

Alternatives to owning livestock



Contents

Disclaimer	2
Acknowledgements	2
Summary	3
Overview	5
Profit sharing	7
Profit sharing case study, perspective of the livestock owner	8
Agistment	10
Share farming	14
Livestock Leasing	19
Building the business with low capital: a case study example	22
Backgrounding:	22
Sharefarming:	22
Leasing:	23
Trading livestock:	23
Key to success:	24
Summary:	24
Appendix	25

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Summary

There are alternatives to owning livestock that could suit some businesses, and would allow these businesses to establish, expand or value add without the need for a large up-front capital outlay.

These alternatives include:

- profit sharing
- agistment
- share farming
- livestock leasing

These types of arrangements are uncommon within the sheep industry, however as the case studies within this report demonstrate, they can be successful and benefit both parties.

Profit sharing arrangements can provide an opportunity for both investing parties to value add a product they otherwise may not have been able to. The capital investment required from both parties is generally low, as it involves investing the value of the asset to be value added, in addition to labour. The risk is shared between the parties, although not necessarily in equal amounts.

Agistment provides an opportunity for the party offering the agistment to value add an underutilised forage resource. For the livestock owners agistment may provide a lower cost option to supplementary feed livestock and the ability to destock land at risk of becoming damaged. In this arrangement the risk and capital outlay is held by the livestock owner, and allows the forage owner to earn additional income with very little risk or capital required.

Share farming can provide an opportunity for the non-asset owner to establish or grow a farming business without a large capital outlay. For the asset owner, it allows greater control over their equity than would be the case in a leasing arrangement. Both parties share in the upside and downside of prices and production.

Livestock leasing can enable the lessee to build up equity in the livestock throughout the life of the arrangement, without having the high up-front capital cost of purchasing livestock outright. The aim of this arrangement, for the lessee, should be to have developed the equity in the livestock by the end of the agreement. For the lessor, it may provide an opportunity to leave farming or relinquish a livestock enterprise over a period of time while pursuing other opportunities/interests, without having to sell their livestock genetics. Under this arrangement, the lessor can then choose to re-enter farming or a livestock enterprise at a future date without the capital outlay of re-purchasing sheep or having to re-establish their former genetic base.

A successful alternative arrangement, where one party does not own the livestock relies on the situation being a win/win for both parties involved. It is important to have trust and good communication in all arrangements, but is critical to the success of share farming and profit sharing arrangements where the asset owner is more involved with the day to day management and decision making. In all situations, it is important to consider the length of the arrangement, as this can have a significant effect on the potential risk to the non-stock owner, most particularly in the case of livestock leasing. In a three year lease one poor year can mean that very little profit is made by the lease.

There are many variations in which profit sharing, agistment, share farming and leasing arrangements can be developed to benefit both parties. Before choosing to enter into any arrangement, whether it be as the owner or non-owner of livestock, it is important to ensure decision making is based on a proper economic analysis that considers risk and return on investment.



Overview

Project Aim

To develop and document alternatives to owning sheep.

Method

The information contained within this report is based on interviews with producers currently participating in arrangements where one party does not own the livestock, and a consultant with extensive experience in assessing agriculture investment options.

Overview

Alternative arrangements to owning livestock are divided and addressed in five separate sections in this report:

- profit sharing
- agistment
- share farming
- livestock leasing
- building the business with low capital: a case study

Each of these arrangements vary in complexity, capital outlay, risk, and potential return. Importantly, these factors may differ between the livestock owner and the other investing party. The report will provide a general overview of each of these arrangements and will consider the value of the arrangement to both investing parties. The case studies provided are of producers who are currently involved in an arrangement where one of the parties does not own the livestock.

The case studies presented have differing levels of formality. It is important when entering into any of these arrangements, to consider the need for a formal agreement. In drawing up such an agreement, consideration needs to be given not just to the structure of the agreement, but also the responsibilities and liability of each party in the event of a pest or disease outbreak (eg lice, footrot) or event that constitutes an act of God (eg flood, fire, drought, exotic disease outbreak); and a formal process of dispute resolution should a conflict arise, as well as provision for termination of the agreement, and legal responsibilities for both parties. This list is by no means exhaustive, and professional legal assistance should be sought in the development of such an agreement.

Before entering into a profit sharing, agistment, share farming or leasing arrangement, it is important to undertake a proper economic analysis to determine the value of the investment and whether the level of return is sufficient to warrant entering into the arrangement. The analysis and results will vary based on the individual situation. In undertaking such an evaluation, it is important to consider the following:

1. What is the calculated return on investment? It is important that a full economic analysis is undertaken to determine the value of the investment. The Internal Rate of Return (IRR), an economic analysis of the business, can be used to determine if the proposition is worth pursuing. In doing this it is important to set an ideal IRR that represents a threshold value - a value that, if exceeded, indicates a sound investment. This value should allow for buffering in case things go wrong (eg low

prices, low lambing percentage etc). Experience puts this figure at, ideally, around 20%.

2. How is the cost of the livestock lease funded?

If the arrangement is to be funded from the existing business, an opportunity cost needs to be applied when working out the economics - ie the opportunity cost of investing the money for a similar period in an alternative investment.

If the arrangement is funded through a loan/mortgage/overdraft arrangement, this cost needs to be reflected in the economic evaluation.

3. When calculating income, it is important to understand that by nature livestock industries are cyclic. This cyclic nature means there will be both high and low prices over time. It is therefore important to take a longer term view of prices when calculating income, and not focus on the current day price, as this is not the market the livestock will be sold into.

4. Include all costs. All too often, some costs are overlooked when undertaking an economic evaluation of a business investment. These tend to be labour and overhead costs. Each animal you run in the business needs to contribute to these costs.

5. Cost and income of a livestock investment need to include/consider the following:

- a. Annual ewe operating costs (shearing, crutching, animal health, selling costs, marketing costs, freight, livestock purchase, supplementary feed, livestock deaths, fertiliser, insurance).
- b. Overhead costs per ewe (business overheads, wages, interest).
- c. Loan repayments.
- d. Sales, including cast-for-age ewes and rams, all lamb sales (this needs to include the smaller inferior ones commonly called the tail of the mob), and wool sales.

If unsure about this part of the process, professional advice should be sought.



Profit sharing

Profit sharing will generally be one of the more simplistic arrangement of the alternatives presented. It involves both parties investing in the business arrangement, and sharing the profits. This arrangement appears to work well where both parties have the ability to contribute a resource; enabling them both to maximise the resource or value add their product, which they would otherwise not have been able to or only to a lesser extent. In this arrangement, both parties share some risk, but that does not mean the level of risk is necessarily equal. The investment risk differs depending on the type of arrangement in place. The complexity will also vary depending on the nature of the arrangement. A profit sharing arrangement allows minimal additional capital expenditure for both parties. The investment is the value of the resource at the time of contribution.

The profit sharing case study below involves both parties providing a resource required - one the lambs and the other the feed source - to a lamb finishing operation. Each party contributes to operating costs and labour of the finishing system, and at the end point (when the lambs are sold) they both receive half of the profits. In this arrangement, both parties have risk, although not equal. In this specific arrangement, the livestock owner holds the majority risk if livestock deaths occur, however they share the production and end price risk. There are a range of ways in which a livestock profit share arrangement could be set up, and this may alter the level of investment of each party, the profit distribution and the level of risk for each party.

In this case study example, there are other options for value adding their product that each party could consider. It is useful, when deciding to enter into such an arrangement, to work out the economics of profit sharing compared to alternative value adding options. Also consider the return that could be made by investing the value of the asset off-farm for the same time period.

An example of this is shown in Table 1. This example, based on the case study, compares the options of profit sharing, feedlotting and agisting for the livestock owner; and profit sharing and agisting for the feed source owner. Budgets for each option (Appendix 1.1, 1.2, and 1.3) show the income, expense and returns over an 8 year period. The average 8 year margin is then shown in Table 1 for each option less labour costs. The results show that the return from profit sharing, based on the store value price (the investment amount) for the livestock owner, for profit sharing, feedlotting and agisting the lambs, is 23%, 12% and 12% to 30% respectively. The variation in returns for the agisting option is reflective of seasonal price variation for stubble agistment. In the budget example the returns are highest for the profit sharing and agisting options, and all are greater than the returns achieved from investing the resource value off-farm for the same time period.

The livestock owner then needs to weigh up the pros and cons of each scenario. For example, feedlotting is a lot more labour intensive, and the cost of the facility needs to be considered, either in terms of setting up a feedlot or repairs and maintenance to an existing facility. Returns from agistment can be a lot more variable (due to seasonal price fluctuations) and rely on the agistment being available each season. As for the feed source owner, the returns of profit sharing compared to agistment rates are calculated to be between -42% and 35%, this variation is due to the seasonal price variation for agistment. Profit sharing has the potential to provide higher returns. It does, however, require a greater labour and resource input from the feed source owner.

The case study shows profit sharing is an opportunity well suited to regions with a high intensity of cropping. However, there are other situations to which profit sharing arrangements could be suited. These might include feedlotting, whereby one party provides all or some of the livestock, and the other party provides all or part of the feed; a production system that has surplus feed outside the growing season, such as a small seed irrigation system or lucerne hay production system; or an alternative industry that has livestock feed available that is of no or little value to their business, eg inter-row vineyard pasture. As with all systems, it is important to consider the economics, and pros and cons, of all the options before investing.

Profit sharing case study, perspective of the livestock owner

Background: The livestock owner runs both cropping and livestock enterprises. The profit sharing arrangement is with a neighbour who owns no livestock and is 100% cropping, with a high proportion of beans grown. The arrangement has been in place for 8 to 9 years, and is of an informal nature.

Driver: The key driver for this arrangement was not having enough feed for stock after a series of dry years, and not wanting to sell lambs into a flooded market.

Arrangement: A portion of the livestock owner's lambs are valued as store lambs, and transferred to the neighbouring property when stubbles become available post-harvest. The lambs are valued by a stock agent. The livestock owner provides the lambs, and the feed source - generally bean stubbles - are supplied by the neighbour. Both parties equally contribute labour, management and any costs that maybe required. When the lambs are sold, each party receives 50% of the profit (profit is sale price less store valuation).

Benefit for the livestock owner: The arrangement provides the livestock owner the peace of mind that they can breed a few more lambs, knowing they have a good quality finishing system for them to go on to. It spreads the livestock owner's marketing risk, with a portion of the lambs sold as suckers, some retained on their own stubbles and finished, and some finished on the neighbour's bean stubbles (these lambs finish later than the ones retained on the owner's stubbles). The arrangement also provides more labour to assist with looking after stock over summer.

Benefits for the other investing party: They are not investing into the store value, therefore the livestock owner is taking on the risk if something unexpected should happen to the lambs. The livestock owner provides the animal husbandry skills. Generally, they are achieving better than livestock agistment rates.

Other: In years where the market price has been too low, or the lambs not heavy enough for sale at the end of the stubble grazing period, the lambs have been put in a feedlot situation. Both parties then either supply an equal value of feed, or the one providing the feed is paid a small fee to ensure a 50/50 cost split arrangement.

Table 1. Example evaluation of returns from alternative value adding options for the livestock owner. The returns are based on a 8 year margin average for 1000 lambs, less the labour component of each option (full budgets for each option shown in Appendix 1.1, 1.2 and 1.3).

Livestock owner	Ave. return over 8 years	
Value of store lambs	66000	
Profit sharing	16500	
<i>less labour (24 wks @ 2 hrs/wk)</i>	960	
	15540	
Feedlot lambs	10000	
<i>less labour (8 wks @ 14 hrs/wk)</i>	2240	
	7760	
Agistment* lambs (24 wks @ 2 hrs/wk)	\$0.50/wk/hd	\$1.00/wk/hd
	21000	9000
<i>less labour</i>	960	960
	20040	8040

*Agistment rates vary depending on the season, the type of feed/stubble available, and regional demand.

Table 2. Example evaluation of returns from alternative value adding options for and feed source owner. The returns are based on an 8 year margin average for 1000 lambs, less the labour component of each option (full budgets for each option shown in Appendix 1.1, 1.2 and 1.3).

Stubble owner	Ave. return over 8 years	
Profit sharing	16500	
<i>less labour (24 wks @ 2 hrs/wk)</i>	960	
	15540	
Agistment* (24 wks @ 4 hrs/wk)	\$0.50/wk/hd	\$1.00/wk/hd
	12000	24000
<i>less labour</i>	1920	1920
	10080	22080

*Agistment rates vary depending on the season, the type of feed/stubble available, and regional demand.

Agistment

Agistment can be a comparatively simple arrangement between a party who has an underutilised forage resource and a party who has the requirement or the ability to capitalise on an additional forage. Traditionally, the forage sources available for agistment are crop stubbles, pastures, or forage crops such as small seed crops. The arrangements can often be opportunistic, and will generally depend on the seasonal conditions, and therefore pasture growth, and livestock prices as the drivers of profitability. Circumstances that reduce the level of forage available on a property and/or expose the property to environmental degradation (eg soil erosion, pugging etc) can also be a drive opportunistic adjustment arrangements, they may include events such as drought, bushfires, and floods. In an adjustment arrangement the level of risk for the two parties will differ, with the livestock owner holding the majority of the risk in the arrangement.

The agistment fee paid by the livestock owner is traditionally calculated in one of three ways, as a daily rate per head (eg. \$1/hd/day), on a weight gain basis (eg. \$1.50/kg/hd), or a combination of the two (eg. a base rate of \$1/hd/day, with an additional \$0.50 paid per kg/hd gained during the agistment period). The method used will often depend on the type of livestock (eg are they young growing stock, or mature dry/pregnant/lactating stock) and the purpose for them being agisted (weight gain or maintenance), and in the case of on-going arrangements maybe re-negotiated each time an arrangement is entered into.

Things to ensure are covered if you are the livestock owner:

1. That the person agisting the stock is a good producer and livestock manager. This is very important, as livestock only have value if they are healthy, productive and well managed.
2. That the livestock are appropriately insured for both during transit and for the time they are on the agistment property.

Things to ensure are covered for both parties:

1. That the way in which the agistment rate is calculated is robust.
2. That the end date of the arrangement is clearly understood, or there is a clear agreement of the process of notification for the arrangement to end.
3. That there is an understanding for who is liable in the event of stock deaths, and that appropriate insurance is held by both parties to cover livestock deaths.
4. All conditions have been clearly outlined in writing, such as possible risks, animal health requirements, any costs that maybe incurred outside of the agreed agistment cost.

In the case study example there are other options the parties could consider. For example the property owner offering agistment could capitalise on their forage resource through livestock trading, running additional stock or making hay or silage. These options all require additional capital outlay and labour resources. As such, the ability to raise capital in addition to calculating the economics and additional labour requirement of each option needs to be considered. Equally, the livestock owner could choose to consider alternative options such as, lot feeding, or reducing the number of core stock and making up the additional DSEs through livestock stock trading. As with all scenarios it is important to undertake a cost/benefit analysis of each option before proceeding.

The following case study is based on agistment of cattle, but equally would work where the livestock type were sheep. The case study demonstrates the ability for agistment to become part of a business risk management strategy for both parties. In the case study example a key component of success is due to the differing climatic patterns between the forage owner and the livestock owners. The current arrangement is utilising a peak in pasture growth during the winter/early spring period. In the future the property owner is keen to expand the agistment to include grazing dual purpose crops, it is expected this will result in the cattle achieving higher growth rates whilst having little to no negative impact on the final grain yield of the crops.

The case study demonstrates agistment is an opportunity well suited to regions with complementary off-set pasture growth. Agistment could also be an option for additional income cropping business. Stock can be agisted on crop stubbles during the summer or graze dual purpose crops during the winter, as these are often key feedgap periods for livestock enterprises, there is a good supply and demand fit. There is also an opportunity for agistment where an enterprise can offer surplus feed outside of the annual pasture growing season such as, small seed crops, summer crops and summer active pastures.

Agisting case study, perspective of the forage owner (referred to as Farmer A)

Background: Farmer A has been agisting stock for over 10 years, with the current arrangement running for the last 4 years. The current arrangement was originally through an agent, but is now a direct arrangement between Farmer A and B.

The two farmers, Farmer A and Farmer B live in different microclimatic zones over 200 km apart. Farmer A lives in an area with a 600 mm annual average rainfall, while Farmer B lives in an area with a 850-900 mm annual average rainfall. Whilst both are mediterrainian type environments experiencing cold wet winters and mild/warm summers, farmer B experiences colder, wetter winters that result in very low pasture growth rates through the winter/early spring. Pasture growth then peaks in the late spring/early summer. In contrast, Farmer A experiences the peak in pasture growth during the winter/early spring, with pasture growth slowing by late spring. This offset in pasture growth is key to the success of the agisting arrangement.

In a normal to wet season Farmer A will experience higher peak pasture growth through the winter/spring and is able to increase the DSE by agistment stock. Then when pasture growth begins to decline the stock can be removed which times in with when Farmer B's pasture are actively growing. In a drier than average season Farmer A can choose not to offer agistment and conserve the feed for their own stock. This suits Farmer B as in a drier than average year they are generally experiencing pasture growth earlier in the season, and as such does not require agistment.

Driver: The agistment arrangement allows Farmer A to capitalise on forage grown surplus to requirement with no capital outlay, a low additional labour requirement, and with a lower risk compared to an alternative option, such as trading stock. The agistment forms part of Farmer A's flexible DSE, which is an important part of their stocking rate and risk management strategy. Agistment provides assured income with the added incentive given based on livestock weight gain.

In this arrangement Farmer B likely benefits as it provides an opportunity to partially destock the property at a time when the pastures are at risk of damage due to livestock grazing short pastures in waterlogged or wet conditions, which can lead to the pasture becoming damaged and reducing the potential productivity of the pasture stands.

Arrangement: Cattle from two separate suppliers are generally agisted on Farmer A's property from end May until mid October. The length of time the cattle are agisted for is dependent on seasonal conditions. If the season is dry than agistment may not be offered by Farmer A, or the length of the agistment may be shorter. Equally, if the spring is wet, than the cattle may stay longer on Farmer A's property if pasture growth is still surplus to requirement and Farmer B's property is too wet for the cattle to return. Due to the off-set in pasture growth of the two regions this flexibility suits both Farmers. When deciding when the cattle will return to Farmer B's property both parties aim to give one months' notice to the other party.

Prior to the agistment arrangement beginning the fees are negotiated. The type of arrangement will depend on the type of cattle. Generally, the cattle are young growing stock, as such this year the arrangement is a set weekly agistment rate plus a weight gain incentive. The weekly agistment rate is charged one month in arrears, at the conclusion of the agistment period the weekly agistment rate will be deducted off the calculated total based on the daily weight gain of the cattle over the agistment period. The weight gain incentive is a win/win for both Farmers. It provides an added incentive and reward for Farmer A to manage the cattle well and to maximise their weight gain, while for Farmer B it provides the advantage of knowing the cattle will be managed well and have a higher economic value when they return to the property. Farmer A has the confidence to enter such an arrangement now as he has proven that he can achieve the target weight gain by knowing Farmer B's cattle and his own pastures. It is important that Farmer A has a good understanding of the potential weight gains achievable from their pastures and the stock being agisted as show in Table 3, the advantage of a weight gain incentive is made at higher growth rates and over a longer duration of agistment due to the initial adjustment period where stock may not gain weight.

Charging the agistment rate in arrears provides financial security for Farmer A, ensuring that he is not left at the end of the lease with a large outstanding payment and it also provides cash flow throughout the agistment period. This arrangement is agree on before the cattle arrive on the property, with details of the arrangement documented in an email, but this is essentially a fairly informal arrangement.

As part of the arrangement Farmer B is required to drench the cattle prior to them leaving the property and the cattle must have had all the appropriate vaccinations. Farmer B is always advised there is sometimes a risk of bloat during the agistment period. To manage this Farmer A undertakes to manage the risk through monitoring of the cattle and removing them from a paddock if there is any sign of bloat, Farmer B also has the option of provided a bloat capsule prior to the cattle leaving their property.

During the agistment period Farmer A is responsible for supply the cattle with adequate feed and water, keep them contained within the property, and keep them separate from other groups of cattle that may not be theirs. Farmer A will only box mobs of cattle if permission has been gained from Farmer B. Farmer A does not have to undertake any animal husbandry when the cattle are being agisted. Farmer B is responsible for ensure all the appropriate animal husbandry has been administered before the cattle leave the property, additionally Farmer B need to arrange transport of stock to and from the property.

Key to success: Good communication and not being greedy. It has to be a win/win for both parties in order for the relationship to succeed longer-term.

Table 3. Example of potential returns (\$/head) from base rate agistment of \$5/week compared to the returns from a weight gain incentive system (\$1.30/kg of weight gain) for differing agistment times and daily weight gains.

No. weeks agistment	Base rate	Daily weight gain		
		0.9 kg/hd	1.0 kg/hd	1.1 kg/hd
16	80	115	127	140
18	90	131	146	160
20	100	147	164	180
22	110	164	182	200

*Agistment rates vary depending on the season, the type of feed available, and regional demand. It is assumed no weight gain is achieved in the first two weeks as the stock adjust to the property and forage available.



Share farming

Share farming can be a good option where someone is looking to establish a farming business, or expand their business, and have low availability of capital. This arrangement is unlikely to be as profitable as leasing for the non-asset owner (share farmer), but it allows business expansion or development with little or no capital outlay, and is low risk. It also provides an opportunity for knowledge transfer, as the two parties are working together in a share farming arrangement. For the asset owner, it allows them to have much greater control over the asset than a leasing arrangement. They also share in the upside of seasons and/or markets. The downside of a share farming arrangement for the asset owner is they also share the risk in a poor season, as opposed to a leasing arrangement where they have a guaranteed income over the life of the lease.

Trust and good communication are essential to the success of share farming arrangements, as there is a lot more involvement of the owner than in a leasing arrangement.

Consideration needs to be given to the formality of the agreement, controls in the event of an unexpected occurrence such as disease or pest outbreak (lice, footrot, disease – both livestock and pasture), or a natural disaster including flood, fire, drought. These events can have significant impacts on the productivity of livestock/feedbase, and therefore the profit to each party. In some cases, it may be worth considering a Force Majeure clause (an act of God type coverage) in the contract for events that are not the fault of the non-livestock owner.

The share farming case study is a good example of how with trust and communication a successful long-term share farming agreement can be achieved. The budget created, based on case study information, shows similar return for each party before overheads, interest and lease costs (Table 3). In determining the value of share farming for each party, they would need to consider the return on investment and risk of this option compared to a range of alternatives. For the asset owner, this could include comparing share farming to leasing, employing staff, and selling and re-investing the value of the asset off-farm for the same time period. For the share farmer, this comparison could include leasing or working off-farm.

Share farming case study, perspective of the non-owner (referred to as Farmer A)

Background: The owner of both the land and stock has a property they farm in another region. This party will be referred to as Farmer B. The non-owner (Farmer A) has a property in the same region. Prior to the current arrangement, the property was run by a farm manager. At the end of that period the owner decided to lease out the property. After discussions involving both parties, a share farming arrangement was suggested, and after further discussion it was agreed on.

At the beginning of the arrangement, Farmer A did budgets for both a leasing and share farming arrangement, and the profits were similar for the two options. The budgets were not fantastic, and historically it was not the best property in the area, but the budgets were good enough to try the lower risk strategy of share farming. Based on the budgets and history of the property, they would not have leased it as they considered it too high a risk. Subsequent to the start of the share farming arrangement, livestock prices increased, and this would have made leasing more profitable.

The original formal arrangement was for 3 years with an opt out option after the first 12 months. The share farming arrangement has now been in place for 6-7 years.

Driver: Share farming allowed Farmer A to expand the business without the capital outlay required to purchase stock and pay the lease cost. The main reasons, from Farmer A's perspective, for entering into this arrangement initially, was the low capital outlay and low risk. If they have a bad season from a price or production point of view, then both parties share the risk. The determinates Farmer A used to decide if the arrangements would be a good economic proposal were profit and required capital outlay.

Arrangement: The property and livestock owner, Farmer B, provides the livestock, the replacement livestock and the land. Farmer B is also responsible for capital improvements. In this situation the property owner has been good at capital improvement, fixing up fences and sheds. Farmer B holds standard farm insurance and public liability insurance. Farmer B also provides the OJD vaccination as it is considered part of the sheep, but Farmer A administers the vaccine.

The non-owner, Farmer A, provides all the operating costs, the labour, and the day-to-day management and decision making. Farmer A also holds public liability insurance on the share farming property.

The decision-making that both parties are involved in is the purchasing of merino ewes. Generally, Farmer A organises the transaction and Farmer B provides the budget and pays the costs. They also concur over capital improvements and, to a lesser extent, the sale of lambs.

They have currently not done a lot of pasture renovation, but the small amount they have was done in a split cost arrangement. Farmer B provided the seed and chemicals, while Farmer A provided the labour and machinery.

The share farming profits are distributed in the same way each year. Farmer B retains all the ewe progeny of the 1st cross breeding enterprise, and these become the replacements for the 2nd cross breeding enterprise. The 1st cross wether lambs are split between the two parties, 45% to Farmer A and 55% to Farmer B. All the 2nd cross lambs are split between the two parties, 45% to Farmer A and 55% to Farmer B. All the wool is retained by Farmer A. Based on the original budgets, Farmer A has just over half of the income.

At the end of the season, when all the sale stock have been sold, Farmer A and B then go through the remaining stock together. The split is based on the same aforementioned percentage splits to each party. Each party then does what they feel is best with their portion.

There are no formal or specific arrangement in place should the two parties have a disagreement. Where there have been disagreements in the past, they have been resolved through discussion.

There are no arrangements currently in place in the event of a catastrophic event. If something were to happen both parties would sit down and discuss how best to resolve the situation and agree on the cost to each party.

The initial arrangement had an opt out clause after 12 months into the contract. This was important, as the two parties did not know each other when they originally entered into the share farming arrangement. The clause allowed either party to opt out of the arrangement after the first 12 months if they felt the arrangement was not working. This provided Farmer B the confidence to enter into the contract.

The only current requirement of the contract for Farmer A is a minimum amount of Phosphorus fertiliser that needs to be applied each year; they tend to apply more than is required.

If either party wants to change some part of the arrangement, they have a phone or face-to-face discussion and work through the issue. They work out the best approach together, so it is also a flexible arrangement. This is possible due to the level of trust and good level of communication between the two parties.

Selecting/purchasing livestock:

Ewe purchasing – Farmer B is more involved in purchasing merino ewes than other management decisions. This involvement is mainly deciding the numbers required and the budget. Merino ewes are purchased each year. The process is that Farmer A and B discuss the numbers and budget. Then Farmer A contacts the stock agent and provides the details of what they need. The stock agent provides details of what is available to Farmer A, and then Farmer A and B discuss the options. Farmer B has the opportunity to look at some photos, and if they are local sheep then Farmer A would go and have a look.

Ram purchasing – Farmer A manages the ram purchasing, which is done through local ram actions. There are no stipulations from the owner (Farmer B), and he is comfortable with leaving the decision making to Farmer A. Farmer B does provide a budget (ie an average price per head). Before purchase, Farmer A and B discuss how many rams they need to buy. The rest is up to Farmer A.

Selecting stock - Currently all 1st cross ewes bred are retained, except anything that is lame or otherwise unsuitable (eg dry or broken mouth ewes). The aim in the next couple of years is to be in a position where they are able to sell some ewes. They will either sell some young ewes, or more likely cast for age ewes. When they get to that stage, for the first few years at least, it will be something that is discussed between the two parties. However, the majority of the transaction will probably be done between Farmer A and the stock agent.

Note of caution: *In this case study the owner of the sheep is not necessarily protecting the quality of the sheep genetics. In a breeding operation it is important to protect the quality of the genetics. This can be achieved by having involvement or control over the purchase of sires, and replacement ewes. In a self-replacing situation, it is important that the replacement ewes are grown out properly to ensure the quality and capability of the flock is maintained. At the end of the share farming period, or any time within the share farming period that the genetic capability of the livestock needs to be the same as at the start of the arrangement. If not, there needs to be a clause in the contract to the effect, that the livestock owner is compensated by any loss in value of the livestock due to lower genetic value, lower market value (where stock are poorly grown out and fertility/wool yield is compromised) or the age of the flock is higher. In a completely terminal operation (no replacement animals are retained) than the situation in the case study maybe ok.*

Benefits for the other investing party: The share farming arrangement has enabled them to expand their business to a self-sufficient level without having to rely on off-farm income or capital outlay. Share farming did not require a loan/mortgage, however a leasing arrangement would have. The format was also relatively low risk, as seasonal production and price risk is shared.

Key to success: Trust, communication, having the 12 month opt out clause in the original contract, and having a formal contract in place at the start. It also helps that the two parties are not having to work together all the time - they catch up 2-6 times a year, more in the initial stages, and less now the relationship and trust has been firmly established.

Other: For this arrangement to work, there has to be trust and good communication. The reason for the longevity of the arrangement is each party trusts the other, and their communication is good.

Table 3. Share farming example budget showing surplus/ha before overheads, interest and lease payments. The budget is based on the arrangement outlined in the share farming case study for a 647 ha property, running 3000 breeding ewes.



Income	No.	Price/hd	Owner	Share farmer
1st cross ewe lambs*	500	120	60000	
1st cross wether lambs	500	80	22000	18000
2nd cross lambs	2400	100	132000	108000
Merino wool	1000	35		34976
1st cross wool	2000	21		42230
Crutching	3000	2		6000
<i>Total Income</i>			\$ 214,000.00	\$ 209,206.00
Expenses	No.	Cost/hd	Owner	Share farmer
Replacement ewes	480	150	72000	
Replacement rams	10	800	8000	
Shearing and crutching	3000	6		18000
Animal health	3000	2	3000	3000
Selling costs (5%)			7847	10460
Supplementary feed	3000	5		15000
Freight	3320	4		13280
Other	3000	2		6000
Capital improvement (per ha)	647	5	3235	
Insurance (per ha)	647	7 & 5	4529	3235
Labour			4000	40000
Sale of CFA ewes	420	70	2940	
<i>Total Expenses</i>			\$ 102,611.00	\$ 108,975.30
Surplus			\$ 111,389.00	\$ 100,230.70
Surplus per ha			\$ 172.16	\$ 154.91

*Note: The \$60,000 1st cross ewe lamb income is in non-cash form.

Livestock Leasing

Leasing livestock is the most complex of the arrangements addressed in this report. Historically, the author is aware only of one such arrangement in red meat production systems, which involves cattle.

However, this does not preclude this option from potential consideration. This arrangement is likely to be an attractive option where the owner of the livestock (lessor) wishes to exit the livestock industry for a period of time. Leasing would allow them to do so without having to sell the genetic base they have developed, and therefore they retain the option of returning to the livestock industry at a later date without the capital outlay or having to re-establish the genetic base. Leasing livestock is likely to appeal to someone (the lessee) wishing to develop equity within a livestock enterprise without the upfront capital outlay. For example, it may suit where a business wishes to expand, but for risk management/economic reasons it is best to do it in phases. The first phase would be to purchase additional land and lease livestock for 3-5 years. This reduces the upfront cost of having to buy the land and livestock at the same time. The aim at the end of the lease, the second phase, would be to use the equity gained from the livestock lease to purchase stock.

As with any of the three arrangements reported, for this arrangement to succeed in the long term it needs to be a win/win situation for both parties. For the lessee, the aim in entering into a livestock leasing arrangement would be to own the value of the livestock by the end of the lease period (with most leasing arrangements likely to be 3 years). In order to achieve this in a leasing arrangement, a range of important factors need to be considered, and a proper economic evaluation undertaken to determine the true value of the investment.

As with share farming, consideration needs to be given to arrangements and controls in the event of an unexpected event, such as disease or pest outbreak (lice, footrot, Johne's disease, drench resistance), or a natural disaster including flood, fire, drought. These events can have significant impacts on the productivity of livestock, and therefore profit to the lessee, but also the value of the livestock to the lessor. In some case it may be worth considering a Force Majeure clause (an act of God type coverage) in the contract for events that are not the fault of the lessee - for example an exotic disease outbreak.

Things to consider when developing or entering into a livestock leasing arrangement:

1. What is a fair way to determine the lease value of the livestock? However this is determined it needs to be based on something that is robust. For example, basing the lease value on the National Trade Lamb Indicator for either trade lamb, heavy lamb or mutton, depending on the enterprise type being leased (<http://www.mla.com.au/Prices-and-markets/Market-reports-and-prices>).
2. The length of time of the leasing arrangement. Most land lease arrangements are 3 year terms, it is likely that a livestock lease would be a similar timeframe. The length of this timeframe is an important consideration for the lessee. Analysis and experience of these arrangements have shown that if there is a bad year in any of the three years, the lessee will end up making no money. This is because the other two years would need to make up for the loss in the bad year. Therefore, from a lessee perspective a longer lease arrangement would be better for risk minimisation (1 bad year in 5 can be more easily buffered than 1 in 3). This also comes back to understanding the agro ecological zone you are farming in and the realistic likelihood of a poor season occurring, and an understanding of market price fluctuations.

Things to ensure are covered if you are the livestock owner:

1. That the person leasing is a good producer and livestock manager. This is very important, as livestock only have value if they are healthy, productive and well managed.
2. If it is a breeding operation, protecting the quality of the genetics is important. This can be achieved by having involvement or control over the purchase of sires, and replacement ewes. In a self-replacing situation, it is important that the replacement ewes are grown out properly to ensure the quality and capability of the flock is maintained. At the end of the lease period, or at any time within the lease period, the genetic capability of the livestock needs to be the same as at the start of the leasing arrangement. If not, there needs to be a clause in the contract to the effect, that the livestock owner is compensated by any loss in value of the livestock due to lower genetic value, lower market value (where stock are poorly grown out and fertility/wool yield is compromised), or the age of the flock is higher. This is not an ideal situation, as valuing this decline is very difficult. Instead the owner should be involved in maintaining the genetics from the start.
3. If the operation is a terminal lamb breeding operation, covering for depreciation of the ewe is important.
Over time and breeding seasons, the value of the ewe becomes lower. So if the owner takes back the ewes at the end of the lease, or at any point in time of the lease, the depreciation of the ewe needs to have been accounted for.
4. In any leasing operation, deaths need to be covered.
5. In any leasing arrangement, the livestock owner needs to be aware of the return on capital. (What you get out of the investment arrangement).

A livestock leasing example budget has been prepared based on the following scenario (Table 4). The livestock lessee has purchased a 200 ha property with a stocking rate of 10 dse/ha. They are considering leasing ewes for 5 years rather than purchasing them in year 0. The aim for the lessee is to own the value of the stock by the end of the 5 year lease. The example shows a cumulative surplus of \$115,436 at the end of the 5 year lease. Based on a ewe purchase price of \$140 per head (\$140,000 for 1000 ewes), the amount at the end of the lease is lower than the value of the stock. Importantly, the lessee also need to consider the risk of having a poor season, which would further reduce the total surplus in year 5. The budget highlights the risk of this option for the lessee, and the lessee needs to consider other options, including purchasing livestock in year 0.

In this example, the lease cost per ewe has been calculated based on a 5% return on capital, and allowing for depreciation and deaths (Appendix 2.2). The example provides a reasonable return on investment for the livestock owner, however, it is important the livestock owner considers the risks and ensures they have covered themselves as per the points 1-5.

Table 3. Livestock leasing example budget base on a scenario of purchasing a 200 ha property (50% of which is financed at 7.5% over 20 years), and leasing 1000 ewes for 5 years. (A breakdown of ewe running costs is provided in Appendix 3.1 and the calculation of the ewe lease rate is provide in Appendix 3.2).

Area	200	10 dse/ha						
			\$ per Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Expenses								
Lease Ewes	1000	1.5yo ewes	-22	-22400	-22400	-22400	-22400	-22400
Purchase Rams	15	rams	-800	-12000				
Running Costs*	1000	per ewe	-30	-30000	-29400	-28812	-28236	-27671
Fertiliser	20	tonne	-350	-7000	-7000	-7000	-7000	-7000
Principal & Interest Costs (7.5% on 345,000 over 20 yrs)	200	hectares	-169	-33800	-33800	-33800	-33800	-33800
Lessee O'hds (Ute, Fuel)	200	hectares	-25	-5000	-5000	-5000	-5000	-5000
Labour			-12000	-12000	-12000	-12000	-12000	-12000
Total Expenses				-122200	-109600	-109012	-108436	-107871

Revenue								
Lambs Sales*	1000	lambs	100	100000	98000	96040	94119	92237
Wool*	1000	ewes	40	40000	39200	38416	37648	36895
Sale of CFA 6.5yo Ewes		ewes	60					0

Total Income				140000	137200	134456	131767	129132
Total Expenses				-122200	-109600	-109012	-108436	-107871
Surplus				17800	27600	25444	23331	21260
Cumulative Surplus				17800	45400	70844	94175	115436

*Running cost, lamb sale and wool values decline over the 5 year lease reflecting the ewe mortality rate. Depending on the nature of the lease arrangement the number of ewes maybe topped up to maintain the original starting number or the number let decline with natural attrition.

Note: The cumulative surplus could be seen as a return on investment from purchasing the land. There is also some opportunity for capital growth from the land purchase.



Building the business with low capital: a case study example

The case studies on profit sharing, agistment, sharefarming and leasing have all demonstrated how alternatives to owning livestock can allow a business to establish, expand or value add without the need for up front capital. The following case study presents the narrative of a business that has used a range of techniques requiring low upfront capital including agistment stock, leasing and sharefarming land, to build up capital and create a very successful livestock trading business.

The case study property is currently made up of owned, sharefarmed and leased land, 10%, 33%, and 57% respectively. The business does not own any breeding stock, instead they trade stock. They sow wheat, canola and ryegrass and are flexible with the end purpose of the crops depending on the markets for each option. The crops are sown in February/March, with the wheat and canola grazed up until August before being locked up and harvested for grain. However, depending on markets the wheat maybe grazed continuously until the end of the season if it is more economical to finish livestock on the forage then harvest a grain crop. Through this flexible approach they have been able to successfully grow their business to one that trades 8500 head of cattle and 20,000 head of lambs annually, with the business aim to achieving 800 kg/ha liveweight gain per annum.

Backgrounding:

In the past the business owners used to background stock for other livestock owners with the arrangement based on a price per kg. They undertook this for 4 years. The challenges they found in this system was it was an opportunistic arrangement for the customer. The stock owner controlled the stock type that was coming onto the property and also how long they stayed on the property for. Their returns were low, a third of what they currently achieve from trading livestock, and variable, it was not something that was used by the customers each year. It was an opportunistic arrangement for the customer, so if the opportunity wasn't there then the property owner would be left with a resource they couldn't make money out of. It was however, successful in allowing them to get started as they were capital poor. Now they are able to raise their own funds to purchase stock and they have moved from this systems to livestock trading as it provides them move control and the margins are better. This move has also been made possible as lenders have changed their business model from only lending against land as security to now being willing to lend against livestock.

Backgrounding provided them with a start but the arrangement would no longer fit into the flexible business structure they have created. To work it would rely on the livestock owners to be as flexible in their business. For example the property annually sows wheat, canola and ryegrass, if wheat prices reach \$400/t they would be locking their wheat up in August and not grazing the crops out, or alternatively if wheat prices dropped to \$180/t they might graze the crops out and not harvest. This system requires flexibility that backgrounding didn't provide.

Sharefarming:

For the last 10 years the case study business has been sharefarming with a producer in a different district. This arrangement has developed over time.

Initially the arrangement was the property owner supplied the land and the sharefarmer did all the work, then they share the profits and material costs.

This arrangement has changed and evolved, with everything now done on a costed basis. As such, all the operations, eg sowing, or any labour like loading trucks is charged to the partnership. They found under the original arrangement they were wearing a lot of

hidden cost. The new arrangement makes things a lot more fair and equitable. Hidden cost included a non-appreciation of the cost of running machinery, often there was more spraying or spreading that had to be done than was budgeted for. This was constraining the business, because at times more things had to be done than originally intended and as technology and practices have improved so has the workload. This new arrangement allows them to move with the changes without either partner in the arrangement being adversely affected. Both parties want to achieve the same goal, so they are making decisions based on the best outcome for the business.

The sharefarming is an ongoing arrangement, with the success of the arrangement attributed to the good relationship and good communication the two parties have. There is a formal agreement in place, although it does not have a term written into the arrangement. The reason for this is both parties have agreed the moment one of them loses faith in the other the arrangement needs to finish. The arrangement works because of the good relationship they have and it will not work if that is not there. If that was to occur there would be a realisation of losses and they would go their separate ways.

The key to success of the sharefarming arrangement is trust and communication. The communication is critical as what is important to the property owner is not always what is important to the sharefarmer, it's important that each party are aware of what the desired outcome is for the other party. This is also likely to be fluid, and this is why open and ongoing communication is important.

Leasing:

The case study business also leases land. They find leasing to also be a good option in their business. They have found that when a land owner decides to lease out their property they have expectations of what they want to get out of it. Often it is the desire to have the property left in better order than when the lease started. This is what the case study business offers. They change the land use, they go into a lease and change it from a native semi-improved pasture to a cropping system, while still using livestock. The minimum amount of time they will take on a lease is for 5 years, and will be more inclined to lease where the other party was after an outcome rather than just cash. Having a 5 year lease is important in their business strategy because they are improving the land. They have to put a lot of energy and money into the first year of the lease to improve productivity, therefore they need the remaining 4 years to be able to capitalise on that investment. After the initial 5 year lease they would be happy to go to 1-2 year extensions if the property owner still wanted to lease.

Trading livestock:

Trading livestock allows a lot of flexibility, and the ability to adapt to the current or expected situation without having to rely on other to make decisions. However, they are now running a much more sophisticated and labour intensive system. They have to work closely with their agents and the processing sector, to ensure they are always finding out what is happening. The decisions they make about the livestock they trade is often driven by forward pricing. They work hard on having forward contracts in place for the livestock. They will often miss out on the highest spot price, but the business they are running is about knowing where they are heading rather than hoping. The risk strategy is to have 50% of the stock contracted, however it is not always possible to do so. In the past they have been more price takers, but now with larger lines of stock they are able to negotiate with the end purchasers.

When purchasing livestock they generally are buying in from a lot of different sources, the business is similar to that of a feedlot. They do however have criteria when buying. When buying cattle they try to source them from within a 200 km radius of the property, and are careful with the cattle they buy.

They generally only buy vendor breed cattle, they don't like to buy cattle that have been traded multiple times. If they have a poor experience with a particular supplier then they will blacklist the source. When buying they have target specifications, these will change depending on what market they are targeting. They are also careful when buying to assess cattle temperament, it is due to the large numbers of cattle they are handling. When buying lambs they have to meet dentition requirements for the lamb classification, as such they will avoid certain regions because they are known to lamb earlier. They buy stock in a range of ways, through auctions plus and out of the markets. They don't tend to buy directly off farms, as producers are tending to want to sell through the market with the livestock prices high, but it is something they would like to do in the future.

The business has been trading livestock for 10 years, over this time the business has built up and is continuing to do so. This has a lot to do with capital and being able to sourcing capital for livestock trading. Traditionally this has been hard but it is becoming a lot easier now. The lower interest rates have also helped. They have found it is important in livestock trading to have good cash flow and keep good books. It is always important to know where you are at, and to know your inventory cost. When they buy stock they work them out on a margin basis and they have a trading range. It is all underpinned by liveweight gain. When stock are inducted they are given a management tag and all weights taken on the animal, what treatments they are given, any withholding periods are all recorded electronically against their management tag, so they have full traceability. This allows them to keep track of liveweight gains. In the future, they can see the value in the being able to weigh automatically in the paddock as technologies improve.

They have found the key to success in trading livestock has been having large numbers of stock and creating and maintaining linkages into the sector so you are always finding out what is going on. "The more stock you have and the more conversations you have the more you find out what is going on. It is not a lazy business or a sedentary business you have to actively manage the people and need to stay ahead of the game."

Key to success:

Their key to success has been always having an open mind as to the best use for the feed they grow. Their strength in being a trading enterprise is the ability to move between enterprises and capitalise on markets. They still have rotations within the crops they sow, but they are not constrained in thought to keeping on running the same enterprise.

Summary:

This case study has demonstrated how it is possible to have low capital and use options including alternatives to owning livestock, sharefarming and leasing to build a successful business from a low capital base.

Appendix

1.1 An 8 year profit sharing budget based on the arrangement outlined in the profit sharing case study. Store lambs are valued in November and sold in April the following year as prime lambs.

		Year							
		2014	2013	2012	2011	2010	2009	2008	2007
Store value*		52	49	67	94	82	56	52	76
<i>Running costs</i>									
Drench	0.25	0	0	0	0	0	0	0	0
Crutching/shearing	2.70	3	3	3	3	3	3	3	3
Deaths (percent of average of store and sale value)	2%	3	3	4	4	5	3	3	4
Selling costs	5%	5	4	5	7	8	6	5	6
Interest		2	2	2	2	2	2	2	2
Sale price*		90	77	109	130	166	112	103	117
Margin/hd:		26	17	28	20	66	42	38	26
Ave. margin per head over 8 years:									33

*Store value and sale prices are based on actual November store lamb prices and April prime lamb prices from Naracoorte Sale Yards, 2007 to 2014 (Data supplied by the National Livestock Reporting Service, 19/6/2015).

Note: The stubble grazing time of 24 weeks was based on the case study, however in many situation stock would not be grazing stubbles for this long.

1.2 An 8 year lamb feedlotting budget. Store lambs are valued in November, retained in the feedlot for 8 weeks and sold as prime lambs.

		Year							
		2014	2013	2012	2011	2010	2009	2008	2007
Store value		52	49	67	94	82	56	52	76
<i>Feeding Costs</i>									
Grain price*		240	275	175	265	210	260	440	400
Introductory phase (t required ** grain price)	0.02	4	4	3	4	3	4	7	6
Finishing phase (t required ** grain price)	0.06	14	17	11	16	13	16	26	24
<i>Running costs</i>									
Drench	0.25	0	0	0	0	0	0	0	0
Vaccination	0.15	0	0	0	0	0	0	0	0
Deaths and shy feeders (percent of average of store and sale value)	5%	7	6	9	11	12	8	8	10
Interest		1	1	1	1	1	1	1	1
Selling costs	5%	5	4	5	7	8	6	5	6
Sale price		90	77	109	130	166	112	103	117
Margin/hd:		7	-4	13	-3	46	21	4	-6
Ave. margin per head over 8 years:									10

*Grain price is the actual feed price for the corresponding year.

**Information for feed required and days on feed from: Duddy G, Bell A, Shands C, Hegarty R, 2007, PRIMEFACT 523 Feedlotting lambs, NSW DPI

1.3 An 8 year agistment lamb finishing budget. Store lambs are valued in November, agisted on crop stubbles for 24 weeks and sold as prime lambs in April the following year.

		Year							
		2014	2013	2012	2011	2010	2009	2008	2007
Store value*		52	49	67	94	82	56	52	76
<i>Running costs</i>									
Agistment (24 wks @ \$0.50)	12	12	12	12	12	12	12	12	12
Drench	0. 25	0	0	0	0	0	0	0	0
Crutching/shearing	2. 70	3	3	3	3	3	3	3	3
Deaths (percent of average of store and sale value)	2 %	3	3	4	4	5	3	3	4
Selling costs	5 %	5	4	5	7	8	6	5	6
Interest	2	2	2	2	2	2	2	2	2
Sale price*		90	77	109	130	166	112	103	117
Margin/hd:		14	5	16	8	54	30	26	14
Ave. margin per head over 8 years:									21

*Store value and sale prices are based on actual November store lamb prices and April prime lamb prices from Naracoorte Sale Yards, 2007 to 2014 (Data supplied by the National Livestock Reporting Service, 19/6/2015).

Note: The stubble grazing time of 24 weeks was based on the case study, however in many situations stock would not be grazing stubbles for this long.

2.1 Break down of ewe running costs used in the livestock leasing example budget.

Ewe Costs	Shearing	-5
	Animal Health	-2
	Selling Costs	-7
	Freight	-4
	Rams	-5
	Feed	-5
	Other	-2
Total Ewe Costs		-30

2.2 Calculation of the ewe lease rate used in the livestock leasing example budget.

Leasing Sheep Calculator					
				No Ewes	1000
Ewe Depreciation	Purchase price	Sale Price	No Yrs	Cost per Ewe	Total Cost/Flock
	140	70	5	14	14000
Ewe Deaths	Average Price	Death %			
	105	0.03		3.15	3150
Return on Capital	Average price	Interest Rate			
	105	0.05		5.25	5250
Total Cost				22.4	22400