

**BARASTOC**

**THE CHOOK BOOK**



***8<sup>th</sup> edition***

***An introduction to home flock management***

## FOREWORD

*The keeping of backyard chooks is not a new thing, it dates back over 5,000 years. Today, people do it for many reasons, a regular supply of freshly laid eggs, for showing and selling or even as family pets. Keeping chooks can be a rewarding experience for the whole family.*

*At Barastoc, we've been supplying proven and trusted quality feeds to the poultry market for over 30 years. We continue to cater for the changing needs of poultry enthusiasts, developing feeds that are ideally suited to them.*

*As the country's leading supplier of poultry feed, we know how important the correct rearing and keeping of poultry is for their welfare, their health and the production of fresh eggs.*

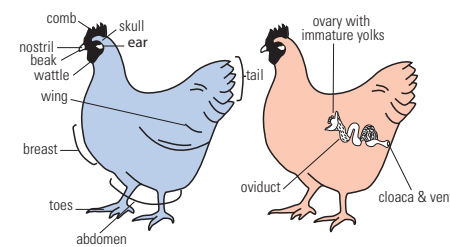
*Hence The Barastoc Chook Book. It has been developed as a guide for the correct rearing and feeding of laying hens. It also includes a section on the Barastoc layer range of feeds and their use.*

*If there is anything else you would like to know please call Ridley Sales & Support on 1300 666 657.*

## THE DOMESTIC HEN

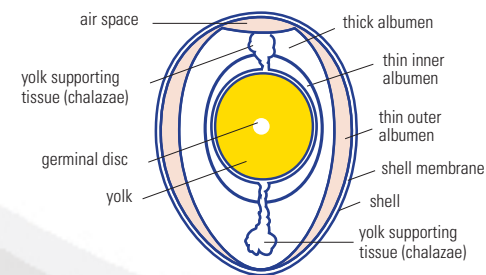
Although indigenous to virtually all continents, it is believed that wild fowl were first domesticated for their eggs in Egypt nearly 5,000 years ago.

The following diagrams show the main characteristics of the domestic hen with which a poultry person should be familiar.



## EGGS - NATURE'S INCREDIBLE FOOD

Eggs are considered one of nature's most complete foods, containing all of the essential amino acids, vitamins and minerals.



The consumption of two eggs alone is said to supply the following percentage of daily human requirements outlined in the table below.

Protein	20%
Calcium	8%
Phosphorus	20%
Iron	26%
Iodine	10%
Vitamin A	20%
Vitamin B	12%
Vitamin B <sub>1</sub>	12%
Vitamin B <sub>2</sub>	8%
Vitamin B <sub>12</sub>	24%
Vitamin D	24%
Kilojoules	670
Weight Watchers points	2

The egg, as illustrated, is made up of 5 main sections:

1. The shell, which consists mainly of calcium carbonate, is quite porous, containing nearly 8,000 minute holes through which gases and water vapour can pass.
2. The shell membrane, which acts as a barrier against bacteria.
3. The layered albumen (egg white) including the chalazae, which hold the yolk in the centre of the egg.
4. The yolk.
5. The germinal disc, which can be seen as a very small spot on the centre of the yolk's surface, is where the chicken develops in an egg that has been fertilised for hatching.

## EGG QUALITY

First quality eggs, as defined by egg marketing authorities, are those that are well-formed, with clean, uncracked shells, with an air cell that is not more than 5 millimetres in depth and with a yolk colour not less than No. 10 on the DSM Yolk Colour Fan”.

## THE EGG SHELL

It is important that eggs be uncracked and kept very clean and dry, as bacteria from dirt and stains can penetrate even through an unbroken shell.



## SHELL COLOUR

There is no relationship between the colour of the shell and the quality of the egg, its flavour or “cookability”. Commercial hybrid hens can lay either white-, tinted- (creamy coloured) or brown-shelled eggs. Brown-shelled egg laying hybrids are now the most commonly farmed hens.

## BLOOD STAINS ON SHELL

The incidence of blood stains on the egg shell occurs more frequently with young birds, though it is quite usual with any aged bird when a double yolker is laid. The shell is stained when small blood vessels that line the oviduct rupture when an egg passes through, though subsequent eggs are generally free from any stains.

*Note: Blood-stained eggs could also indicate cannibalism within the flock and it is especially important to investigate and check each bird for possible injury around its vent.*

## YOLK COLOUR

Carotenoid pigments derived from plants consumed by the bird accumulate to pigment the egg yolk. Although orange yolks look good, there is very little nutritional difference between paler yellow and darker orange yolks. Pasture and vegetable scraps can contribute a range of carotenoid pigments to the hens’ diet. These can be variable, hence yolk colour is likely to vary when hens are given access to a variety of feed sources.

## BLOOD OR MEAT SPOTS

Some may find blood or meat spots to be unsightly. However, they present no harm to the consumer and can be easily removed. When a mature yolk is released from its follicle in the ovary, the follicle usually bursts

along a line (the stigma) that contains few, if any, blood vessels. If the follicle does not tear exactly along the stigma a tiny blood vessel may be torn and escaping blood may form a “blood spot” in the egg.

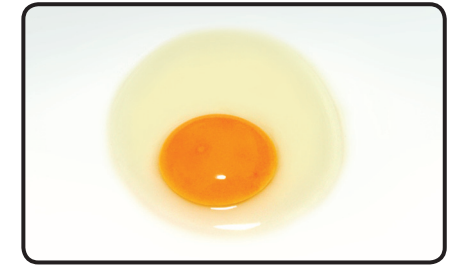
Some breeds of laying birds have a genetic tendency to lay more eggs with blood spots. Also, you can expect a higher occurrence of blood spotting in young hens just coming into lay.

Albumen (egg white) is formed around the yolk as it passes through the oviduct. “Meat spots” are thought to be pigmented or non-pigmented pieces of albumen left behind during formation of the previous egg. The pigment involved (Ooporphyrinse) is associated with colouration of brown-shelled eggs; hence meat spots are less common in white-shelled eggs.

Occasionally, meat spots are made up of pigmented epithelial cells that line the oviduct. Unlike blood spots, meat spots tend to show a random incidence throughout lay with no age-related effect. However, birds that tend to lay eggs with meat spots are likely to continue to do so throughout lay.

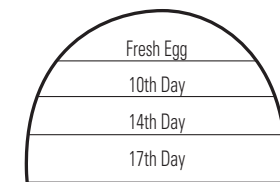
## FRESHNESS

The best way to prolong freshness is to promptly collect eggs and store them in a refrigerator. As a rule of thumb, as much freshness is lost in three days at room temperature as in three weeks in the refrigerator.



Fresh, well-stored eggs are more flavoursome, produce firmer cakes and custards and the whites beat up to produce stable foam. The moment an egg is laid it contains no air cell, though as it cools and loses moisture, a slight vacuum is created serving to draw in air through the pores in the shell.

As the egg ages, this air space becomes bigger. You can use the following as a guide on hard-boiled eggs:



## RUNNY ALBUMEN

When a fresh, well-stored egg is fried, the albumen is more likely to stand high and close to the yolk rather than spread across the pan. Runny albumen can be caused by a number of factors including genetic tendency, age, health and nutrient intake.

Albumen tends to become runnier as the hen gets older and when intake of key nutrients such as protein is compromised. It is important to provide young stock with shelter and water, especially during hot weather, to avoid a severe reduction to feed intake (see Poultry Housing).

It is also important to offer ample feed and avoid diluting balanced Barastoc feeds with poor quality forages at any time. Illnesses such as Infectious Bronchitis, whilst presenting no threat to human health, can be detrimental to albumen quality.

### WHAT TO BUY

The best commercial hybrids have the genetic potential to lay over 300 eggs per hen per year under ideal conditions (i.e. ISA Brown, Hi-sex Brown, Hyline Brown). More traditional brown-egg laying strains include the Black Cross (Australorp/New Hampshire) and the Red Cross (Rhode Island/New Hampshire).

For white eggs the traditional cross is the White Leghorn/New Hampshire. For maximum egg production, pullets should be purchased to reach point of lay in September (around 17 weeks of age) and lay right through to the following September when their replacement flock will begin to lay.

Replacement birds should be purchased from a reputable source, either a commercial hatchery or a recognised breeder. Usually the classified section of rural newspapers will have advertisements for poultry detailing available breeds and prices.

### REPLACING YOUR FLOCK

Don't keep old hens! For maximum production, you should replace your flock when birds reach 75 weeks of age. Beyond this age, the rate of lay is much lower, and egg shell and albumen quality will be poor.

### REARING OF YOUNG CHICKENS AND PULLETS

Rearing chickens from day-old requires husbandry skill, time and proper equipment. Attention to detail is required to avoid high mortality, ill-thrift and poor lifelong performance. If this is considered to be too daunting, obtaining point-of-lay pullets instead of chickens remains a good option.



Before the chickens arrive, all manure and litter from the previous flock must be removed and the enclosure scrubbed thoroughly with detergent and sprayed with a sanitiser approved for use in poultry houses.

Dirt floors must receive special attention. The objective is to minimise contamination of the environment with bacteria, viruses

and parasites. Day-old pullets obtained from the supplier should be vaccinated against Marek's Disease and Infectious Bronchitis Virus. To contact a vaccine supplier please see the "More Information" section in this booklet.

Protection from predators such as rats and cats is essential. Day-old chicks should be reared for at least the first 3 weeks inside a draught-free enclosure, on clean, dry litter material (such as wood shavings or rice hulls), with a heat lamp or heater positioned so that the temperature at the level of the litter is 32°C to 35°C.

It is essential that the day-old chicks can easily access fresh water. A balanced feed of appropriate size, such as Barastoc Pullet Starter, should be provided in feeders. By scattering feed on paper around the feeders and drinking points for the first 24 to 48 hours, the young chickens will more readily learn to gain access to feed and water.

Decrease temperature gradually, aiming to reach about 21°C to 24°C at 3 to 4 weeks of age. Once birds are fully feathered, at around 5 to 6 weeks of age, they can tolerate lower temperatures.

Significant fluctuations in temperature from day to night should be avoided. Extreme high temperatures should also be avoided as this may lead to mortalities and poor performance. Roof sprays or internal shed misters can be of assistance.

For optimal egg production and egg quality, pullets should be vaccinated and treated as recommended by the supplying hatchery.

For example, a standard body weight-per age-chart is useful to gauge progress of your young flock. Contact your commercial hatchery for further details.

### POULTRY HOUSING

It is important to provide all poultry with protection against inclement weather and direct sunlight. The house must be ventilated, however it must also provide shelter from draughts and very hot winds. Exclusion of foxes and other predators is essential.



Convenient access to fresh water is important. If using surface water (dam, river, irrigation) it must be sanitised to be suitable for consumption by domestic poultry. This is to reduce the risk of infection with serious emergency poultry diseases (i.e. Avian Influenza) from water contaminated by wild birds, particularly waterfowl. For more information, contact your State Department of Agriculture or Primary Industries.

To achieve optimal egg production from the modern laying hen, it will be necessary to provide lights to ensure a minimum of 15 hours of light per day – particularly for flocks reaching point of lay in autumn, when natural day length is decreasing. If you wish to control lighting, safe access to electricity is important.

To determine the appropriate size of a hen house, allow approximately 0.37 square metres (4 sq.ft.) of floor space per bird. Thus a 20 bird flock would require a floor area of at least 7.4 square metres (10 ft. x 8 ft. or 80 sq.ft.).

Local councils may have restrictions on the keeping of poultry. It is wise to enquire about your local council requirements. A Model Code of Practice for the Welfare of Animals, Domestic Poultry in Australia also regulates poultry housing. This is available from your State Department of Agriculture or Department of Primary Industries.

You should make yourself familiar with these requirements.

## **PERCHES**

Poultry have a natural tendency to perch. Without perches they will perch on anything available including nests, feeders and, if not too high, the top of the fence. At night, and without perches, the birds will crowd into a corner of the hen house and soon a hard, caked patch of manure will form.

Additionally, the hens' claws and feathers will get dirty and caked with droppings which will be transferred to the nests and subsequently to any eggs laid therein.

By providing perches for roosting, your eggs will be much cleaner and your hens less "flighty". The average hen needs approximately 250mm (10 inches) of perch space. Additionally, it needs to be within a comfortable jumping height. In general, 600mm (2 feet) will suffice.



## **NESTS**

Nests need to be comfortable and fairly dark to ensure seclusion from the rest of the hen house. The amount of nesting space per flock is again dependent on flock size. As a rule, 6 layers require approximately 1 square metre (9 sq.ft.) of nesting space.

Nesting material can be of straw and wood shavings and should be at least 100mm (4 inches) deep.

Shallow nests cause fighting and encourage feather picking and cannibalism. Keep nests clean to avoid soiling the eggs.

Hens can be trained not to sleep in nests by providing perches and excluding them from the nests in the evening. This will also reduce the incidence of broodiness amongst the hens. Reopen the nest when they are asleep and after a week or two the birds will have formed a roosting habit, greatly reducing the amount of droppings in the nests.

Collect eggs twice a day to ensure freshness and minimise the opportunity for egg eating.



## **HEALTH**

Maintaining a productive and healthy flock must be the main objective of every poultry keeper. With proper management, the incidence of disease and other problems is lessened.

## **COCCIDIOSIS**

Coccidiosis is caused by an intestinal parasite. It generally occurs because of damp ground or litter in the hen house which encourages the survival and

maturation of the oocyst – the infectious stage of the coccidiosis life cycle.

There are two main types: Caecal Coccidiosis usually affects young pullets up to 8 weeks of age and Intestinal Coccidiosis is more likely to occur in pullets from 8 to 12 weeks of age. Both types of coccidiosis can cause significant mortalities and chronic ill thrift in a percentage of the survivors, and hence a loss of flock uniformity. Signs that pullets are affected by clinical coccidiosis include mortalities, huddling, ruffled feathers, depression and blood in the droppings (faeces).

Losses can be significant unless the affected birds are treated appropriately. Because there are a number of different species of poultry coccidia, pullets can experience repeated cases of coccidiosis under poor husbandry conditions.

Beyond point of lay, birds will generally have developed an immunity to coccidia. Given the prevalence of coccidiosis, an anticoccidial feed additive has been included in Barastoc Pullet Starter and Barastoc Pullet Grower to help protect young birds when they're most vulnerable.

If further control measures are required, be sure to seek advice from a veterinarian and always ensure that any additional medications are compatible with in-feed additives.

## **WORMS**

The large roundworm (*Ascaridia* spp.) is the most likely to cause trouble in the backyard or free range flock. The adult worm lives in the intestine where it lays large numbers

of eggs which are excreted in the birds' droppings.

These eggs are then picked up by other birds when feeding or scratching for food, and so the infection spreads. A notable feature of roundworm eggs is that they can remain viable on the ground for very long periods, particularly in damp, shaded areas. The symptoms of heavy roundworm infestation are wasting, loss of condition and reduced egg production.

Poultry housed under barn or free range conditions are also commonly infested with other types of worms including the intestinal worm (*Capillaria* spp.), caecal worm (*Heterakis* spp.) and tapeworms (*Raillientina* spp. and *Davainea* spp.). The caecal worm plays a role as an intermediate host in the poultry disease, Blackhead. To control tapeworm where possible, there is a need to control their intermediate hosts – beetles, ants, snails and slugs.

### **EXTERNAL PARASITES**

External parasitic infestation such as ticks, lice and mites causes undue irritation and stress to your birds, which can result in a severe drop in egg production. Although it is unlikely you'll be able to eliminate parasites completely, they can be kept to a minimum by sound management practices.

### **MINIMISING INTERNAL AND EXTERNAL PARASITES**

Damp conditions promote the build up of internal parasites in the flock. Control dampness by attending to leaky drinkers or taps and avoid spillage when water is supplied by hand. Ensure that open areas are well drained and that rainwater cannot enter housing. Remove damp litter or soil and replace with clean, new material and fill in depressions.

For maximum productivity, flocks should be replaced on an "all-in-all out" basis to break the life cycle of internal and external parasites. Ideally, young pullets should be raised apart from older hens and on fresh ground that has not been used by older birds for at least 6 months.

Before introducing new birds to the hen house, all old litter material should be removed and the house should be washed down with a detergent and then sanitised with an approved sanitiser for poultry houses. Ideally, to control external parasites and litter beetles the house should also be treated with an approved insecticide.

Attention should also be paid to cleaning and sanitising nest boxes, drinkers and feeders and any maintenance required undertaken before placement of the birds. Regarding use of medications and other treatments, be sure always to follow instructions and seek Veterinary advice when required.

### **VIRAL AND BACTERIAL INFECTIONS**

Birds are prone to a number of viral and bacterial infections. Some cause minor effects to health and productivity whilst others can result in a high level of mortality or potentially threaten the poultry industry in Australia.

For poultry flocks above a certain size (around 500 to 1,000) it is compulsory in a number of Australian states to vaccinate your layers for Newcastle disease virus

Check with your Department of Agriculture or Primary Industries for advice. It is vital that you report to your local government department or Veterinarian any unusual mortalities or clinical signs of disease in your poultry flock. Ask your bird supplier about their vaccination schedule and contact your Veterinarian to discuss any concerns you may have regarding the health of your flock.

### **EGG EATING**

Laying hens are naturally inclined to eat broken eggs – this is not caused by a feed deficiency. At times this trait develops into a vice whereby a hen pecks at eggs to break and eat them.

Once this habit starts it is difficult to break and will of course result in serious egg losses and may also lead to cannibalism.

It is best to prevent egg eating from starting with good management, such as providing plenty of litter in nests, prompt removal of broken eggs and collecting eggs twice a day.

### **FEATHER PICKING AND CANNIBALISM**

This vice usually results from overcrowding, lack of drinking and feeding space, idleness and poor conditions. Any birds that have been vent picked, traumatised by other hens or are showing signs of poor health and debilitation should be immediately culled in a humane manner.

Seek advice from your Veterinarian or State Department of Agriculture or Primary Industries regarding appropriate culling methods. If it is neglected it may develop into the nastier vice of cannibalism. Again, once it starts it is very difficult to stop.

The primary task is to keep the birds occupied. Assuming your hens are well housed with adequate space, this can be done by scattering straw or feed over the ground for them to scratch around.

### **BROODINESS**

This is a natural, maternal instinct that can cause decreased egg production. Broody hens occupy the nest for extended periods of time, thereby preventing other hens

from laying. Even during the night broody hens tend to remain on the nest rather than roosting with other hens on the perch.

Other signs of broodiness include the ruffling of feathers, aggressiveness when approached on the nest and making a characteristic clucking noise. Broody hens will continue to lay a clutch of 4 to 6 eggs before they stop laying. It is important to act prior to the hen laying this clutch of eggs to avoid the bird going out of lay.

Broody hens should be removed to separate wire coops. There, provided with sufficient feed and water, they should be cured within 3-4 days after which they can be returned to the flock. Keep a close watch for the next few days, as they may lapse back to being broody. Repeat the above isolation treatment if they do.

## POULTRY EQUIPMENT

A range of home poultry equipment is available from most produce stores. Most stores have a range of metal feeders to suit all types and numbers of birds kept. These range from small round feeders suitable for an aviculturist to large 15kg feeders for poultry. Plastic drinkers reduce water contamination and provide visible water levels.

*For further information on poultry equipment, contact your local produce store and discuss your particular requirements.*

## FEEDING LAYING HENS

Layers are omnivores, meaning it is in their nature to consume meat and vegetable material. In the wild this would consist of insects, worms, carcasses, seeds and other plant material. Layers will not survive on vegetable scraps alone. To achieve good health, well-being and egg production, the laying hen must receive a balanced diet.



### 1. Water

Ample, cool, clean water should always be available as this is essential for maximum egg production. If a hen has to do without water for even a short time, her comb may turn a blue-black colour and she will cease to lay. In hot weather, a lack of water for even a few hours can be fatal. Although actual consumption depends on the size of bird, level of egg production, season and type of drinker used, the following may be used as a guide for birds of various ages:

## DAILY WATER CONSUMPTION GUIDE

Age (Weeks)	Litres (10 Birds)
1	0.2
5	1.0
15	2.3
20	2.6
25	4.0
30	5.0

Saline water can be a cause of poor shell quality and wet manure. To check the suitability of your water supply, contact your State Department of Agriculture or Primary Industries or a recognised analytical laboratory.

*Note: In extremely hot weather a good rule to follow is to provide at least three times the usual water allowance.*

### 2. Protein and energy

Birds require an appropriate balance of protein and energy to support growth, egg production, daily functions and overall health. Barastoc laying hen feeds (see product guide) have been formulated to ensure that the requirements for these nutrients are met.

### 3. Vitamins and minerals

Barastoc laying hen feeds (see product guide) are supplemented with vitamins and minerals to support egg production, essential body functions and resistance to disease.

### 4. Coarse sources of calcium

Calcium is required for strong bones and good quality eggshells. Barastoc laying hen feeds (see product guide) contain sufficient

calcium to satisfy your hens' needs. Hens generally lay down egg shells during the night. It can be beneficial to also offer coarse sources of calcium such as shell grit or limestone chips. These provide a sustained slow-release of calcium and allow for the selection of extra calcium by hens.

### 5. Hard grit

Hens use small insoluble stones to grind feed in the gizzard. They require grit when being fed coarse grains such as wheat or other feedstuffs where grinding is necessary for digestion. Grit is generally described as small insoluble stones of approximately 3mm (1/8") in diameter.

### 6. Green feed and scraps

Green feeds and scraps are a source of vitamins and can contribute carotenoid pigments for yolk colour. Hens enjoy grazing and picking over scraps and whilst these can contribute to their diet, they can also be very low in nutrients. If too much poor quality forage or scraps are fed too often in place of a balanced ration, egg production and hen health can suffer.

Care should be taken to avoid access to mouldy or "off" feed such as old damp stored grain or mouldy bread. These may contain toxins that can affect the health and performance of laying hens. The practice of wetting pellets is unnecessary and potentially harmful. Milk should not be added to feedstuffs due to the risk of promoting bacterial growth.

## DOES IT PAY TO KEEP YOUR OWN LAYING HENS?

When properly fed and cared for, hens in a home flock situation (commercial hybrids) can lay in excess of 20 dozen (240) eggs per year. During that time the laying hen will eat approximately 47kg of feed.

By calculating the annual cost of feed, housing, equipment, health care and replacement birds you can then establish how much it costs to produce your own eggs.

Obviously the pleasure of keeping hens cannot be measured in dollars and cents, particularly when it is a family activity. Most importantly, you can't beat home-grown, fresh eggs!



## BARASTOC LAYER RANGE

The Barastoc range of feeds for laying hens and growing pullets covers the complete spectrum of dietary needs for these birds. It also covers the needs of various husbandry practices allowing you to successfully rear and keep laying hens. The following pages provide information about these feeds.

## MORE INFORMATION

**Australian Egg Corporation Limited,**  
www.aecl.org

**Australian Government Department of Agriculture, Fisheries and Forestry,**  
www.affa.gov.au

**Australian Veterinary Poultry Association,**  
www.jcu.edu.au/school/bms/avpa/

**"A Model Code of Practice for the Welfare of Animals, Domestic Poultry in Australia".**

**Vaccines – Intervet Australia Pty Limited.**  
Ph: 1800 033 461

## ACKNOWLEDGEMENT

The contribution of expertise by Dr. Peter Scott (Scolexia Animal & Avian Health Veterinary Consultancy) is greatly appreciated.

8th Edition – Barastoc Chook Book.  
Printed July 2010. Content may change between editions according to changes in products, legislation, and codes of practice. Contact Ridley Sales & Support on 1300 666 657 to ensure you have the most recent edition of the Barastoc Chook Book.

## FEEDING DIRECTIONS

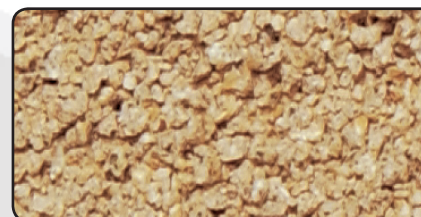
- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Self-feeders designed for poultry are a good way to ensure feed is continuously available.
- Ensure that pullets have access to clean, fresh water at all times.
- Hatchlings can be encouraged to start eating feed by scattering feed on newspaper placed around feeders.
- Care for young stock according to the instructions of your livestock supplier.

## EXPECTED FEED CONSUMPTION

- You can expect young pullets to consume 50 grams of feed per bird each day.
- In the starting period from hatching to 8 weeks of age you can expect each bird to consume a total of approximately 2.5 kilograms of feed.

## ANALYSIS (AS-FED)

Crude Protein (minimum)	19.5%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	6.0%
Salt (maximum added)	0.3%
Copper (added)	0.8mg/kg
Selenium (added)	0.1mg/kg
Calcium (minimum)	1.0%



# BARASTOC

## PULLET STARTER



**COMPLETE FEED**  
for pullets from hatching  
to 8 weeks of age.



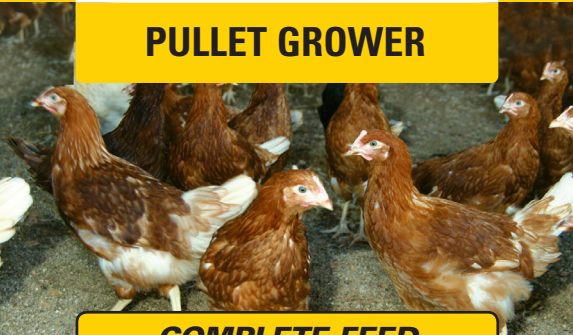
## KEY FEATURES:

- Complete and nutritionally balanced feed to support growth and health of young pullets.
- Suited to a wide range of layer-type breeds.
- Suited to chickens being reared to: lay eggs for the table, breed replacement pullets or be ornamental birds.
- Feed is pelletised and crumbled to a small size suitable for hatchlings.
- Contains anti-coccidial to aid in the prevention of caecal and intestinal coccidiosis.

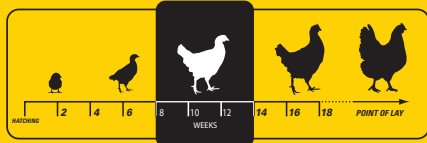


# BARASTOC

## PULLET GROWER



**COMPLETE FEED**  
for pullets from  
8 to 14 weeks of age.



### KEY FEATURES:

- A complete and nutritionally balanced feed to support growth and health of young pullets.
- Suited to a wide range of layer-type breeds.
- Suited to chickens being reared to: lay eggs for the table, breed replacement pullets or be ornamental birds.
- Feed is pelletised and crumbled.
- Contains anti-coccidial to aid in the prevention of caecal and intestinal coccidiosis.

### FEEDING DIRECTIONS

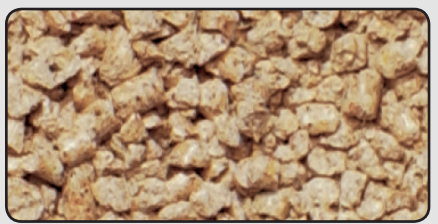
- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Self-feeders designed for poultry are a good way to ensure feed is continuously available.
- Ensure that pullets have access to clean, fresh water at all times.
- Care for growing stock according to the instructions of your livestock supplier.

### EXPECTED FEED CONSUMPTION

- You can expect growing pullets to consume 95 grams of feed per bird each day.
- In the growing period from 8 to 14 weeks of age you can expect each bird to consume a total of approximately 4 kilograms of feed.

### ANALYSIS (AS-FED)

Crude Protein (minimum)	15.5%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	8.0%
Salt (maximum added)	0.3%
Copper (added)	8.0mg/kg
Selenium (added)	0.1mg/kg
Calcium (minimum)	1.0%

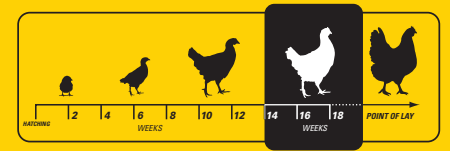


# BARASTOC

## PULLET FINISHER



**COMPLETE FEED**  
for pullets from  
14 weeks of age to point of lay.



### FEEDING DIRECTIONS

- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Self-feeders designed for poultry are a good way to ensure feed is continuously available.
- Ensure that pullets have access to clean, fresh water at all times.
- Care for growing stock according to the instructions of your livestock supplier.

### EXPECTED FEED CONSUMPTION

- You can expect pullets to consume 95 grams of feed per bird each day.
- In the finishing period from 14 weeks of age to point of lay you can expect each bird to consume a total of approximately 2.5 kilograms of feed.

### ANALYSIS (AS-FED)

Crude Protein (minimum)	15.5%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	8.0%
Salt (maximum added)	0.3%
Copper (added)	8.0mg/kg
Selenium (added)	0.1mg/kg
Calcium (minimum)	1.0%



### KEY FEATURES:

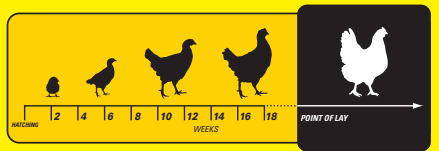
- A complete and nutritionally balanced feed to support growth and health of young pullets.
- Suited to a wide range of layer-type breeds.
- Suited to chickens being reared to: lay eggs for the table, breed replacement pullets or be ornamental birds.
- Feed is pelletised and crumbled.

# BARASTOC

## GOLDEN YOLK



**LAYER PELLETS**  
Complete feed for laying hens in a home flock.



### KEY FEATURES:

- A complete feed to support egg production and health of laying hens in a home flock.
- Formulated to provide balanced levels of protein, energy, vitamins and minerals, including calcium.
- Suited to a wide range of layer-type breeds.
- Feed is pelletised.

### FEEDING DIRECTIONS

- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Self-feeders designed for poultry are a good way to ensure feed is continuously available.
- Ensure that Barastoc Golden Yolk makes up the majority of the hens' total daily feed to ensure a balanced diet.
- Other feeds such as green scraps, pasture and hay may be fed, but only in small amounts.
- Ensure hens have access to clean, fresh water at all times.

### EXPECTED FEED CONSUMPTION

- You can expect hens to consume 130 grams of feed per bird each day.
- A group of 10 hens will consume approximately 9 kg of feed each week.

### ANALYSIS (AS-FED)

Crude Protein (minimum)	15.0%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	10.0%
Salt (maximum added)	0.3%
Calcium (minimum)	3.8%
Copper (added)	6.5mg/kg
Selenium (added)	0.1mg/kg

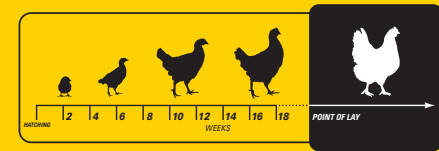


# BARASTOC

## DARLING DOWNS LAYER



**COMPLETE FEED**  
containing natural grains and seeds for laying hens in a home flock.



### KEY FEATURES:

- A complete feed to support egg production and the health of laying hens.
- Formulated to provide balanced levels of protein, energy, vitamins and minerals, including calcium.
- Suited to a wide range of layer-type breeds.
- A blend of natural grains and seeds (whole and cracked).
- Contains a concentrate pellet containing vitamins and minerals.
- Ingredients are carefully selected from plant and vegetable sources and high quality vitamin and mineral supplements.

### FEEDING DIRECTIONS

- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Self-feeders designed for poultry are a good way to ensure feed is continuously available.
- Ensure that Barastoc Darling Downs Layer makes up the majority of the hens' total daily feed to ensure a balanced diet.
- Other feeds such as green scraps, pasture and hay may be fed, but only in small amounts.
- Ensure hens have access to clean, fresh water at all times.

### EXPECTED FEED CONSUMPTION

- You can expect hens to consume 130 grams of feed per bird each day.
- A group of 10 hens will consume approximately 9 kg of feed each week.

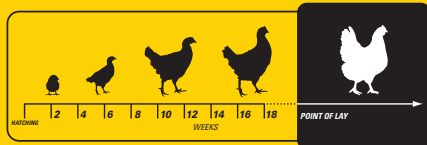
### ANALYSIS (AS-FED)

Crude Protein (minimum)	15.0%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	6.0%
Salt (added)	0.3%
Calcium (minimum)	3.2%
Copper (added)	8.0mg/kg
Selenium (added)	0.3mg/kg



**BARASTOC****TOP LAYER MASH  
TOP LAYER CRUMBLE**

**COMPLETE FEED**  
for laying hens in a commercial flock. Also suitable for a home flock where high performance is required.

**KEY FEATURES:**

- Complete and nutritionally balanced to support egg production and health of laying hens.
- Formulated to provide balanced levels of amino acids important for high levels of performance.
- Formulated to provide balanced levels of protein, energy, vitamins and minerals, including calcium.
- Suited to a wide range of layer-type breeds.
- Available as both crumble or mash products.

*(Note that both products may not be available in all regions.)*

**FEEDING DIRECTIONS**

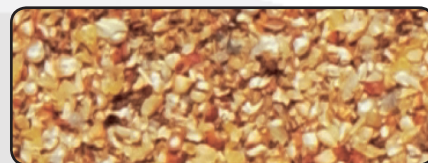
- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Avoid overfeeding by ensuring adequate feeding space for all birds.
- Green scraps, pasture and hay may be fed in small amounts.
- Ensure hens have access to clean, fresh water at all times.

**EXPECTED FEED CONSUMPTION**

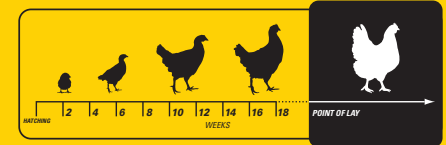
- Appropriate feed consumption is 115 to 125 grams of feed per bird each day for mature full size hens.
- A group of 10 hens will consume approximately between 8 and 9 kilograms of feed each week.

**ANALYSIS (AS-FED)**

Crude Protein (minimum)	16.5%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	6.0%
Salt (maximum added)	0.3%
Calcium (minimum)	3.6%
Copper (added)	8.0mg/kg
Selenium (added)	0.3mg/kg

**BARASTOC****LAYER MASH**

**COMPLETE FEED**  
containing whole and crushed grains, for laying hens in a home flock.

**KEY FEATURES:**

- A complete feed to support egg production and health of laying hens.
- Formulated to provide balanced levels of protein, energy, vitamins and minerals, including calcium.
- Suited to a wide range of layer-type breeds.

**FEEDING DIRECTIONS**

- Ensure birds have continuous access to feed – do not restrict feed consumption.
- Self-feeders designed for poultry are a good way to ensure feed is continuously available.
- Ensure Barastoc Layer Mash makes up the majority of the hens' total daily feed to ensure a balanced diet.
- Green scraps, pasture and hay may be fed in small amounts.
- Ensure hens have access to clean, fresh water at all times.

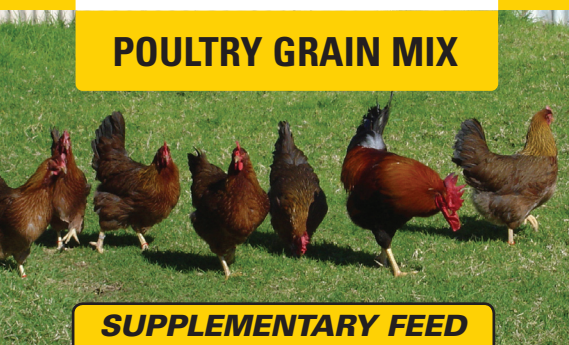
**ANALYSIS (AS-FED)**

Crude Protein (minimum)	15.0%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	6.0%
Salt (maximum added)	0.3%
Copper (added)	4.0mg/kg
Selenium (added)	0.15mg/kg
Calcium (minimum)	3.5%



# BARASTOC

## POULTRY GRAIN MIX



**SUPPLEMENTARY FEED**  
containing natural grains and seeds for laying hens and other poultry in a home flock.



### KEY FEATURES

- Designed to supplement the diets of laying hens and other classes of poultry.
- Supplies the base energy and protein requirements of laying hens and other classes of poultry.
- Suited to a wide range of breeds of laying hens and other poultry kept in a home flock.
- A blend of natural grains and seeds (whole and cracked).
- Ingredients are carefully selected from plant and vegetable sources.

### FEEDING DIRECTIONS

- Feed as a supplement to the birds' diet.
- If feeding to laying hens provide continuous access to calcium chips or shellgrit.
- For improved performance from your hens or birds, use a complete feed from the Barastoc product range.
- Ensure hens or birds have access to clean, fresh water at all times.

### ANALYSIS (AS-FED)

Crude Protein (minimum)	10.0%
Crude Fat (minimum)	2.5%
Crude Fibre (maximum)	6.0%
Salt (maximum)	Nil
Calcium (minimum)	2.5%
Copper (added)	NIL
Selenium (added)	NIL



## BARASTOC LAYER FEED RANGE

### GROWING PULLETS

#### PULLET STARTER



#### PULLET GROWER



#### PULLET FINISHER



### LAYING HENS

#### GOLDEN YOLK

Layer Pellets. Complete feed for laying hens in a home flock.

#### DARLING DOWNS LAYER

Complete feed containing natural grains and seeds, for laying hens in a home flock.

#### TOP LAYER MASH & CRUMBLE

Complete feed for laying hens in a commercial flock. Also suitable for a home flock where higher performance is required.

#### LAYER MASH

Complete feed containing whole and crushed grains, for laying hens in a home flock.

#### POULTRY GRAIN MIX

Supplementary feed containing natural grains and seeds, for laying hens and other poultry in a home flock.



HATCHING 2 4 6 8 10 12 14 16 18 POINT OF LAY  
WEEKS



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