite fails, the horns feel chilled and fever develops. Sometimes the temperature rises rapidly to 107°F, high fever being a typical symptom of the ailment. The entire udder rapidly hardens and becomes very hot to the touch. Curdled material is found to be present when expressing the milk. As the udder further swells and hardens, the cow develops a peculiar straddling stance to prevent her hind legs from pressing upon the enlarged udder. In neglected cases mortification of the udder may set in.

Treatment This must be immediate and very thorough. The main drawback with herbal treatment, for the busy farmer, is that it requires time and care. It is not the mere injection of some violent drug to suppress the symptoms and the affair ended, constant attention to the cow is required for a week or more. But the resultant complete health of the udder and the cow herself, especially if she be an animal of much value as a milk producer, is surely worth the time required, were it not also sufficient to feel that the very best is being done for the animal herself, quite apart from her value.

The cow must be confined indoors in the cowhouse throughout the early stages of the treatment. This should be well ventilated, for a cow in fever requires fresh air. Begin with a cleansing fast of two days. Water only is allowed. All straw or other bedding must be enclosed in sacks to prevent the cow from eating during the fast, the litter-stuffed sacks being placed on the floor for bedding. Cows both in health and in sickness should always have sufficient litter on which to lie, to prevent any kneeling on bare stone. Each evening of the fast a laxative drench of twenty large senna pods should be given, the senna pods to be soaked in half a pint of cold water for a minimum of six hours; one teaspoonful of ground ginger to be added to the brew. The whole brew to be given at one dose. Break the fast on the third morning with a drench of two pints milk, half pint tepid water, and ten heaped tablespoonful of molasses added. At midday feed a meal of steamed hay approximately one third of a gallon bucket of sweet hay, softened by heating gently over hot water for one hour. Add to the hay two pounds of bran and ten tablespoonful of molasses. Repeat the meal in the evening. Do not give further senna laxative brew. Keep on this diet for three days, but increasing the quantity of the feed according to the size and appetite of the animal being treated. The medicinal herbs to be used throughout the treatment are garlic and wood sage, wood sage or common (blue flower) sage, sage and garlic being specific for the cure of udder ailments. The garlic dosage is two whole roots grated into one pint of water, half pint given morning and night, or six to eight for grain garlic tablets. The tablet dose can be given morning and night if necessary. N.R. Herbal Compound tablets contain blue sage in addition to wild garlic.

The blue sage is given as a brew during the fast, two handfuls of the herb, finely cut, brewed in 1½ pints of water, two tablespoons full honey added. Give as a single drench in the early morning. When the fast is ended the herb can be given finely cut, mixed with bran and molasses. Give also, when available, several handfuls twice daily of raspberry foliage and herb Robert, also Southernwood.

When the body temperature returns to normal, the cow should be turned out to grass, except in severe weather (sunlight is always beneficial in udder disorders). To complete the efficiency of the treatment the cow should be allowed to suckle her calf for several weeks, when back in the field.

External treatment Some external aid must be given to relieve the udder5. This should consist of cold packs to dispel the fever and encourage the expulsion of the pus accumulation from the teats. A brew of common dock leaves should be used for the cold pack. Two handfuls of dock leaves brewed in one pint of water. Soak flannel in the brew and well bathe the udder and teats, with cold brew, following very gentle milking. This should be done three times daily, or more often if necessary. In cases of very bad inflammation packs should be made soaking thick swabs of cotton wool in the dock brew, covering with flannel, and then binding with an external sheep bandage to keep in place. If necessary the cow's head should be tied short, to prevent her from removing the udder pack.

If the udder is very congested feeling very hard, then the brew should be used hot.

When the cow is back in the field continued attention should be paid to the daily diet. In addition to the green feed that she will get from the field grazing, the cow should be given twice daily a feed of sweet hay, a normal ration for her breed, a supply of compost grown oats, and a mash of bran and molasses. As a convalescent tonic, steamed beetroot is excellent, the leaves, raw, also being fed to utilize their high mineral content, especially fluorine. Feed also blood cooling and mineral rich comfrey foliage.

Final note to mastitis treatment. It sometimes happens that the general care of the ailment is very speedy following the herbal treatment; all fever departs, and the udder returns to normal, with one exception. A small area of hardness sometimes persists in one quarter. If this persists for as long as three weeks, a short, intensive treatment is then indicated. A one day fast, one day fluid diet, milk-water-molasses, the garlic and sage dosage to be doubled. Repeat the external treatment of the udder, but apply the dock leaves brew hot instead of cold (cold to remove inflammation; hot to dispel disease bacteria in the tissues and to reduce congestion). A few drops of eucalyptus oil or peppermint oil can be added to the hot brew with advantage.

Dry Mastitis

This ailment can attack the udder of a cow when she is dry. It is often caused by sudden chill during hot weather, or unsuitable overheating diet. Thus the ailment is more prevalent in late summer and early autumn than at other times. It is rare in winter. The condition is more stubborn to cure than common mastitis.

Symptoms these are the same as for common mastitis, but there is generally less fever and less swelling of the udder. Sometimes the swelling is confined to only one quarter.

Treatment The same as for common mastitis (see above). But replace the senna laxative dose with one of Epsom Salts. Give three to four ounces of Epsom salts dissolved in three quarter pint of warm milk, four dessertspoonfuls molasses added. Give the usual garlic treatment. The udder should be rubbed and fomented with hot dock brew, and the affected quarters drawn thrice daily. Continue the treatment until the udder is normal.

H. DROUGHT FEEDING PRECAUTIONS

Under drought feeding conditions longer term diets consisting mainly of cereal grain may result in calcium deficiency in some stock. To reduce this possibility, add finely ground agricultural lime (calcium carbonate) to cereal grain at 1.5% weight of the ration i.e. for every 100kg grain add 1.5kg of limestone. The lime is spread onto the grain when filling the feed out bin.

Do not use builders lime, burnt lime or slaked lime. If the stock water does not contain salt levels, then 0.5% coarse salt should also be added to the grain diet.