

Buloke Intensive Livestock Investment Guide

Volume 2 - 2017 Egg Production

VOIA STR.







TABLE OF CONTENTS

TABLE OF CONTENTS	_2
POULTRY BREEDS AND SYSTEMS	2
BULOKE AND THE EGG INDUSTRY: OVERVIEW	3
BECOMING A POULTRY EGG FARMER	4
ESTABLISHMENT	6
BALL PARK COSTS	7
IDEAL SITE REQUIREMENTS	8
LOGISTICS	9
CASE STUDY: BULOKE TABLE EGG FARMING	_11
DAY TO DAY MANAGEMENT	_12
FINANCE	_13
MAP OF BULOKE	_15
STATUTORY REQUIREMENTS	_16
Bibliography	_16
PLANNING CHECKLIST	_17
BUILDING CHECKLIST	_17
FURTHER INFORMATION	_18

POULTRY BREEDS AND SYSTEMS COMMERCIAL BREEDS GROWING DESCRIPTION **SYSTEMS** Lohmann, Isa Brown Free range Allowed access to outside range each day during most daylight hours. Outside range area is a minimum of 10,000 birds per hectare and inside maximum is 12 birds per square metre. Birds are always shedded however they are Hy-Line Brown, Isa Brown Barn Laid free to roam anywhere in the shed. Stocking densities of no more than 12 birds per square metre. Birds live in large cages with stocking Hy-Line Brown, Isa Brown Caged densities of no more than 7 birds per cage. There can be multiple levels of cages.

DISCLAIMER

Buloke Shire Council has compiled this document using information from a range of sources, which are considered reliable. Council, its employees and agents, accept neither responsibility for the accuracy of the material in this document, nor for the consequences of any action taken by any organisation or individual as a result of the use of any information in this document.

BULOKE AND THE EGG INDUSTRY: OVERVIEW Why Buloke Shire? Buloke Shire Council is actively seeking to attract investment in intensive poultry, and related business activities, to the Shire.

Buloke Shire Council is actively seeking to attract investment in intensive poultry, and related business activities, to the Shire.

The Australian layer egg farming industry has revenue of \$760 million per year, with an annual growth of 5.3% and this is expected to stabilise at an annual growth of 2.4% per year over the next five years. Australians, on average, eat 220 (D'Mello, 2015) eggs per year and this has risen at the rate of just over 2 eggs per year over the last 3 years (this has the potential to keep increasing as it has in other countries, eg Japan and Mexico where consumption is well over 300 eggs per head per year) (lanssen, 2012). James Kellaway, managing director of Australian Egg Corporation Limited, says that by 2050, Australian egg farmers will have to increase egg production by approximately 160 per cent to keep up with demand (D'Mello, 2015).

There are just 329 farm establishments producing table eggs (of which 29% are located in Victoria), paying \$80.3 million in wages and achieving net profit of \$34.2 million (before tax). The broiler industry has a history of steady expansion since world war two with most of this focussed around capital cities or major regional cities. In the last few years with advances in transport and production technologies, and the growth in free range and organic production, the industry is now looking to expand in bio-secure, broadacre locations: Buloke is well placed to meet many of the needs of the table egg industry in the coming decades.



Buloke has several natural advantages including a quality water supply (now very secure as part of the GWM Water pipeline system), affordable land, large wide open spaces (8,001 square kilometres predominantly used for grain production) and a population (6,000 residents) of less than one person per square kilometre. Buloke also has a temperate, dry climate minimising risks of many diseases.

Buloke's climate, broadacre farming environment and the ability to provide adequate separation distances contribute to giving the Shire a strong bio-security profile.

Buloke's communities are generally supportive of the poultry industry, understanding that it will help to drive the economy, add to local diversity, and provide new local jobs.

In recent times, proactive real estate agents in Buloke have helped to secure land for outside investors planning to establish poultry businesses in the Shire. Land prices for poultry farming operations lots have been around \$2,500 per hectare (or \$1,000 per acre) with very few sales of properties less than 80 hectares (200 acres). Larger areas enable bio-security and planning requirements to be more easily met, making the planning application process easier to navigate. Land should be located near a local sealed road with three phase power and water access. A site where there are no residences within three kilometres of the poultry facilities can be both desirable, and possible in Buloke.

BECOMING A POULTRY EGG FARMER

To become an egg producer, farmers can be either contract grower or grow and market their own birds as specialist niche growers.

There are many commercial models for egg production such as Caged layers, Barn layers, Free range layers, and Caravan layers.

The entry level for a full time poultry farmer on a commercial basis is usually as a free range grower with a minimum of 1,000 birds. Entry at this level would require the farmer to have no preexisting debt and to be very careful with management systems as the income level is likely to be low.

More common now days would be for a larger commercial system with a contract to sell the eggs and a set up cost of between one and two million dollars depending on the model used.

Workload

All forms of egg production is a seven day per week job and while it is not difficult or overly strenuous work it is every single day including Christmas day.

Unlike the broiler industry where there are busy times and the workload varies throughout the batch cycle, the egg workload is pretty much every day and there is not much you can do to make one day have less work than another.

A continuous workload is one of the major deterrents to entering this industry and you have to be very sure before you spend your money that you can handle the seven day a week work. Not only is it seven days per week it is also good practice to have someone on site at all times "just in case".

Caged Layers

There is still a market for factory eggs or caged layers. This is the most efficient form of egg production and provides the cheapest eggs. This is because every part of the environment is controlled and is set to provide the ideal production environment for the chicken. The birds are housed in a sealed building that protects the birds from predators and diseases.

The layers are fed precise rations depending on their stage of life and egg production. The temperature is also set at optimum levels for the flock. The regulations surrounding caged layers have changed considerably in recent times to create a more humane environment for the layers. There are no longer single caged chickens in commercial systems with most having more than three birds per cage and cages size must allow at least 600 cm2 per bird. (Agriculture Victoria, 14)

The caged layer system of egg production is losing its market capacity as a table egg, however there is still considerable demand in the processing sector for these eggs. It is likely that the competitive pricing, and low perception of the use of eggs in manufactured foods, will see caged eggs remain a big part of the processed manufacturing sector for the foreseeable future.

Free Range – What is it?

Free range, as the name indicates, is a production system that allows birds to roam the range around their housing for most of the daylight hours. In smaller systems this will be controlled manually by the farmer who will let them out in the morning and close them in at night.

The national definition of free-range will require hens have "meaningful and regular" access to the outdoors, and that the density of chickens outdoors must be no more than one hen per square metre (10,000 hens per hectare). (Vidot, 2016)

Some major growers have indicated that they intend to keep birds at much lower densities than 10,000 birds per hectare, to create a competitive advantage and demonstrate a concern for both environment/land management and animal behaviour.

"Farmers of free range eggs will also be required to prominently disclose their outdoor stocking density of their hens, allowing consumers to easily choose their preference.

The main reasons for closing birds in at night is to keep them safe from predators and intemperate weather conditions while also assisting in training them to lay their eggs inside.

Small Scale Free Range

Free range is the usual system that would be used by small growers to establish a commercial egg business. They usually do this by establishing themselves as a business that supplies eggs directly to the consumer often filling a specific niche market. These growers would need to have in the vicinity of at least 1,000 birds to be a commercial scale operator (Street, 2016).

Many smaller growers exist in this market space selling directly to the consumer but do it as a sideline or as an adjunct to supplement their main source of income.

As these type of businesses get bigger they would still sell the majority of eggs produced directly to the end consumer and only supply wholesalers with eggs produced in surplus.

There is still room for this style of business but it is generally a much less mechanised business with little automation. Often the farmer in this situation will grow and mix his own feed, hand collect the eggs, grade the eggs, and pack the eggs by hand. This may seem labour intensive however there is still good money in doing it this way if you get the markets right. In these smaller free range systems the chickens themselves may be in either a fixed shed or in a series of wagon style sheds that are wheeled onto fresh pasture on a regular basis.

A section of the industry is pushing this as the best and most humane way of producing eggs and is marketed to appeal to those wanting animals to live a life close to what would happen without human intervention. This style of farm is not without its problems as it exposes chooks to all types of diseases as well as predators ranging in the area. This system is usually less intense and will often cost more in feed and produce lower numbers of eggs per year.

Large Free Range

The next step up is usually to larger sheds with a minimum of 10,000 birds and up to about 40,000 birds per farm. In these farms the eggs are usually sold to a wholesale market although there are still a few doing their own marketing.

Sheds with only ten thousand birds are usually only considered if they are making use of existing infrastructure and often there would be more than one shed. It is doubtful if it is worth getting into these mechanised contract systems with less than fifteen thousand birds and many would suggest at least twenty thousand if you are using existing infrastructure. If you are starting from scratch it is advised to plan for a facility to run between 30,000 and 40,000 birds. In most systems a 30,000 to 40,000 bird shed could be run by a husband and wife depending on the amount of mechanisation however and allowance should be made for extra workers to allow for time off. 30,000 to 40,000 bird sheds are usually very mechanised with eggs being collected on a belt system. The eggs can continue on this system through an on farm grading system and sometimes a washing system and then be packed for sale.

The more commons system for many growers with these numbers of birds is to simply pack them into trays of 30 straight off the collecting belt and then stack them onto pallets and transport them to a regional processor for grading and packing for consumers.

Growers can have them packed and sold directly to Often the grower will have a supply contract with the regional processor and the processor will arrange the sale of the eggs.

Barn Laid

Barn Laid is the step between caged birds and free range. The birds are kept in a shed but not in cages. This offers advantages over both systems. The birds are seen to be more humanely treated because they are not caged to a certain pen but are free to roam throughout the shed.

The environmental conditions in Barn Laid sheds are still well controlled in a similar fashion to caged hens, but unlike the free range system they are not exposed to diseases and predators from the outside world.

The cost of growing eggs in this system is lower than free range because of the controlled environment however the premium paid for barn laid eggs is commensurately lower meaning that the gross margins are not significantly different.

Barn laid systems usually are similar in size to large free range systems with 30,000 to 40,000 birds to a farm.

Barn laid systems are less expensive to set up than free range because they do not require extra land and fencing. Several sheds can be situated next to each other so the overall land footprint for barn laid can be much less. It also has the benefit of simple expansion because with the addition of relatively small amounts of land and more labour the size of the farm can keep expanding

ESTABLISHMENT

There are many different options when entering the egg industry. You can pay the full costs of setting everything up including the cost of food and birds leaving you with the total risk.

Paying for everything yourself puts you in the best position to choose how you sell the eggs and can offer the greatest return on your investment.

Other models are available where you grow under This can be very important, particularly when starting out as the combined cost of the purchase of birds and food on a forty thousand bird shed could get to half a million dollars. Under a contract system your supplier could be paying this; of course your return per egg will be less to reflect the cost savings and the risk born by the supplier.

There is another system in the market where the grower is provided with the birds and feed and also a significant amount of infrastructure in the shed. This

Pros for the farmer with this system include:

- Assistance with establishment costs
- Almost a franchise with step by step work guidelines for a farmer new to the industry
- A turnkey system with never ending advice from the company's experts.
- •
- A guaranteed pricing contract
- The knowledge that because they have 'skin in the game' they are going to do their best to make sure you succeed.

Pros for the company include

- They effectively increase their production figures with little capital investment
- Because their equipment is in the farmers shed, the farmer cannot sell eggs elsewhere
- They don't have to borrow much money to expand their capacity
- They don't have to organise a labour force to manage their egg production expansion
- They will have your loyalty because they know that you have made it easier for them to get established.



contract for an established company. Some of these companies will purchase the birds and pay for the feed. Effectively you are providing the infrastructure and the labour to manage the birds.

system is likely to provide the least return to the grower, however there are many positives from starting this way.

It is almost a franchise system where the parent company has significant 'skin in the game' and really has to be sure that you perform well for them to make money on their investment. At the same time you are still investing heavily and also have a large vested interest in performing well to pay back your expenses and make a good living.

BALL PARK COSTS

In reality in the Buloke Shire, farms are likely to be set up on relatively large acreages because there are not many small acre blocks available. Generally speaking the larger the land size of the farm location the easier it is to get permits as it keeps the buffer zones on the owner's farm.

In Buloke land is low in price compared to most other places in Victoria and land can start from about \$1,250 per hectare although most land sold recently for intensive animals has been at least twice this amount or more.

It is easier to get permits on larger allotments as this keeps much of the buffer zone (required by the planning permit), on your property and makes it harder for people to justify objections to your planning permit.

The cost of setting up an egg laying farm is estimated to be between 40 and 50 dollars per bird housed. It is likely to be at the lower end for large scale barn laid and caged systems while small free range systems would be at the higher end.

The cost can also change significantly depending on which of the establishment model from above that you choose.

40,000 bird broiler farm is likely to be around 1.6 million dollars plus land using the cheapest system above. The return on this system taking out all expenses except wages, capital repayment and interest would be about 320,000 per year

Many poultry egg producers enter some sort of contract arrangements with egg processing companies. Usually these contracts include very good back-up support and training.

Most contract systems involve the individual farmer supplying the infrastructure, the water, the power (energy) and labour. Some contracting companies supply layers, (transport of eggs is negotiable), feed, veterinary advice, medications, and a management system for the birds. Farmers are responsible for cleaning and disinfecting the sheds between batches (every 60 weeks), and may have to arrange destocking the shed, depending on the contract.

The industry is a full-time commitment and most contracts require that someone is present on site, and contactable by mobile phone at all times. This is a large commitment and needs careful consideration.

Significant automation of the operation of the layer industry has substantially reduced the workload required to manage them. Evidence suggests that it is possible for a husband and wife team to control the normal operations of sheds for up to 40,000 birds.

If entering this industry is of interest, please contact James Goldsmith, Economic Development Officer at Buloke Shire Council who can answer many of your queries and provide further information and specific contacts in the poultry industry.

There is still plenty of opportunity for independent egg producers however their needs to be a lot of due diligence and careful planning before going down this track.

Growers intending to 'go it alone' in terms of producing, processing and marketing their own eggs require more extensive information, and are encouraged to discuss their plans with Council's Economic Development Officer at an early stage.



IDEAL SITE REQUIREMENTS

The following notes relate to suggested 'ideal' land and infrastructure for an egg producing poultry farm. Farmers and investors may be able to work around deficiencies in many of the preferred natural or installed assets, through design, innovation or making trade-offs.

Site

It is best to avoid slopes to minimise earthwork requirements and to be located away from waterways, lakes and flood prone areas. Valleys and areas enclosed by thicker vegetation can be suitable, depending on the microclimate and odour dispersal characteristics. Free range sites need available grazing land to accommodate relatively low bird free-ranging densities. Properties that have the capability to run birds to at least 1,500 birds per hectare are recommended.

Biosecurity

Sites, which are initially identified as suitable, may have planning restrictions due to zoning provisions or overlays (related to the environment or heritage). These provisions can be checked in advance with help from Council staff, or will be advised during the planning permit process.

The egg laying facilities must be at least one kilometre from other commercial avian bird species and some contract companies prefer a distance of five kilometres. It is unlikely that a permit would be issued if there were another poultry farm only one kilometre away.

Neighbours:

The current Victorian broiler code (there is currently no code for egg layers) also suggests a separation distance of no less than 250 metres (with a formula used to calculate distances for larger farms) from the nearest edge of a broiler shed to the nearest edge of a neighbouring 'sensitive' land use (usually a house).

Housing:

Poultry sheds require someone on site at all times. It is suggested housing close to, or on the farm, may be useful and practical, particularly if the poultry is part of a family enterprise.

Access:

Sealed bitumen road access is preferred. If the nearest sealed road is not VicRoads controlled, the development costs for access to the site may be reduced. However, Council roads may also require some access expenditure from the farmer. *Note: Buloke roads have no restrictions on B-doubles*. Water

Access to Wimmera Mallee pipeline water needs to be calculated at the rate of 3 to 5 megalitres per shed, per year depending on the circumstances (eg use of evaporative coolers and misters) and the size of shed. Many poultry egg laying developments look for a capability to expand operations to a maximium of 40,000 birds (free range). It is therefore wise to look for a site that can access around 8 megalitres of water. GWM Water needs to be consulted to confirm that it has the capacity to deliver this level of supply to each particular site.

Power

Access to three phase power is ideal. Power availability must be checked with Powercor by the farmer to ensure there is sufficient capacity at each installation.

Ideally, no houses within three kilometres of the property should be sought, and always "the further the better".



LOGISTICS

Distance from processor

Most companies offering egg contracts are willing to travel long distances for eggs provided they have a critical mass of around 80,000 birds in the area; this allows them to pick up two semi loads per week. Obviously the closer to the packing factory the better however recent trends and realities (of placing higher priority on secure farming operations and investments) have resulted in a wider catchment area being accepted by the packing companies. As a result, all districts within Buloke Shire are potentially suitable for egg laying production.

Farm size

Processers look for farmers with, or able to house, a minimum of 20,000 birds before considering offering a contract. Smaller sized sheds maybe quite viable but usually the grower is either marketing the eggs directly or arranging his own transport to the processing and packing plant.

Emptying sheds

Chickens are delivered to your shed at about 16 weeks of age and are removed from your shed at between 72 and 80 weeks of age depending on the model being used by yourself or the contract company.

At this time the shed is de-stocked and spent hens are sent to a processing plant and made into processed meat for the consumer market.

This is done by hand loading the birds onto B doubles and which take about six to eight thousand birds per load. It is preferable to de-stock the shed/farm as quickly as possible and hopefully on the one day. Once the shed is destocked it is cleaned and disinfected ready for the next batch.

De-stocking a farm would require four or five loads and because it has to be done at night it might happen over a few days. This process is scheduled at night-time, when the birds are partially asleep, and are less stressed by the process. In Buloke, at present, teams of catchers are organised by the grower and arrangements and cost involved are paid by the grower.

Bio-security

When sheds are empty they are cleaned and disinfected in preparation for the next batch to start. This is a big job in an egg laying shed that has had birds in it for over 12 months.

The shed has to have all its flooring slats removed and bobcats come in to clean all the waste manure out. Once this is complete the whole shed is cleaned with high pressure washers and then disinfected.

Processors plan for each farm to have a few days with no birds as a further bio-security measure, to allow proper cleaning and aeration to take place and thereby ensure no contamination is left in the shed to let diseases pass from the old batch to the next batch.

During this period any damaged equipment is repaired so that it is ready for the next batch to come in.

The next batch usually arrives two or three weeks after being de-stocked. Sometimes a little more time is allowed so that the owner can have a week or so off.

The cleaning process must follow the standards of cleanliness of sheds and prevention of cross-contamination as set down by either the advice given by your vet or if you are a contract supplier by whatever your contractor demands.

The cleaning process must follow the standards of cleanliness of sheds and prevention of cross-contamination as set down by the contracting processor.



Markets

There are many good opportunities in egg farming if you get the marketing right. It is very important for a potential farmer to have worked out in detail how they are going to sell their eggs before entering the industry. The initial infrastructure cost plus the cost of birds and food means that the by the time the first egg is laid it is likely to have cost between 60 and 70 dollars. This information is not meant as a deterrent, they are stated to emphasize that you must have a good plan to market your eggs from the start of the project.

Egg farming is much less vertically integrated than broiler farming. There are still plenty of opportunities for individual

farmers to manage the sale of their eggs. This can be done wholly on farm where the farmer processes and packages the eggs and then takes them to market, or he can simply grow the eggs and take them to a processor who will clean and pack them.

The opportunity still exists for individual farmers to negotiate selling contracts right from the individual customer, to the local cafe or local supermarket right up to a direct contract with one of the major supermarket chains.

As well as marketing your own eggs there are many companies with contracts to supply large supermarkets and manufacturing companies that will offer contracts of up to five years to be a supplier for them.

The more lucrative of these contracts are where you simply supply the eggs and take all the risks managing the birds and delivering the eggs to the processing plant.

Other contract systems offer the option of the contracting company supplying the birds and the feed while the farmer provides the infrastructure, labour power and water and grow the eggs according to the way the contracting company determines. This system is much less costly for the farmer and provides him with less risk however it often provides less return.

Buloke has one contract egg processor at the moment in Kinross Farm. Kinross has enough producers in Buloke to allow it to pick up eggs at least twice weekly and transport them to its large and modern processing plant located at Kinglake.

Loddon Valley eggs located at Bridgwater are another option for potential growers; however, you would have to arrange your own transport at this stage. There are other companies that have shown interest but most rely on you delivering the eggs until they have sufficient growers to warrant their own transport.

It is likely that that over time there will be other sheds set up with different marketing arrangements that will make it easier to choose how eggs can be marketed.

The links in the egg industry supply chain are shown in Figure 1. Potential farmers and investors should note that all the links in this chain, up to the final customer stage (of domestic and export supermarkets and food service outlets) are available within transportable distance, no further than 4 hours by road from Buloke Shire.







CASE STUDY: BULOKE TABLE EGG FARMING

Robert and Debbie Adams are diversified farmers based at Laen on the outskirts of Donald. They have built expert knowledge in poultry farming to complement their dryland cropping and intensive pig enterprise.

"Debbie and I were in the turkey industry and when the turkey company shut down we looked around and decided the egg industry looked like a good stable and economical alternative. The workload suited our lifestyle and is also a way to provide secure income that balances out the highs and lows of cereal farming."



With many years' experience in intensive animal production the Adams think they have finally found the system that best suits them. The Adams realise that this industry is not for everyone but offer plenty of opportunity for those that can handle the continuous workload seven days a week. "We have been involved in intensive farming for many years starting with pigs. Pigs are good but seemed to have cycles that every now and then left us with no money. To balance this we invested in Turkeys which were good for a number of years but our processor closed so we had to look elsewhere, and decided on eggs. We chose eggs over broilers because of the even workload which is mostly in daylight hours.

Eggs are a seven day a week job but the workload doesn't vary much once the birds have settled in. The working conditions are mostly quite pleasant and it is something we can do for as many years as we want to. You have to be able bodied to do the work but it is not overly strenuous and mostly the work environment is pleasant.

We have been able to secure a long term contract that suits our needs and we make a reasonable income without having to employ full time labour. The eggs have allowed us to transition the pig production side of our farm over to our son, who is more able to handle the strenuous work required with pigs.

The closure of the turkey processing plant has really become an opportunity for us, as it led to us entering a new industry that offers a good level of stability and profitability.

Of course there have been plenty of challenges to overcome:

- Learning the management requirements of a very different industry
- Developing new work systems, and
- Employing dedicated and careful staff to work in the shed. We look for staff who don't mix in the same circles as us, so that we are less likely to want time off for the same social or family events" (Robert Adams, August 2016).

Robert and Debbie have had their share of challenges with chickens not laying when and where they should, but believe that after the first couple of batches they are getting on top of this and are very pleased with the move into laying birds. Both of them appear happy in the workplace and are confident that the business will assist them to achieve the goals they set when they entered the industry as a secure family oriented business.

DAY TO DAY MANAGEMENT

The description here is for a large contract system with 20,000 plus birds and can vary considerably depending on the type of operation you have e.g. birds in a wagon system or a caged system are much different.

Egg farmers start the cycle with sixteen week old point of lay pullets being unloaded into their shed. They are delivered by road transport with trucks disinfected between farms

The birds are housed in a shed usually with a slat floor covering the whole shed and nesting boxes running the full length of the shed and feeders and drinkers running around the length of the shed.

Both the feed and drinker systems operate automatically and are checked each day to ensure they are working.

The farmer (or farm manager) walks through the chickens at about 7.30am each morning and:

- Checks that all drinkers are working and supplied with water
- Checks that all feeders are working
- Checks the ventilation system
- Removes any dead birds
- Collects any eggs laid on the floor
- The farmer would come back at 9.00am and start the belt to collect the eggs from the first shed
- Doors are set to open automatically in the morning around 9.30.
- He would do another walk through at about 10.30 looking for more floor eggs
- Finish packing the eggs into trays of 30
- Trays of 30 are loaded onto pellets and when there are 980 dozen on the pellet they are put in the store room.
- At midday another walkthrough looking for floor eggs
- Fills out the quality assurance (QA) sheets recording floor eggs, mortality, temperature, bird weights, feed consumption, water usage, etc (some of which are automatically recorded through the system).
- At about 3.00pm the farmer will do another walk through looking for floor eggs

- Following the walk through the belt will be run again to collect all late eggs
- At 5.00pm the farmer would do another walk through looking for floor eggs and checking that the nesting boxes are closed and nothing is caught in them
- The farmer will check that all birds are back in the shed at dusk or a bit later and that the doors are closed
- The farmer checks the monitoring equipment throughout the day.
- At dusk the farmer checks the birds and herds stragglers back into the sheds before closing the doors.

The workload varies during the growing cycle (of around 8 weeks) with more attention being paid in the early stages, when small changes can cause big problems e.g. a small temperature change can greatly affect growth rates and even cause deaths on a large scale.

Modern sheds have many electronic monitors enabled to ensure that all equipment is working properly. If something goes wrong (such as the water supply is compromised, or the temperature control malfunctions) the monitor triggers an alarm usually by telephoning the farm manager and if he/she does not answer immediately it will set of an audible alarm at the shed.

The contract usually requires that the farm manager, or another responsible employee, is either directly on site or within a couple of minutes of the site 24 hours a day seven days a week.



It is possible to kill all the birds in a shed within a couple of hours on a hot day if the circulation from shed stirring fans stop, if misters malfunction, or other air conditioning fails; therefore it is imperative that someone is close by to monitor the shed at all times. This risk is slightly reduced in free range systems when the birds have access to the outside, however on hot days birds often choose to stay in the shed because it is often cooler inside when the fans and misters are working properly.,

Other major jobs take place when the birds are leaving for processing. This involves the farmer arranging a catching team of four to six people to load the birds into cages and onto trucks for transport (loading 8,000 birds per truck). Sheds are usually emptied as quickly as possible to allow cleaning to commence well before the next batch arrives.

Once all the sheds are empty, the slats flooring is removed and litter is removed by tractor and taken

offsite for spreading on paddocks, composting, or further processing. The waste litter has a value and can be used by the farmer, sold to other farmers for spreading, or it can be further processed for use as fertiliser or as a renewable energy source.

Intensive livestock industries are moving towards further processing as a preferred future strategy, adding value and improving biosecurity.

Following the waste litter removal, sheds are disinfected to remove pathogens and other diseases.

The slat flooring is also cleaned and put back in place at this stage.

Maintenance is carried out on all feeders and drinkers and the ventilation system to ensure they are ready for the next batch which will arrive in a week's time





FINANCE

Start-up costs

Land

Larger farm allotments make it easier to obtain permit approvals. Large allotments assist in lessening buffer requirements on neighbouring land and reduce the potential for objections. For example, if the separation distance for a shed encroaches on more than fifty percent of a neighbouring allotment then it is necessary to obtain a signed agreement from the owner of the neighbouring property before a permit could be issued.

Indicative land values in Buloke suggest that purchasing at least 80 hectares would cost \$2,500 per hectare, or a total of \$200,000. It is possible to buy smaller lots but these are difficult to find and may introduce separation distance issues. Smaller allotments may also have other infrastructure such as houses and sheds which add to the cost but may not contribute to the poultry enterprise.

Current recommendations suggest that egg laying businesses should aim for a capacity of 40,000 birds per farm for free range. This can be achieved using to sheds meeting end to end. This configuration offers the maximum opportunities for the layers to have easiest access to the most land for free ranging and is suitable for stocking rates of less than 1,500 birds per hectare.

The cost of building two sheds for a forty thousand bird farm is in the range of one point six to two million dollars. If you were planning to start with just one of these sheds it is likely it would cost one million dollars. The set up costs can vary quite a bit depending on the materials used the degree of mechanisation, the size of the packing area and cool room and how well the project is managed.

Spending money on a good project manager/planner is likely to show an overall financial return in favour of the farmer in the design efficiencies and building efficiencies they usually provide. This is not to say that the farmer can' do this part himself, it is just that experience shows that the overall cost is usually lower if a good project manager is employed to manage the whole process.

A decision to enter the poultry industry will imply a minimum of one shed, and an investment of around one million dollars (unless the land is already owned). In practice an investment in two or more sheds will make the enterprise more attractive to a processor, if a contract is proposed. Some major banks and financial institutions are prepared to lend up to seventy percent on the developed value of the property. So, if the expected final value of the property is, say \$3 million and there is no existing debt, there is a possibility a bank would lend enough to build two sheds without the need for personal cash input.

Egg production annual expenses (based on a 40,000 bird farm under contract) per typical shed include the following suggested budgeted amounts:

- Power: approximately \$20,000
- Water: approximately \$10,000 (assuming just under 3 megalitres per shed per year
- Repairs: approximately \$15,000
- Cleanout approximately \$10,000
- Labour: approximately \$95,000 (1.5 of a full time equivalent labour unit; enough to run both sheds shed seven days per week).

Other expenses include such as emptying and cleaning the sheds should be a simple cost recovery with the value of the birds and manure enough to cover the cost of cleaning and catching.

The total costs to the grower per year equate to approximately \$150,000 per 40,000 birds.

Returns

Indicative Viability: Income per shed per year = \$375,000 Operating expenses = \$150,000 Cash surplus = \$225,000



These basic cash flows (depending on staffing and owners drawing needs) could enable the capital costs of each shed to be paid back over ten years, based on current interest rates.



The Department, Data61 and Geoscience Australia ("We") make no representations or warranties regarding the accuracy or completeness of any content or the product in connection with the NationalMap. We disclaim all responsibility and all liability (including without limitation, liability in negligence, for errors or omissions) for all expenses, loss, damage and costs which you might incur as a result of the information displayed on the NationalMap and your use of it. The NationalMap must not be used for navigation or precise spatial analysis.

STATUTORY REQUIREMENTS

Planning Permits issued by Local Council

It makes good business sense to engage a specialist consultant to work through the process of planning and building for a commercial poultry enterprise as there are a myriad of rules and regulations that need to be followed.

A lay person can do this, however experience shows that it usually takes considerably longer and mistakes made during the process end up adding to the cost of the project by at least ten percent compared to engaging a consultant in the first place. Planning permits must be applied for if you are planning to farm more than 26 chickens in a farming zone.

The planning permit process takes about 3 months provided there are no objections to the proposal. The plan must be advertised publicly for 28 days in local papers to allow people to object to the proposal. If there are objections this can create large extensions to the timelines.

If there are no objections and the plan meets all conditions required for this industry a permit will be issued once ratified by Council.

Building Permits

It may also be sensible to engage a specialist consultant to work through the building process for a commercial poultry enterprise as there are a myriad of rules and regulations that need to be followed.

Building permits cannot be issued for a poultry shed until a planning permit has been issued.

Building permits are less onerous than planning permits in that they do not have the capacity for public comment. Provided the building permit adheres to the regulations for buildings and meets all statutory requirements, a permit will automatically be granted.

Bibliography

Agriculture Victoria. (14, December 2015). *Code of accepted farming practice for the welfare of poultry*. Retrieved August 8, 2016, from Agriculture Victoria: http://agriculture.vic.gov.au/agriculture/animal-health-and-welfare/animal-welfare-legislation/victorian-codes-of-practice-for-animal-welfare/code-of-accepted-farming-practice-for-the-welfare-of-poultry

- D'Mello, C. (2015, October 12). *An excellent time for eggs*. Retrieved May 5, 2016, from The Sydney Morning Herald: http://www.smh.com.au/small-business/entrepreneur/an-excellent-timefor-eggs-20150910-gjjxj2.html
- Ianssen, K. (2012, February). *Egg Consumption Cracks New Heights*. Retrieved May 5, 2016, from Australian Egg Corporation Limited: https://www.aecl.org/dmsdocument/43
- Street, W. (2016, January 28). Principal NPC and Street Ryan and associates. (J. Goldsmith, Interviewer)
- Vidot, A. (2016, March 31). *Farmers welcome new national standard for free-range egg production*. Retrieved August 8, 2016, from ABC Rural: http://www.abc.net.au/news/2016-03-31/free-range-egg-definition-chickens-welcomed/7286772

PLANNING CHECKLIST

	0	
1	Engage a consultant specializing in planning broiler developments to ensure everything on the checklist below is delivered on time and accurately – This is very likely to save you time and money	
2	Preliminary meeting with Council planning department	
3	Sight analysis and design response to zones and overlays:	
4	Report on Special Features - e.g. technology to reduce buffers or deviate from the code	
5	Master Plan Describing stages and implementation timing	
6	Locality Plan at a scale of at least 1:10,000 showing: sheds, houses, water, drainage, roads etc	
7	Locality plan to also include buffers, separation distances and biosecurity	
8	Site plan at a scale of at least 1:100 showing: showing: sheds, houses, water, drainage, roads etc	
9	Development Plan Showing - elevation, excavation, power, water, sewerage, ventilation	
10	Landscaping plan	
11	Environmental Management Plan	
12	Proposed Planning, Design and Construction Measures to meet design criteria (for example odour, dust and noise) and to minimise off-site environmental impacts for each risk event including:	
13	Proposed Day-To-Day operational and Management Practices and contingency plans (including trigger points and target response times for critical incidents) from each risk event for:	
14	Farm Waste (operating systems and practices for managing wastes) especially:	
15	Report on comparison with Generic EMP	
16	Environmental Risk Assessment (using the Broiler Code including modelling to demonstrate):	
17	Environmental Auditing	
18	Aerial Photograph	
19	Other Information lodged with the application (for example, animal welfare report)	

Planning checklist provided by the Northern Poultry Cluster (Northern Poultry Cluster, 2016)

BUILDING CHECKLIST

1	[] Engage a consultant specializing in planning/building broiler developments to ensure everything on the checklist below is delivered on time and accurately – This is very likely to save you time and money	
2	Preliminary meeting with Building Inspector/ Surveyor	
3	Earthworks inspection	
4	Inspection prior to pouring concrete	
5	Wall inspection	
6	Inspection of all mirrors	
7	Final Inspection to issue certificate of occupancy	

FURTHER INFORMATION

Research

Specialised Breeders Australia

(formerly Hy-Line Australia); Suppliers of genetically superior breeding stock to the Table Egg Industry http://www.specialisedbreeders.com.au





Australian Egg Corporation Limited

https://www.aecl.org/marketing

Australian Poultry Cooperative Research Centre

http://www.poultrycrc.com.au/



回記法回

Rural Industries Research and Development Corporation www.rirdc.gov.au

Northern Poultry Cluster

http://www.northernpoultry.com.au/ Phone 03 5428 1488



Poultry Companies Commercial

Sunny Queen www.sunnyqueen.com.au 2830 **Specialised Breeders Australia** http://hyline.specialisedbreeders.com.au/ Phone 03 5448 3300 Loddon Valley Eggs/Bridgewater Poultry Farm www.bridgewaterpoultryfarm.com.au Happy Hens Phone 03 5286 1400 **Kinross Farm** www.kinrossfarm.com.au o Xai Farm Pride www.farmpride.com.au Pace Farm www.pacefarm.com.au



Notes

