



# New Entrants to agroecological farming

## EXAMPLE BUSINESS START UP COSTS AND THE CASE FOR PUBLIC SUPPORT



*The Landworkers' Alliance is a union of farmers, growers, foresters and land-based workers, working to improve the livelihoods of our members and create better food and land-use systems for everyone.*

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This document draws together estimated start up costs for a few common enterprises typically established by new entrants to agroecological farming and forestry.

The primary objective of compiling these examples is to show that new entrants to agriculture and forestry face significantly higher start up costs than new entrants to other sectors of industry. While it is entirely possible to generate decent but modest livelihoods working in this sector, profit margins are both slim and extremely variable, and new entrants often do not have property to secure loans against. This means that securing commercial loans is very difficult. Many farmers also

prefer to opt for a more resilient approach of avoiding debt and building the enterprise slowly in a more piecemeal approach.

In almost all situations, new entrants cannot afford to invest up front in the full start up costs and instead piece together sub-optimum systems using second hand equipment over a number of years. Although this approach is a necessity for people starting up farms on low budgets it adds a huge amount of stress to farmers' lives and reduces the capacity of businesses to deliver their full environmental, social, economic and agricultural potential. In many cases, new entrants will work

additional jobs to increase their income during the early years, this means their businesses develop more slowly and are less productive than those run by full time farmers with the capital and resources they need. Furthermore it restricts those who can consider starting farm businesses to those with the resources to survive on very low incomes during the establishment years, which excludes many people from following careers in agroecological farming or forestry. To overcome these impacts we believe that policy makers should be looking at options to assist new entrants with start up costs.

**THE START-UP COSTS AND OUTLINE BUSINESSES THAT WE USE IN THIS DOCUMENT ARE BASED ON EXISTING EXAMPLES, ALTHOUGH IN MOST CASES THE FARMERS BUILT THE BUSINESS OVER A SIGNIFICANT NUMBER OF YEARS, AS AND WHEN FINANCE WAS AVAILABLE.**



As every farmer knows, no two situations are ever the same and so everyone will face different costs, opt for different production systems and take advantage of different opportunities. This is even more pronounced in businesses selling directly to the public. As such, the start up costs we highlight should be used as a rough guide for policy makers rather than a road map for prospective new entrants. In general, we have provided a price range that is below the price of new equipment but represents the range of good quality second hand options available.

Furthermore, it is important to bear in mind that the businesses we are outlining represent enterprises run

by experienced and highly skilled farmers and foresters, and it would take a prospective new entrant, with access to high quality training and mentorship a number of years to reach these levels of productivity and financial returns.

This document should be read alongside the Landworkers' Alliance policy document 'Supporting the next generation of farmers: proposals for support schemes to assist the establishment and success of new entrants to agroecological farming' which outlines the social, environmental and agricultural justifications for supporting new entrants.



# Start up costs and loans

Estimates for average small business start up costs across all sectors range from £12,000<sup>1</sup> to £27,520<sup>2</sup> whereas in many cases the start up costs for agroecological farm businesses are likely to be between £50,000 - £250,000 before land and housing is taken into account. Furthermore, the low profit margins and high risks of agricultural and forestry work mean that the repayments on a commercial loan to cover start-up costs are usually unaffordable.

Many businesses can provide viable livelihoods for 1 – 4 FTE on small areas of land. However, with profit margins after the farmers labour is accounted for often well below 10%, and extremely variable, depending on factors like weather which are outside of the farmers' control, they are often unable to cover the costs of loan repayments.

For example, with £200,000 start up costs, and a £25,000 deposit taking out a business loan at 4.5% incurs an annual repayment of £11,664 over 25 years. This is impossible in the first years of most farming business, and an unrealistic risk for many businesses in the longer term.

We have developed model start up costs for nine common businesses. These do not include annual running costs, or the significant costs associated with getting planning permission and are intended as a rough guide rather than a detailed analysis. We have included different cost levels depending on whether the land is bought or not, and whether there is existing infrastructure to give an indication of the range of variation in different possibility. In reality, in some situations some of these costs would not be relevant, some sites will not need a borehole for example, or the 100m of track may be excessive. However, in others they may be considerably more. In general these estimates are likely to be on the optimistic side.

The stocking and production levels included in these estimates are those common for agroecological and organic systems.

## The nine hypothetical models are:

1. A 9 acre market garden, selling locally through a Community Supported Agriculture scheme
2. A 3 acre market garden, selling high value crops to local cafes and restaurants
3. A 6 acre orchard, selling apple juice and cider directly to customers
4. A 22 acre mixed farm, selling chicken, pork, lamb, cider, cheese, jams and preserves locally through a farm shop
5. A 35 acre micro dairy, selling fresh milk locally through a milk delivery scheme
6. A 300 acre grazing livestock business, selling livestock at market, with the additional costs for on farm butchery for direct meat sales.
7. A 20 acre mixed woodland forestry enterprise
8. A 20 acre coppice and woodland social enterprise
9. A 50 acre arable farm growing populations of wheat and baking all flour into breads and pizzas.

1. <https://www.lloydsbankinggroup.com/Media/Press-Releases/2016-press-releases/lloyds-bank/average-cost-of-starting-a-new-business-is-over-12000/>

2. <https://www.moneywise.co.uk/news/2016-08-16/27520-the-cost-starting-business-2016> / <https://smallbusiness.co.uk/business-failure-four-ten-small-companies-dont-make-five-years-2533988/>



## 9 acre market garden, selling locally through a Community Supported Agriculture scheme

In this model, 7 acres of a 9 acre site are used to produce field vegetables and 1250m<sup>2</sup> are used for polytunnel crop production and seedling propagation. The extra 1.75 acres are used for hardstanding, packing shed and compost production. The farm has all the equipment it needs and produces its own seedlings and much of its own fertility through green manures, minimising input costs. It supplies a weekly Community Supported Agriculture scheme vegetable box to 150 households all year round. This means produce is sold for less than the retail prices that could be achieved in a farm shop or market stall, but the vegetable boxes take a high volume of produce and give the farm a stable and predictable income.

The 1000m<sup>2</sup> of polytunnel space produces around £17,000 of vegetables per year and the 7 acres of field vegetable production, with 25% under green manure at any one time, are worth around £86,000. This creates a total turnover of £103,000. In this kind of model you would expect to spend at least 60-70% of the income on labour, including the farmers' own drawings, and so the farm would create a significant amount of employment.

Approximately 20-30% of the turnover is fixed costs, leaving an average of 10% as surplus, although this would take a number of years to achieve and can rapidly disappear or run to a loss in a year of bad weather.

Item	Cost low	Cost medium
Tractor	£10,000	£25,000
Bucket	£500	£1,000
Pallet forks	£500	£750
Plough	£500	£1,000
Power harrow	£1,000	£2,500
Steerage hoe	£500	£1,500
Flail mower	£1,000	£2,500
Potato planter	£500	£1,000
Potato harvester	£500	£1,500
Muckspreader	£500	£2,500
Toolbar weeder	£500	£1,000
Transplanter	£1,000	£3,500
Delivery Van	£2,000	£5,000
Polytunnels 1250m <sup>2</sup>	£10,000	£25,000
Propagation equipment	£2,000	£5,000
Crop covers, sandbags, ground cover, fleeces etc	£5,000	£10,000
Irrigation	£5,000	£10,000
Misc hand tools and sundries	£10,000	£15,000
<b>Subtotal equipment &amp; polytunnels</b>	<b>£51,000</b>	<b>£113,750</b>
Processing Barn / packing shed 6m x 12m	£15,120	£25,200
Machinery store and workshop 6m x 12m	£10,800	£15,120
Hardstanding 150m <sup>2</sup>	£2,250	£4,500
Track 100m	£3,000	£6,000
Borehole	£5,000	£10,000
Coldstorage	£1,000	£10,000
Electric connection	£5,000	£20,000
Rabbit and Deer fencing 9 acres	£22,500	£25,200
<b>Subtotal including infrastructure</b>	<b>£115,670</b>	<b>£229,770</b>
<b>Total including 9 acres of land at £10,000/acre and basic timber mobile home at £40,000</b>	<b>£245,670</b>	<b>£359,770</b>

## 3 acre market garden, selling high value crops to local cafes and restaurants

In this model, 2 acres of the site are used for crop production. 1000m<sup>2</sup> are used for polytunnel crops and 1.75 acres are used for outdoor production of high value salad crops. These require a high quantity of hand labour and the production system is largely manual, with minimal cultivation. Seedlings are produced on the farm to increase control over the production system and fertility is primarily provided by bought-in compost, that is also used as a mulch and soil conditioner.

Produce is sold at a premium wholesale price directly to local restaurants, cafes and shops, and so the model works best in a peri-urban areas or those with a high concentration of food retailers responding to a demand from tourism.

The polytunnels produce around £25,000 per year and the 1.75 acres of outdoor crops yield around £55,000 so the total turnover of the farm is around £80,000. This system requires a high labour input which accounts for around 80% of the turnover, creating a large amount of employment. 10-20% of income goes on fixed costs. This leaves, at most, 10% as surplus, although this would take a number of years to achieve and can rapidly disappear or run to a loss in a year of bad weather.

Item	Cost low	Cost medium
<b>2-wheel tractor</b>	£1,500	£4,000
<b>Power harrow for 2-wheel tractor</b>	£1,000	£2,000
<b>Flail mower for 2-wheel tractor</b>	£1,000	£1,500
<b>Rotary plough for 2-wheel tractor</b>	£1,000	£1,500
<b>Delivery Van</b>	£2,000	£5,000
<b>Polytunnels 1250m<sup>2</sup></b>	£10,000	£25,000
<b>Propagation equipment</b>	£2,000	£5,000
<b>Crop covers, sandbags, ground cover</b>	£5,000	£10,000
<b>Irrigation</b>	£5,000	£10,000
<b>Misc handtools and sundries</b>	£10,000	£15,000
<b>Sub total equipment and polytunnels</b>	<b>£38,500</b>	<b>£79,000</b>

<b>Processing Barn / packing shed 6m x 12m</b>	£15,120	£25,200
<b>Hardstanding 100m<sup>2</sup></b>	£1,500	£3,000
<b>Track 50m</b>	£1,500	£3,000
<b>Borehole</b>	£5,000	£10,000
<b>Coldstorage</b>	£1,000	£4,000
<b>Rabbit and Deer fencing 3 acres</b>	£7,500	£8,400
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£75,120</b>	<b>£152,600</b>

<b>Total including 9 acres of land at £10,000/acre and basic timber mobile home at £40,000</b>	<b>£145,120</b>	<b>£222,600</b>
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## 6 acre orchard, selling apple juice and cider directly to customers

In this model 5 acres of a 6 acre site are planted with 200 trees per acre on 1/2 standard rootstock. The last acre is used for hardstanding, processing barns, chipping brush etc. After 5 years these trees should yield 4000 - 8000kg/acre, with an average of 5000kg/acre. Some fruit could be sold fresh but the majority is made into juice and/or cider. Each acre would yield approximately 3,500 litres of juice, with the 5 acres producing an average of 17,500 litres.

Sold direct to customers and local restaurants, cafes and shops for an average of £2.50/liter (some retail would be higher, some local wholesale lower) this juice is worth approximately £43,750 per year. However, fixed costs for juice processing (bottling, labelling etc) are around £1/liter so the costs of the processing alone account for over 30% of the turnover, leaving £26,250 for labour, other fixed costs and any surplus.

It is likely that this system could provide a viable livelihood for the farmer, employ seasonal help and pay fixed costs but with a profit margin of maximum 10% the farm would only have £2000 - £3000 to repay loans for start up. This margin could easily disappear in a year of bad weather.

Item	Cost low	Cost medium
<b>1000 apple trees on 1/2 standard rootstock</b>	£10,000	£15,000
<b>Apple mill</b>	£500	£1,000
<b>Press</b>	£3,000	£4,000
<b>Pasturiser</b>	£2,000	£3,000
<b>Bottling and Labelling Machine</b>	£1,000	£1,500
<b>Tractor</b>	£10,000	£25,000
<b>Bucket</b>	£500	£1,000
<b>Pallet forks</b>	£500	£750
<b>Mower</b>	£1,500	£2,500
<b>Chipper</b>	£1,500	£2,500
<b>Trailer</b>	£1,000	£2,500
<b>Apple Hoover</b>	£3,000	£5,000
<b>Misc handtools and sundries</b>	£10,000	£15,000
<b>Sub total equipment and trees</b>	<b>£44,500</b>	<b>£78,750</b>

<b>Processing Barn 6m x 12m</b>	£15,120	£25,200
<b>Machinery store and workshop 6m x 12m</b>	£10,800	£15,120
<b>Hardstanding 150m2</b>	£2,250	£4,500
<b>Track 100m</b>	£3,000	£6,000
<b>Borehole</b>	£5,000	£10,000
<b>Coldstorage</b>	£1,000	£4,000
<b>Rabbit and Deer fencing 6 acres</b>	£15,000	£16,800
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£101,670</b>	<b>£180,370</b>

<b>Total including 6 acres of land at £10,000/acre and basic timber mobile home at £40,000</b>	<b>£201,670</b>	<b>£280,370</b>
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## 22 acre mixed farm, selling chicken, pork, lamb, cider, cheese, jams and preserves locally through market stalls or a farm shop

In this model, a diverse mixed farm is set up on 22 acres. The farm produces vegetables, soft and top fruit, jams, juice and cider, eggs, chicken, cheese, beef, lamb and pork which are all sold directly to customers. This farm requires a diverse market for its produce which could be provided by a couple of good weekly farmers' markets, or a farm shop if the location was right. In the case of the farm shop, start up costs would be higher to reflect the additional infrastructure costs. This model is resilient because of its diversity, but requires more start up capital to set systems up efficiently and ensure that the complex systems run well in parallel.

1 acre of the farm is used for vegetables, with 0.75 acres used to grow a range of crops outdoors and 500m<sup>2</sup> used for polytunnel production. This brings in approximately £21,000 per year growing a variety of vegetables with a focus on higher value crops requiring less specialised equipment. A further acre is used for strawberries and soft fruit, which are sold fresh and processed into jams. This brings in another £7,000. 2 acres of land are planted to apple orchards that would produce about 3,500 litres of juice per acre per year at peak production. At £2.50/liter this juice is worth £17,500

250 laying chickens are kept that are rotated around the farm, making use of the orchards and growing areas at some times of year. The 250 chickens would produce around 4500 dozen eggs that are sold at £2.50/half dozen bringing in £22,500. The chickens would

Item	Cost low	Cost medium
<b>Tractor</b>	£10,000	£25,000
<b>Bucket</b>	£500	£1,000
<b>Pallet forks</b>	£500	£750
<b>Mower</b>	£750	£1,500
<b>Tedder / rake</b>	£750	£1,500
<b>Plough</b>	£500	£1,000
<b>Rotovator</b>	£500	£1,000
<b>Trailer for tractor</b>	£750	£2,000
<b>livestock trailer</b>	£1,500	£3,000
<b>Pickup truck</b>	£2,000	£8,000
<b>Polytunnels 500m<sup>2</sup></b>	£4,000	£10,000
<b>Propagation equipment</b>	£500	£1,500
<b>Crop covers, sandbags, ground cover</b>	£1,000	£3,000
<b>Irrigation and water supply to stock</b>	£2,500	£5,000
<b>Planting material for top and soft fruit</b>	£7,500	£8,500
<b>4 cows in calf</b>	£4,000	£5,000
<b>250 chickens</b>	£2,500	£3,500
<b>10 ewes in lamb</b>	£1,200	£1,500
<b>livestock trailer</b>	£1,500	£3,000
<b>Pickup truck</b>	£2,000	£8,000
<b>Misc tools and electric fencing</b>	£10,000	£15,000
<b>Pic arcs</b>	£200	£500
<b>Movable chicken housing</b>	£2,500	£5,000
<b>Chicken misc costs</b>	£500	£1,500
<b>Apple mill</b>	£500	£1,000
<b>Press</b>	£3,000	£4,000
<b>Pasturiser</b>	£2,000	£3,000
<b>Bottling and Labelling Machine</b>	£1,000	£1,500
<b>Misc Processing kitchen equipment</b>	£1,000	£2,500
<b>Milking machine</b>	£1,000	£4,000
<b>Cheese making equipment and sundries</b>	£3,000	£5,000

make use of processing waste from vegetables and fruit but would require some cereal feeds.

4 Jersey cows are milked yielding approximately 5000 litres each over the year. The 20,000 litres of milk are processed into cheese which is sold for an average of £15/kg. This brings in a total of £27,000. Calves are raised to 24 months and three are slaughtered each year, and butchered bringing in £2000 each. One calf joins the herd and one cull cow is also slaughtered bringing in £1000. The cows generate £7,000 of beef per year. The cows are primarily fed on pasture, hay and silage, however some lucerne supplement is required to reach 5000 liters per year. The cows require 12 acres of pasture and are rotated with the sheep

1 breeding sow is kept, producing 2 litters of 10 piglets a year. Piglets are killed at 50kg and processed into bacon, sausages and meat. These are worth £400 each bringing in £8,000. The pigs are fed on whey from the cheese making, processing waste from the fruit and vegetables and brought in cereal feed. The pigs account for 1/2 an acre

Finally, 10 ewes are kept on the remaining 3 acres. The 10 ewes produce 16 lambs per year. 13 are slaughtered and butchered each year, bringing in £150 each. 3 join the flock and 3 cull ewes are slaughtered and butchered as well, bringing in £100 each. The flock brings in £2,250 each year.

In total the farms' multiple enterprises bring in approximately £112,250 per year. Of this, around 60% would be labour costs and 30% fixed costs, leaving around 10% profit depending on the year.

The farms' feed bill could be reduced by renting additional land and growing cereals for the pigs, chickens and dairy cows.

<b>Chiller</b>	£2,000	£15,000
<b>Cutting blocks</b>	£500	£1,500
<b>Vacuum packer</b>	£2,000	£4,000
<b>Scales and labeller</b>	£1,000	£2,500
<b>Mincer</b>	£2,000	£4,000
<b>Sausage stuffer</b>	£500	£1,500
<b>Burger machine</b>	£500	£1,000
<b>Slicer</b>	£1,000	£2,000
<b>Meat processing sundries</b>	£5,000	£10,000
<b>Refrigerated delivery van</b>	£5,000	£15,000
<b>Gazebo</b>	£100	£750
<b>Tables</b>	£200	£500
<b>Sub total equipment and stock</b>	<b>£88,950</b>	<b>£194,500</b>

<b>Item</b>	<b>Cost low</b>	<b>Cost medium</b>
<b>Processing Barn 6m x 12m</b>	£10,000	£25,200
<b>Stock barn 6m x 20m</b>	£15,000	£25,200
<b>Machinery store and workshop 6m x 12m</b>	£10,800	£15,120
<b>Hardstanding 150m2</b>	£2,250	£4,500
<b>Track 250m</b>	£7,500	£15,000
<b>Borehole</b>	£5,000	£10,000
<b>rabbit and deer fencing 2.5 acres for soft fruit and vegetables</b>	£6,250	£7,000
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£150,750</b>	<b>£316,520</b>

<b>Total including 22 acres of land at £7,000/acre and basic timber mobile home at £40,000</b>	<b>£344,750</b>	<b>£510,520</b>
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## A 35 acre micro dairy, selling fresh milk locally through a milk delivery scheme

In this model, 33 acres of land are used for a microdairy for a herd of 10 jersey cows. The fresh milk is sold at £1.50/liter directly to local customers, through a delivery or farm collection scheme. The 33 acres support 10 milking cows, each with a calf and a yearling, which are sold for beef at 24 months. Each milking cow produces, on average, 6000 litres a season so the farms' milk production is worth £90,000 per year. In addition, on average 8 yearlings are butchered and sold for beef per year, worth on average £2,000 each. Two replacements join the herd and two cull cows are butchered and sold locally for approximately £1,000 each. This makes an income from beef of £18,000 bringing the farms total income to £108,000 per year. The additional 2 acres are used for infrastructure and a dwelling.

Labour makes up 40 - 50% of the farms expenses, with fixed costs around 40 - 50%, leaving 0 - 20% as surplus. The cows are fed on hay, silage and some brought in concentrate feeds Fixed costs could be reduced by moving to a pasture based system, which would lead to lower input costs and a corresponding drop in milk yields. Alternatively, additional land could be rented to grow fodder cereals.

Item	Cost low	Cost medium
Tractor	£10,000	£25,000
Bucket	£500	£1,000
Pallet forks	£500	£750
Grab	£1,000	£1,500
Mower	£750	£1,500
Tedder / rake	£1,000	£2,500
Bailer	£2,000	£5,000
Dung spreader	£1,500	£2,500
Misc tools and electric fencing	£10,000	£15,000
10 cows in calf	£10,000	£10,000
Milking machine	£1,000	£4,000
Bulktank and milk chiller	£2,000	£4,000
Pasturiser	£3,000	£6,000
Bottling machine	£1,000	£4,000
<b>Sub total equipment and stock</b>	<b>£44,250</b>	<b>£82,750</b>

Item	Cost low	Cost medium
Processing Barn 6m x 12m	£10,000	£25,200
Stock barn 6m x 20m	£15,000	£25,200
Machinery store and workshop 6m x 12m	£10,800	£15,120
Hardstanding 150m <sup>2</sup>	£2,250	£4,500
Track 250m	£7,500	£15,000
Borehole	£5,000	£10,000
Coldstorage	£2,000	£10,000
Electric connection	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£101,800</b>	<b>£207,770</b>

<b>Total including 35 acres of land at £7,000/acre and basic timber mobile home at £40,000</b>	<b>£386,800</b>	<b>£492,770</b>
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# 300 acre grazing livestock business, selling livestock at market, with the additional costs for on farm butchery for direct meat sales

In this model, 300 acres of permanent pasture land is used to produce beef and lamb. Beef animals are kept on a suckler system with 25 animals finished per year at 24 months and 5 retained, these are worth approximately £1,400 each, bringing in £35,000 and 4 cull cows worth approximately £850 each, totalling £3,400.

300 ewes are kept, producing on average 500 lambs. 70 are kept as replacements and 10 are lost, leaving 420 lambs to sell at £80 each, bringing in £33,600. Fifty cull ewes a year are sold at £50 each, bringing in £2,500.

The farm turnover is approximately £74,500, before grants are factored in. This income could be increased by building an on-farm butchery unit and selling meat directly to customers from the farm, through boxes or online sales. This would increase the farm turnover and add resilience to the business, but would come with increased fixed and labour costs associated with processing and direct marketing as well as the costs of installing the processing room.

Item	Cost low	Cost medium
Tractor	£10,000	£25,000
Bucket	£250	£500
Pallet forks	£100	£400
Grab	£1,000	£1,500
Mower	£1,000	£2,000
Tedder / rake	£500	£2,000
Bale trailer	£1,500	£2,500
Dung spreader	£1,000	£3,000
Sheep and cattle handling	£4,000	£7,500
Misc tools and electric fencing	£5,000	£10,000
30 cows in calf plus bull	£30,000	£30,000
300 ewes plus 8 rams	£25,000	£25,000
livestock trailer	£1,500	£3,000
Pickup truck	£2,000	£8,000
<b>Sub total equipment and stock</b>	<b>£82,850</b>	<b>£120,400</b>

<b>Stock barns and hay storage @ 30m x 75m</b>	£225,000	£450,000
<b>Hardstanding 150m2</b>	£2,250	£4,500
<b>Track 250m</b>	£7,500	£15,000
<b>Borehole</b>	£5,000	£10,000
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£327,600</b>	<b>£619,900</b>

<b>Total including 15 acres of land at £7,000/acre and basic timber mobile home at £40,000, rest of land is rented</b>	<b>£472,600</b>	<b>£764,900</b>
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As the land is permanent pasture, hay and silage are made and concentrates are brought in. An alternative to buying feeds would be to use an additional 30 acres to grow feed crops, which would require additional machinery and contractor costs. In this model the margins are very tight and fixed costs account for around 70% -75% of the business costs, leaving a narrow margin for the wages for the farmer and a part-time farm hand, and little surplus to repay any loans.

These costs do not factor in rental costs for land or buildings, or income from grants or subsidies. These costs and opportunities would vary by locality and would be likely to make or break the business plan. The 300 acres of permanent pasture, managed in this way would have significant environmental and biodiversity benefits.

### On farm meat processing

Item	Cost low	Cost medium
<b>Processing Barn 6m x 12m</b>	£21,600	£28,800
<b>Refrigeration</b>	£2,000	£15,000
<b>cutting blocks</b>	£500	£1,500
<b>Vacuum packer</b>	£2,000	£4,000
<b>Scales and labeller</b>	£1,000	£2,500
<b>Mincer</b>	£2,000	£4,000
<b>Sausage stuffer</b>	£500	£1,500
<b>Burger machine</b>	£500	£1,000
<b>Slicer</b>	£1,000	£2,000
<b>Meat processing sundries</b>	£5,000	£10,000
<b>refrigerated delivery van</b>	£5,000	£15,000
<b>Total</b>	<b>£41,100</b>	<b>£85,300</b>



## 20 acre mixed woodland forestry enterprise

In this model, a small-scale forestry operation manages an over-stood 20 acre mixed woodland site comprising of 60% maturing conifer plantation and 40% semi-mature mixed hardwoods of varying quality.

Primary processing, the milling of timber and selling seasoned firewood make up most of the income along with external contracts (felling, thinning, extraction etc) managing other local woodland. Activity, processing and sales are generally seasonal and direct to local customers.

In this model annual income is comprised of 120m<sup>2</sup> of firewood sold at £100pm<sup>2</sup> generating £12,000; 30m<sup>2</sup> of milled softwood sold at £512/m<sup>2</sup> and 10m<sup>2</sup> of hardwood sold at £960/m<sup>2</sup> generating £25,000; and 20 days of contract work felling and extracting at £400 per day generating £8000. Based on this the business generates around £45,000 per year. This supports the livelihood of the forester with occasional help.

Item	Cost low	Cost medium
<b>Tractor</b>	£10,000	£25,000
<b>Winch</b>	£500	£2,500
<b>Forwarder Trailer w/ grab</b>	£8,000	£18,000
<b>pto Splitter</b>	£500	£2,000
<b>Mobile or static sawmill</b>	£5,000	£15,000
<b>Pick up truck</b>	£3,000	£5,000
<b>Trailer</b>	£1,200	£2,000
<b>Chainsaws &amp; accessories</b>	£1,000	£2,000
<b>PPE</b>	£1,000	£1,500
<b>Restocking inc guards</b>	£4,000	£1,000
<b>Sub total equipment</b>	<b>£34,200</b>	<b>£74,000</b>

<b>Processing Barn 6m x 12m</b>	£10,000	£25,200
<b>Machinery store and workshop 6m x 12m</b>	£10,800	£15,120
<b>Hardstanding 150m<sup>2</sup></b>	£2,250	£4,500
<b>Track 100m</b>	£3,000	£6,000
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£60,250</b>	<b>£124,820</b>

<b>Total including 20 acres of land at £7,000/acre and basic timber mobile home at £40,000</b>	<b>£240,250</b>	<b>£304,820</b>
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## 20 acre coppice and woodland social enterprise

This model is based on 20 acres of 'coppice with standards' woodland of varying quality; some in rotation, some overstood; comprising mainly hazel, ash and sweet chestnut.

The operation includes contract woodland management, primary processed products sold directly to local consumers and industry; and social forestry projects, education and woodland craft courses.

In this model annual income is comprised of 60m<sup>2</sup> firewood sold at £100pm<sup>2</sup> generating £6,000; 4t of charcoal (BBQ & biochar) sold at £2 per kg generating £8,000; 20 days of woodland management contract work at £400 per day generating £8,000; seasonal coppice product sales (bean poles, hedging stakes, fascines etc.) generating around £3,000; 8 craft courses at around £600 per course generating £4,800; and niche commissions (hurdle fencing, small timber framing) equating roughly £5,500. This totals about £35,300 annual income.

Item	Cost low	Cost medium
<b>Tractor</b>	£10,000	£25,000
<b>Winch</b>	£500	£2,500
<b>pto Splitter</b>	£500	£2,000
<b>Charcoal Kiln</b>	£2,500	£18,000
<b>Pick up truck</b>	£3,000	£5,000
<b>Trailer</b>	£1,200	£2,000
<b>Chainsaws &amp; accessorries</b>	£2,000	£3,000
<b>Personal Protective Equipment (PPE)</b>	£1,000	£1,500
<b>Mobile Deer Fencing</b>	£2,000	£5,000
<b>Restocking inc guards</b>	£4,000	£1,000
<b>Sub total equipment</b>	<b>£26,700</b>	<b>£65,000</b>

<b>Processing Barn 6m x 12m</b>	£10,000	£25,200
<b>Machinery store and workshop 6m x 12m</b>	£10,800	£15,120
<b>Hardstanding 150m<sup>2</sup></b>	£2,250	£4,500
<b>Track 100m</b>	£3,000	£6,000
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£52,750</b>	<b>£115,820</b>

<b>Total including 20 acres of land at £7,000/acre and basic timber mobile home at £40,000</b>	<b>£232,750</b>	<b>£295,820</b>
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# A 50 acre arable farm growing population wheat and baking all flour into breads and pizzas

In this model, the farmer grows a heritage population winter wheat on 25 acres which are rented on short term cropping licences. A high biomass cover crop is drilled in May and grown over the summer, then incorporated before the winter wheat. Muck-spreading is contracted, as is the combining of the crop. The wheat yields 1 - 1.5 tons per acre which is dried, cleaned and milled on farm and processed through an on-farm artisan bakery, producing 240kg of bread per week. A mobile pizza oven operates 3 nights a week through the summer holidays and does 20 other nights throughout the year. The low yield of heritage population wheat is more than made up for in the increased value from direct marketing and processing.

The bread is sold at £4.50/kg and is baked on two days of the week. The bread requires 12 tons of flour and brings in £54,000 over the year. The pizzas are baked in a mobile oven that are taken to local venues. On average a pizza night brings in £800, once the right locations are found. The pizza enterprise uses a further 7.6 tons of flour and brings in £30,400. In addition, straw is sold bringing in a further £2,500. The total income of the business is around £86,540

Item	Cost low	Cost medium
<b>Tractor</b>	£10,000	£25,000
<b>Pallet forks</b>	£500	£750
<b>Plough</b>	£500	£1,000
<b>Powerharrow</b>	£1,000	£2,500
<b>Seed drill</b>	£1,000	£4,000
<b>Einbock tines</b>	£750	£2,000
<b>Flail mower</b>	£1,000	£2,500
<b>Grain dryer (Gas)</b>	£1,500	£5,000
<b>Tray seed cleaner</b>	£3,000	£5,000
<b>Cylinder seed cleaner / vetch seperator</b>	£1,000	£2,000
<b>Flour mill</b>	£13,000	£20,000
<b>Portable oven</b>	£2,500	£3,500
<b>Baking oven</b>	£12,000	£15,000
<b>Bakery items misc</b>	£2,000	£4,000
<b>200 Banitons</b>	£2,000	£3,000
<b>Dough trough</b>	£1,000	£2,000
<b>Dough mixer</b>	£500	£1,500
<b>Trailer for portable oven</b>	£500	£1,000
<b>Gazeebo</b>	£100	£750
<b>Tables</b>	£200	£500
<b>Pickup truck</b>	£2,000	£8,000
<b>Sub total equipment and stock</b>	<b>£56,050</b>	<b>£109,000</b>



The bulk of the labour is provided by the farmer/baker, although the pizza enterprise requires two people to staff and so in the summer the team would expand to 1.5 - 2 FTE.

If the business were to be operating on land owned by the farmer a significantly larger portion of land would be required to grow fertility building crops and rotate the wheat. This could also be combined with livestock enterprises, which would offer the additional benefits of manure, or additional arable crops. An alternative to the cultivation based system in this model would be to use an min-till drill designed for Organic systems such as the Eco Dyn, however these cost around £35,000 and would significantly increase start up costs.

<b>Processing Barn 6m x 12m</b>	£10,000	£25,200
<b>Bakery Barn 6m x 12m</b>	£10,000	£25,200
<b>Machinery store and workshop 6m x 12m</b>	£10,800	£15,120
<b>Hardstanding 150m2</b>	£2,250	£4,500
<b>Track 250m</b>	£7,500	£15,000
<b>Electric connection</b>	£5,000	£20,000
<b>Subtotal including infrastructure</b>	<b>£101,600</b>	<b>£214,020</b>

<b>Total including 50 acres of land at £7,000/acre and basic timber mobile home at £40,000</b>	<b>£491,600</b>	<b>£604,020</b>
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