
POULTRY

STANDARD OPERATING PROCEDURE Approved 30/05/2018

Approval to conduct activities under this Standard Operating Procedure (SOP) is conditional upon pedagogical justification for this use of animals being documented by the activity leader and reviewed by the Principal.

Schools may undertake the approved activities outlined in this SOP once authorised to do so by the Queensland Schools Animal Ethics Committee (QSAEC) Animal Ethics Officer.

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SECTION 1 | OBLIGATIONS

Schools have legal obligations under the *Animal Care and Protection Act 2001 (Qld)*, the *Animal Care and Protection Regulation 2012 (Qld)*, and the *Australian code for the care and use of animals for scientific purposes* (Cwlth) 8th Edition 2013, including:

- 1) ensuring persons in charge of an animal fulfil their duty of care to that animal
- 2) obtaining animal ethics approval prior to conducting scientific activities involving animals and acting in accordance with that approval once granted
- 3) reporting on the use of animals for scientific purposes.

Non-compliance with this legislation may result in schools receiving a maximum fine of 300 penalty units. (Penalty unit value is notified in the **Penalties and Sentences Regulation 2015 (Qld)**).

All Queenslanders have a 'general biosecurity obligation' under the *Biosecurity Act 2014 (Qld)*. That means that everyone is responsible for managing biosecurity risks that are under their control and that they know about, or should reasonably be expected to know about. Contact Biosecurity Queensland on 13 25 23 for advice on managing specific risks or to report notifiable incidents.

1.1. DUTY OF CARE FOR ANIMALS

If you are in charge of an animal, you have a duty of care to that animal - no matter why you are in charge of it, what you are using it for or how long it will be in your care. All decisions and actions involving the care and use of animals for scientific purposes must be underpinned by respect for animals. This respect is demonstrated by:

- using animals only when justified
- supporting the wellbeing of the animals involved
- avoiding or minimising harm, including pain and distress, to those animals
- applying high standards of scientific integrity
- applying the principles of Replacement, Reduction and Refinement (the 3Rs) at all stages of animal care and use through:
 - replacement of animals with other methods (alternatives)
 - reduction in numbers of animals used
 - refinement of techniques used, in order to minimise adverse impacts on animals
- knowing and accepting one's responsibilities.

1.2. PEDAGOGICAL JUSTIFICATION FOR THE USE OF ANIMALS IN EDUCATION

It is the teacher's responsibility to provide a pedagogical justification for any learning activity that involves the use of animals, including activities approved under a SOP. The use of animals must provide an added component to the learning that is neither trivial nor available in other ways, and there must be evidence to support this position. **Planning documents must clearly identify how the use of animals is essential to achieving the learning objectives.** The justification should consider whether non-animal or lower-order animal alternatives could achieve the same learning objectives, the minimum number of animals necessary to achieve the objectives, the impact on the animal/s involved and whether the potential effects on the wellbeing of the animals are justified by the potential benefits of their use. The QSAEC, when undertaking a site visit at the school, may request to see documentation detailing the pedagogical justification for the use of animals.

If there are viable alternatives to animal use that meet the learning objectives, they should be used in preference to using animals. At all times the impact on the animal/s should be considered and, where appropriate, discussed with the students in an age-appropriate way.

Activities outside the scope of this SOP **must be considered by QSAEC before approval can be granted.** To seek approval to conduct activities additional to those approved under this SOP or to modify an activity approved in this SOP, you will need to submit a SOP Variation Request in conjunction with the Application/Activity Notification Form at the last page of this SOP.

Please note: The QSAEC will **not** approve any activities classified as Category 4 in the Categories of animal use.

1.3. ANIMAL HEALTH AND WELFARE

Responsibilities of school personnel under the Code details obligations of staff under animal welfare legislation to promote the responsible care and use of animals for scientific purposes.

An **unexpected adverse event** is any event that may have a negative impact on the wellbeing of an animal and was not foreshadowed in the approved proposal, SOP or subsequent documents to QSAEC.

An unexpected adverse event may result from different causes, and includes but is not limited to:

- death of an animal, or group of animals, that was not expected (e.g. during surgery or anaesthesia, or after a procedure or treatment)
- adverse effects following a procedure or treatment that were not expected
- adverse effects in a larger number of animals than predicted during the planning of the project or activity, based on the number of animals actually used, not the number approved for the study
- a greater level of pain or distress than was predicted during the planning of the project or activity
- power failures, inclement weather, emergency situations or other factors external to the project or activity that have a negative impact on the welfare of the animals.

In the event of an unexpected adverse event or emergency, prompt action must be taken to address any adverse impacts on the animal/s. Alleviating unanticipated pain and distress must take precedence over an individual animal reaching the planned endpoint of the project, or the continuation or completion of the project. Emergency treatment may be required and, if necessary, animals must be humanely killed without delay.

In response to an unexpected adverse event, action and investigation by the activity lead or facility manager is required to ensure students, staff or other animals are not inadvertently affected. The specific response will depend on the animal and the circumstances. It may require seeking advice from a veterinarian to determine the best course of action (e.g. necropsy of the dead animal by the vet), removal of the deceased animal (e.g. by the supplier), or diagnostic investigations of facility or management practices to determine cause of death (e.g. water testing of fish tank, checking of ventilation).

All adverse events provide opportunities for students to learn from the experience. Activity leaders should optimise student learning outcomes (incidental and planned) by focussing on the learning potential of a specific event (e.g. prevention, animal welfare, diagnostic tools, treatment, security, harm minimisation).

The QSAEC should be notified within 7 days of the event, using an Unexpected adverse event report.

Please note: Necropsy of a dead animal is not an approved activity under this SOP due to potential health and biosecurity risks, and must only be performed by a competent person. QSAEC recommends that if a necropsy is required it is performed by a vet.

Further advice about reporting unexpected adverse events is available on the Department of Agriculture and Fisheries (DAF) website.

1.4. STUDENT AND STAFF HEALTH

Those involved in the care and use of animals should make themselves aware of the potential disease hazards and other associated occupational health and safety issues, and manage risks according to the school's risk management process. Apart from injuries which may occur due to handling animals, there are a variety of infectious diseases (zoonoses) that are transmissible from various animals to humans.

Zoonotic diseases are common and the illnesses they cause can be serious. They can be spread by direct contact with animals, for example via bites or scratches, or through contact with animal faeces, bodily fluids, airborne particles, birth products, or enclosures contaminated with these materials.

Staff should familiarise themselves with the zoonoses the animals in their care may potentially transmit, the routes of transmission and what activities may potentially expose staff or students to infection. This research will inform the risk assessment to determine how to manage these risks or determine whether the activity should be conducted at all.

For comprehensive advice regarding zoonotic diseases and precautionary measures to minimise risks to staff and students, refer to Animal observation and handling, Animal contact guidelines - reducing the risk to human health 2014 (Interim) and Preventing zoonoses.

Risk management of animal activities ensures the health, safety and well-being of students, staff and others involved. If a specific Curriculum Activity Risk Assessment activity guideline exists, that guideline must be adhered to at a minimum. Risks associated with zoonotic diseases carried by animals must be identified and measures planned to allow activities to be conducted with an acceptable level of residual risk.

Any incident or injury that occurs in association with an activity must be reported, recorded and notified in accordance with Health, safety and wellbeing incident management procedure.

1.5. RECORD KEEPING

Schools must keep a school-based animal activity register which includes hard copy records relating to their use of animals for scientific purposes for seven years for audit purposes. This includes:

- scientific user registration (for non-state schools)
- signed applications, activity notification forms and modifications
- approval responses from QSAEC
- signed QSAEC reports (e.g. annual completion reporting, unexpected adverse events, complaints).

Clear and accurate records relevant to the particular species used in the activity/s should be readily available, including, as relevant:

- animal identification records (e.g. species and number of animals in each cage)
- dates and sources of acquisition
- disposal details and dates
- feeding logs (times/amount)
- breeding records
- names, dosage, dates of any chemicals administered and veterinary treatment provided
- emergency contacts and procedures.

SECTION 2 | QUALIFICATIONS, SKILLS AND EXPERIENCE

Any teacher conducting scientific animal activity must have competency in the particular procedure and:

- a relevant science or science education qualification (e.g. Agricultural Science, Biological Science),
or
- relevant science or science education experience as deemed appropriate by the school principal (generally two years' experience).

For new or inexperienced teachers (less than two years' experience), for activities requiring performance by a competent person (rather than a suitably qualified person under the Regulation), all activities must be conducted under the supervision of a Science or Agricultural Science Head of Department (HOD) or suitably experienced person.

Where direct supervision of a suitably experienced person is not available, a new or inexperienced teacher must:

- identify a mentor, maybe a Science or Agriculture HOD from a neighbouring school, and
- provide planning documents to the mentor.

Persons deemed to be suitably qualified must have:

- conducted risk assessments on the procedure/s to be carried out
- found the procedure/s to be safe and humane considering animal and student welfare
- considered the maturity and suitability of the student/s involved in the activity.

Teachers should ensure that animal users, including students, staff and volunteers, are provided with adequate prior instruction in specific activities to enable appropriate care of an animal and to minimise risk of undue stress or harm to an animal.

SECTION 3 | STANDARDS OF PRACTICE

3.1. PHYSICAL ATTRIBUTES OF POULTRY

	Chickens	Guinea Fowl	Ducks	Geese	Quail	Turkeys
Size (Height)	Bantam hen 15cm, large fowl 70cm		up to 60cm	up to 90cm	17-20cm	up to 1m
Weight	Bantam hen 500g; large male fowl 6.35kg	800g - over 1kg	Drakes 1-5kg; Ducks 0.8-4kg	Gander 4-14kg; Goose 4-9kg	100-160g Depending on species	Male 8-15kg; Female 4-8kg
Age at adult size			6-12 months	6-12 months	6 weeks	
Weight at birth	Bantam 20g; large fowl 35-40g	24-25g	50g	50g	6g	40-60g
Incubation period	Bantam 19-20 days; large fowl 21 days	26-28 days	Ducks 29 days; Muscovy Ducks 35 days	35 days	14-21 days	28 days
Healthy characteristics						
Body temperature	40-42°C	40-43°C	40-42°C	40-42°C		40-42°C
Heart rate	150-400 beats/minute	Around 200 beats/minute	180-340 beats per minute	180-340 beats per minute		180-340 beats per minute
Range of breeding ages	Bantams 6 months - approx. 7 years Large breeds: 9-12 months – approx. 7 years. Breeding may extend to death, however, they would normally not be used for this extent of time.	From 35 weeks	From 6 months	From 12 months	From 50 days	Sexual maturity – well grown, seven month old pullets.

3.2. ENVIRONMENT

Reference: *Model Code of Practice for the Welfare of Animals – Domestic Poultry*, 4th Edition, SCARM Report 83

Key standards from the poultry code are legislated under the ***Animal Care and Protection Regulation 2012*** as the 'Code of practice about domestic fowl'.

The person in charge of poultry must ensure that the birds, the cages, the water and feed systems, and any electronic or mechanical systems controlling light, humidity, temperature or ventilation are inspected daily.

SPACE

Chickens: Minimum of 180-200cm² per bird for the first two weeks, 440cm² for 2-4 weeks. Grassed runs should be a minimum of 7.5m² per bird. Deep litter should be 0.5m² per bird minimum. The more space that can be provided for each bird the better. Refer to the Code of practice about domestic fowl, Schedule 1 of the Animal Care and Protection Regulation 2012 for additional requirements for cages used to keep chickens.

Guinea Fowl: Adult birds must be housed with no more than 10 birds per m² if caged, and no more than 4 birds per m² in grassed runs.

Ducks and geese appreciate a ranging situation but can be successfully raised in more intensive situations. Ducks require a minimum of 0.2m² of floor space per bird. Geese under shelter require a minimum of 1m² per bird.

Quails: Adults should have 145cm² of floor space per bird. Alternatively, quails can be housed in cages with a 13cm x 20cm area suitable for two quails. Small-gauge mesh must be used to minimise leg injuries, and chicks require corrugated cardboard, wood shavings or coarse paper on floor surfaces for secure footing.

Turkeys: Stocking density should be reviewed periodically and adjusted as necessary for age, breed, strain and type of turkey, colony size, temperature, ventilation, lighting, quality of housing and occurrence of disease and cannibalism.

Floor space under a hover brooder should be at least 90cm² for each poultry breed. For birds up to six weeks of age, provide at least 900cm² per poult. For eight weeks of age, the minimum intensive space required for rearing is 0.6m² per bird. Grassed runs should have at least 15m² of pasture per bird. Rotate pastures between batches. Provide a shed with 1.2m² of roof per bird and allow 25cm of roost space per bird.

HOUSING

Chickens: 'Chook houses' need to be built in accordance with local council regulations. Bird proofing will keep out crows, goannas and carpet pythons that may harm or cause death to the poultry. Figure 1 below is one example of a suitable poultry coop.

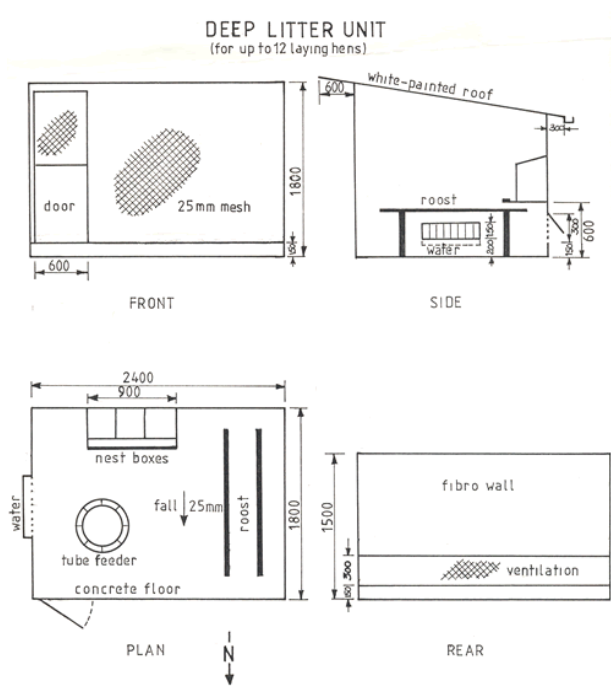


Figure 1: A shed for up to 12 laying hens. A similar shed without the nest boxes and roost would suit meat chickens. (All measurements are in mm.)

Source: Adapted from [What type of house should I build for my backyard hens?](#) RSPCA Australia knowledge base.

Chicken sheds generally should face north. The coop in Figure 1 has a bird-meshed front, a partially enclosed back and solid sides. It is made from material such as fibre cement board which is easily cleaned and not too hot. The roof should slope to the rear with sufficient overhang at the front (600 mm) and back (300 mm). The roof and the walls should be painted, preferably matt white, to reflect heat from the sun. New litter should be spread about 100 mm deep. Suitable litter materials are pine shavings, sawdust and straw. If the litter is kept dry, odour and the risk of disease to the birds are reduced. The shed should be well ventilated but not draughty. Access to an outside run can be provided but this must be securely fenced with wire netting sunk well below the ground surface to ensure dogs and foxes cannot dig under it.

The nest boxes should be mounted on the cool side of the shed preferably 600 to 900 mm off the ground.

Chickens do not have to roost but it is natural for them to do so. Roosting perches made of 75mm x 50mm dressed timber placed 500 mm from the floor can be provided – at least 200 mm of roost space per bird is recommended.

Water and feed should be in a covered water trough, which automatically refills, mounted outside on the shed wall to avoid wet litter. The trough should be 200 mm above floor level and should be long enough to allow each bird in the flock to drink at the one time. The self-feeder should have enough trough space for all the birds to feed at the same time and should be checked daily to ensure proper functioning.

Enclosures should have fencing dug into the ground and concreted at a minimum of approximately 20cm deep to prevent animals digging into the area and should be a minimum of 2m high. Ensure there are no gaps that may allow entry to rats. The door to the pen should meet flush with the top, side and bottom of the doorway.

A chicken coop may be used to house other birds, however consideration should be made to bird size (as quails are smaller and require small gauge mesh to prevent trapping), behaviour (quails prefer floor space to roosting platforms) and interaction between bird types (as guinea fowl may dominate chickens if housed together).

Ducks and geese: Water fowl should have access to a body of water such as a pond or wading pool with stepped area/s to enable the bird to exit. Additional sprinkler systems or misters give birds comfort in summer and allow wet preening and grooming. Duck housing should be at least 2m high at the back to give headroom, and allow for housing growers and adults separately. Ducks do not require perches as they will sleep on the floor.

Guinea fowl and quail: In addition to the above systems, guinea fowl and quail pens should be constructed using small gauge wire mesh. Quail yards should have a soft roof such as netting to minimise damage to birds in flight. Both guinea fowl and quails can be housed with other birds such as chickens, but must be supervised to ensure safety to all birds.

Turkeys: Heat exhaustion is common in turkeys. In hot weather, turkeys should have access to water via a sprinkler system. Turkeys are vulnerable to dog, fox and cat attacks.

Alternatives to the traditional chicken coop include moveable pens, barn or free range systems and pastured poultry techniques. Whichever system is chosen, attention must be given to minimum space allowances, protection from predators, equipment, ventilation, temperature and humidity and other aspects of animal welfare. Refer to the [DAF website](#) for links to appropriate codes of practice.

BROODING AND FEEDING SYSTEMS

Young birds of all species are unable to maintain their body temperature until they reach about six weeks of age and therefore require an appropriate level of heat from another source. The best indicator of the temperature comfort range is alert and active behaviour by the hatchlings.

The brooding and feeding systems described below for chickens are generally suitable for small numbers of chickens, turkeys, ducks, geese, guinea fowl or quails.

The period from hatching until the chickens no longer require supplementary heat is called the 'brooding period' and usually lasts for 3-6 weeks, depending on seasonal temperatures and the type of housing. The heat can be supplied by a broody hen or, more usually, by artificial brooding equipment.

As the chicken grows, its downy coat is replaced by feathers, and the brooding temperature can be gradually reduced until supplementary heat is discontinued at about 3-6 weeks.

TEMPERATURE

The brooder must be capable of providing a temperature of 33°C, even in the coldest conditions. It must be adjustable so that a steady temperature can be maintained. Simple electric hobby brooders can be obtained from poultry equipment suppliers.

The brooding temperature for day-old chicks should be measured at the level of the chicks' backs, that is, about 50mm above the litter. As the chickens grow, the temperature can be reduced until it is discontinued

generally at the end of the fourth week, though it may be necessary to provide heat on very cold nights in the fifth and sixth week.

The following temperatures for day-olds are recommended:

- **Chickens:** 33°C. Reduce by 1°C every 2-3 days until the temperature reaches 20°C, at 28 days of age.
- **Ducks and geese:** 30°C. Reduce by 3°C each week until the third week when the heat may be removed (depending on the weather).
- **Guinea Fowl:** 37°C for three weeks, followed by a 1°C reduction for each of the next two weeks.
- **Quails:** 35°C. Reduce by 3.5°C each week until the chicks are fully feathered at around 3-4 weeks.
- **Turkeys:** For day-old poults under a brooder, measured 10cm above the ground at the rim of the brooder, the temperature, taken with a black bulb thermometer, should be 38°C. Every three days, lower the temperature 1°C to 2°C to reach 21°C when the poults are four to six weeks of age. When poults are weaned, the preferred temperature range is 20°C-28°C.

Temperatures are to be used as a guide only because the best way to adjust the temperature for the comfort of the chicks is to observe their behaviour. If they crowd near the heat source and chirp loudly, the temperature is too low. If they move well away from the heat source and start panting, they are too hot. Ideally they should be fairly quiet and spaced evenly under and around the heat source.

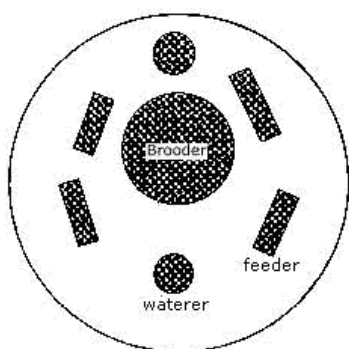


Figure 2: Brooding area layout showing surrounding fence, heat source, feeder and waterer

(Small-scale poultry keeping – brooding and rearing chickens, NSW DPI, 2007)

A simple and effective means of brooding small numbers of chickens is to use an infra-red heat lamp. The infra-red energy passes through the air without heating it but when it strikes an absorbing body, such as a chick, the energy is absorbed and transformed into heat. The litter is also heated and the surrounding air warmed by heat convected from the heated bodies.

The lamp should be suspended 350-400 mm above the litter and the temperature checked by laying a thermometer on the litter directly under the lamp. The temperature can be adjusted by raising or lowering the lamp. Heat lamps must be hung securely by a chain and not by the electric lead. A spare globe must be available.

PREPARING FOR THE CHICKS/CHICKENS

Clean and disinfect the brooding area some days before the chickens arrive so there is time for the area to dry. Cover the floor with dry absorbent litter material (wood shavings, rice hulls, chopped straw, sawdust or shredded paper) to a depth of 50 mm. Place a surround of cardboard, metal sheeting or hardboard around the brooding area. The surround should be about 450 mm high to protect the chickens from draughts, and the area enclosed should provide at least 50 cm² of floor space for each bird. The surround can be gradually expanded until removed completely at two weeks.

For the first two days, the litter in the brooding area should be covered with newspaper. Feed should be sprinkled on the paper and clean fresh water provided. Ideally the water should be in specially designed drinkers consisting of a plastic jar inverted into a shallow circular trough. Ordinary flat dishes can also be used if care is taken to ensure that the water is not too deep. A large stone or block of wood should be placed in the centre of the pan to reduce the amount of water in the vessel without restricting access by the birds.

Switch the brooder on at least two hours before the chickens arrive so that the area is warmed and the necessary adjustments to temperature can be made. Water and feed should be placed near the heat source. As you place a chicken in the brooder, dip its beak in the water to encourage it to drink. The base pans from hanging feeders can be used as feeders for young chickens and, as the chickens grow, tube hoppers can be attached. The tube will hold enough feed for several days. Small flat pans or trays can also be used for feed for the first week.

Fresh food and water must be available to the chickens at all times and feeders and drinkers must be cleaned and refilled regularly. Cleaning will have to be carried out at least twice daily until the chicks have

grown sufficiently and the feeders and drinkers can be raised above the litter. After three days, the newspaper can be removed and the feeders and drinkers moved further away from the heat source. Make sure that the brooder room is well ventilated but that the chickens are free from draughts.

Minimum floor area requirements for cages holding layer chickens and sheds holding chickens are specified in the Code of practice about domestic fowl. Overcrowding and lack of feeder and drinker space can cause some chickens to grow slowly. Suggested space requirements are shown in Table 1. The feeding and drinking space requirements are lengths given in millimetres. For circular feeders and drinkers, the length available to the chickens can be found by multiplying the diameter of the feeder or drinker by three.

Age (weeks)	Floor space (birds per m ²)	Feeder space (mm per bird)	Drinking space (mm per bird)
1-4	20	20	10
5-8	10	30	20
9-20	5	50	30

Source: NSW Department of Primary Industries article: Small scale poultry keeping – brooding and rearing chickens

MOVEMENT AND EXERCISE

In minimum confines, poultry must be able to run around without losing its normal stance and have room to be able to flap its wings. Food and water must be easily accessible. While some poultry such as ducks can be raised in intensive situations, it is always desirable to provide more space rather than less.

TEMPERATURE

The preferred temperature range for poultry is 20°C-28°C. Temperatures below 10°C and above 32°C cause stress. Birds will disperse when it is too hot and will huddle if it is too cold.

LIGHT

Shedded birds must have reasonable light and not be kept in the dark. Birds should have a light and dark cycle. Keeping birds in the light or dark all the time can have an adverse impact on their health. Chickens require a minimum period of 8 hours continuous light (either artificial or natural) and a minimum period of 7 hours of continuous darkness in every 24 hour period.

VENTILATION

It is extremely important that birds of all ages are provided with fresh air while avoiding draughts and chilling winds. The Code of practice about domestic fowl specifies floor area requirements for sheds based on different ventilation systems. Electronic or mechanical systems controlling ventilation must be inspected daily. Ventilation is required to prevent ammonia build up in intensive situations. Ammonia causes distress to poultry. Steps must be taken to prevent ammonia building up to the level where it becomes unpleasant. This can be done by reducing the number of birds in a given area and ensuring adequate ventilation.

SHELTER

Sufficient shelter is necessary to protect poultry from extremes of climate, e.g. temperature changes, wind, rain and direct sunlight. Outside pens must be covered to protect birds from predators. Shelter or covered areas should be provided to allow the withdrawal of individual birds, or to divide young birds from the group if necessary.

BEDDING

Use clean, dry litter of rice hulls, shavings from untreated timber, straw or sand. The area should be checked and cleaned as required.

CLEANING

Make sure equipment is hygienic so that the risk of disease is reduced. Litter should be replaced regularly, particularly when it becomes damp.

NESTING

Chickens: Suitable nesting material of clean dry sand, rice hulls, straw or untreated wood shavings should be provided. Nesting boxes can be used. Allow one 300mm x 300mm nesting box for every three or four birds. It is important to ensure that layers have adequate perch space to accommodate all the birds simultaneously.

Ducks and geese: Ducks generally require little assistance in setting up their nests. Suitable nesting material such as clean and dry sand, rice hulls, straw or wood shaving can be provided. Nesting boxes can be provided. One nesting box can service between three or four birds.

Guinea Fowl: Guinea fowl may not use nest boxes, however they have a tendency to make their own nests if given the opportunity.

Quails: Some quail breeds in a community pen will not build a nest but will hide eggs in the litter. If using a nest box, place it either on or close to the ground. Due to their small size, flooring should have small enough gaps to ensure their feet do not get trapped (for example, if using mesh, 7mm gaps are suitable).

Turkeys: Suitable nesting material such as clean, dry sand, rice hulls, straw or untreated wood shavings should be provided. A nesting box should have a minimum size of 0.5m x 0.5m x 0.5m and accommodate three or four birds. The nest should be reasonably dark and of sufficient size to isolate one bird from another, so that egg damage and aggressive behaviour from other birds during nesting time are avoided.

3.3. FOOD REQUIREMENTS

Ad lib feeding or feeding a minimum of twice daily, in the morning and evening, is preferred for all poultry. No nutritional deficiency is permitted in activities investigating effects of dietary changes on poultry.

Chickens: Suitable food includes pellets, crumbles and mash with a free supply of shell grit. Commercially prepared food is preferred as all nutritional needs are met. A mixture of grains or the addition of grain to commercially prepared diets should be avoided due to the fact that they do not provide a nutritious fully balanced diet. Only small amounts of green feed should be used. Adult fowls require 120g-140g of pellets per day. These requirements vary with the quality of diet, breed and physiological status of each bird and environmental conditions.

Ducks: Use commercial duck rations. If unavailable, turkey feed preparations can be used (some poultry medications included in commercial chicken feed can be harmful to ducks, geese and turkeys). Ducks require 120g-150g of mash or pellets per day. Ducklings require high protein foods. These requirements vary with quality of diet, breed and physiological status of each bird and environmental conditions. Demand feeding is preferred, but feed should be supplied at least twice per day (morning and evening). Do not force feed.

Geese: Use commercial duck rations. Geese require 200g-300g per day when on commercial rations only. Less is required if geese graze on grass. Geese prefer a grassed, grazing area. Goslings require high protein foods.

Guinea Fowl: While guinea fowl will forage for fresh food, a supply of additional feed (either chicken or turkey pellets) is recommended.

Quails: A standard ration for growing or breeding quail may not be available commercially. If this is the case, good quality, fresh, commercial turkey or game bird diets are recommended, preferably fed as crumbles to minimise feed wastage. For the first six weeks the diet should contain 25% protein, 1% calcium and 12.6 megajoules of metabolisable energy per kilogram. As birds reach maturity, calcium and phosphorus levels must be increased. Shell grit or ground limestone can be added after five weeks of age.

Turkeys: Use commercially prepared turkey crumbles for poults, growers and adults. The quantity ranges from a few grams per day for poults to up to 250g per day for adults. Protein ratios should be 28% for the first four weeks, 24% for the next four weeks, and then should be reduced to 20% until the birds are grown.

Please note: Swill feeding (feeding food or food scraps containing animal matter) is banned in Queensland.

3.4. WATER REQUIREMENTS

Chickens: A clean, adequate supply of water, placed in a cool shaded area, is required. If automatic nipple drinkers are used, they should always be fitted with a failsafe mechanism. Variations range from a few mL for chickens to 500mL per day in summer for adults.

Ducks and geese: At all times, water must be cool, clean and fresh as well as of acceptable quality and sufficient quantity. A pond of water, deep enough to enable the ducks to dabble regularly and with stepped area/s, is an advantage. If there is no access to a pond, a water container which is large enough to enable ducks to immerse their heads and dabble is required. Ducks drink up to 1L of water a day.

Quail: Clean, fresh water should be provided at all times with a minimum of 0.6cm of trough space per quail. Nipple drinkers and cups are suitable for adult quail. One nipple or cup should be provided for every five birds.

Guinea fowl and turkeys: Water must be cool, clean and fresh and in sufficient quantity at all times.

3.5. NORMAL BEHAVIOUR

Chickens: Normal behaviour is characterised by being alert, with an erect carriage.

Housing and husbandry practices must allow chickens to express their normal behaviours. These include:

- **Foraging behaviour:** Chickens need to forage for food by scratching and pecking as they investigate their surroundings. If they are not allowed to forage, they peck, pull and tear at objects and other chickens, often developing feather-picking behaviour.
- **Locomotive behaviour:** Hens will walk 1km -1.5km per day, if space permits. They will also fly to elevated perches if provided with the opportunity.
- **Resting behaviour:** Chickens prefer to roost on higher rather than lower perches. They may rest by standing, lying, sleeping or dozing.
- **Comfort behaviour:** Preening, stretching, flapping, sunbathing and body shaking are all comfort behaviours. They also help to keep the bird's feathers in good shape.
- **Social behaviour:** Chickens need adequate nesting sites or they become stressed and develop abnormal behaviours. As chickens are flock animals, a minimum of two should be kept at a time.
- **Enriched environments** reduce fear and stress in chickens e.g. opportunities to pick and explore or use of acoustic stimuli such as playing a radio reduce aggression and improve bird health and productivity.

Ducks and geese:

- **Social behaviour:** Ducks and geese are social, curious animals that enjoy being in flocks of other birds and should never be kept in isolation. It is better for the birds to be housed in open spaces, amongst a flock of other birds, with environmental stimulation rather than in small cages. Ducks and geese are susceptible to behavioural problems related to a lack of stimulation. Feather pecking, preening and headshaking are issues commonly suffered by birds that do not have enough stimulation. Ducks and geese are intelligent animals and need stimulation which can be provided by natural vegetation and environment, toys and chains attached to the pen that they can tug and pull at as well as ponds or large water troughs where they can play and dive in the water.
- **Water play:** Access to water – such as a pond or large tub of water – allows waterfowl to participate in natural behaviours, reducing the risk of abnormal behaviours like headshaking and preening. Access to water also increases feather health and maintenance.
- **Territorial behaviour:** Ducks and geese can become particularly territorial during breeding season. Caution should always be used when entering a pen with male ducks and geese, especially around mating time or when incubating. Males will often forcibly mate with females, causing distress and often injury. Males and females may need to be separated during breeding season if females are at risk of distress and injury.

Guinea Fowl: Guinea fowl have a loud cry that they use to warn of any perceived threat, making them unsuitable to keep in some suburban areas. They are expert foragers and will eat insects, mice and rats. Guinea fowl are known to kill larger predators such as snakes. They are pack creatures and should be kept as pairs at a minimum.

Quails: Quails are primarily ground dwelling, but can fly short distances to roost, escape perceived threats or forage in trees and low vegetation. Family groups often walk in single file. Quails may make low “chuckles or grunts” when foraging, sound a “location” call when separated from a group, or give an alarm call at the sign of an intruder.

Turkeys:

- **Safety and size:** Their enormous body size means that turkeys can only walk, they cannot run and their only means of self-defence is to flap their wings. This makes them very easy targets for predators and they must be kept in a secure area at all times.
- **Social behaviour:** Turkeys are social animals that are best kept in flocks with a mixture of males and females. Turkeys can be aggressive towards one another, especially if new birds are introduced to an existing flock. Head pecking is common. To avoid injury when introducing new birds, introduce two new birds at once so that the entire flock cannot focus on an individual new bird.
- **Enriched environments:** Feather pecking and cannibalism are issues commonly suffered by birds that do not have enough stimulation and cannot perform normal behaviours like socialising, pecking at vegetation and scratching in the dirt. Turkeys are sociable, curious animals and need stimulation, which can be provided by natural vegetation and environment, objects to climb up on to roost such as hay bales and roosting houses, as well as other birds to socialise with.

- **Resting:** At night, turkeys do not roost like fowls but bed down somewhere comfortable, usually in an elevated place if they can get to it.
- **Foraging:** Unlike fowls, turkeys do not scratch up the soil excessively but peck at the grass instead, making them much more sustainable in a free ranging system as they will not destroy their grass.

3.6. BREEDING MANAGEMENT

In accordance with s.4.6 of the Code, animal breeding that does not achieve an educational outcome in science and fails to provide for the lifetime welfare of animals (and their offspring) cannot be demonstrated to, or carried out by, students. If breeding is to take place in a school, there must be sufficient care, facilities, housing and space available for the extra animals. Animals must not be euthanased at the end of the program. If no suitable arrangement can be made to rehouse the animals the program should not proceed.

3.7. SUPERVISION AND MONITORING

Live animals must be inspected at least once a day to assess health and wellbeing. Feeding, watering and cleaning logs/schedules must be easily accessible, preferably displayed, for ease of monitoring.

Diligence in observation does not alter on weekends and holidays. Staff members need to be rostered to maintain observation schedule as per weekdays.

Daily/weekly monitoring logs must be maintained and should include monitoring of water quality, automated feeders, structures, back-up power, security, as well as animal health and behaviour.

Ongoing risk management of potential hazards (e.g. areas of entrapment, breaches of fencing, zoonotic diseases) should be rigorously applied.

3.8. HANDLING

Poultry need to be handled calmly with care to prevent distress and injury to them.

3.9. MOVEMENT

If you intend to keep 100 or more poultry on a property, you are required to register that property with Biosecurity Queensland.

At the time of publication of this document, there are no entry restrictions or documentation requirements for bringing poultry into Queensland from anywhere else in Australia. Please refer to DAF's Moving poultry, poultry products and other birds for up-to-date information.

3.10. TRANSPORT

The Animal Care and Protection Regulation 2012 includes a compulsory code of practice for the transport of livestock at Schedule 3. All persons involved in the transport of livestock must ensure that they are aware of and comply with their obligations under this code. The key features of the code are detailed on the DAF website.

The transport code applies to the transport process from animal assembly prior to loading to unloading at the final destination. It applies to commercial and non-commercial livestock.

General requirements for transporting all livestock are mandated in the transport code and include fitness for transport, advice of estimated time of arrival, impact of extreme weather conditions, suitability of handling facilities and vehicles, ramp alignment, livestock handling, loading density, inspection duties and record-keeping, use of prodders and dogs, and arrangements for distressed stock including killing.

Additionally, specific requirements for transporting certain animals are mandated. These include maximum journey time, spell duration and time off food and water. Requirements for poultry include, but are not limited to, the following:

- Prodders must not be used.
- Poultry must not be lifted or carried by the head, neck, wing feathers or tail feathers unless supported under the breast. Legs of poultry must not be tied.
- Turkeys may be lifted and carried by the tail feathers and neck together, or by one leg and one wing together.
- Adult geese or breeding chickens may be lifted and carried by the base of both wings alone.
- Ducks may be lifted and carried by the neck alone or by the base of both wings alone.

- Other poultry may be lifted and carried by one leg.
- Containers holding poultry must be loaded/unloaded carefully without being dropped or thrown; must be placed on vehicles in an upright position without excessive tilting; must be securely attached to the vehicle; must be suitable for the species or class of bird being transported.
- The loading density of the birds in containers must minimise the risk of harm to the birds. Refer to S.16 (3) of the code for considerations about risk minimisation.
- Maximum journey times, maximum time off water and minimum spell durations are specified as shown:

Class of chicken	Maximum hours journey time	Maximum hours off water	Minimum hours spell duration
Chicks (poultry less than 72 hours of age)	72	72	72
Chicks (if given reasonable access to water at all times the chick is loaded on the vehicle)	84	84	
Poultry other than chicks	24	24	24

3.11. DISEASE PREVENTION

Avian influenza is a notifiable disease. Refer to the DAF website for further information.

Disease control methods and internal and external parasite control programs should be developed in consultation with a veterinarian or local DAF poultry specialist. All activities must be documented in the appropriate records.

3.12. SIGNS OF ILLNESS

Bird health should be monitored at least daily and preferably more often. The first sign of ill health may be noticed as a change in the bird's demeanour. This might be listlessness or lethargy.

Other signs of illness are as follows:

- a failure to thrive or grow
- not active, head under wing, feathers ruffled or isolation from the group
- frequent shutting of eyes
- little response when touched, or often pecked at by another fowl
- changes in colour to the comb (purple combs in chickens or turkeys may indicate lack of water, for example)
- lack of growth or reduced egg production
- diarrhoea, blood in droppings, or constipation
- lesions or sores around the vent
- sneezing, nasal discharge, or lesion/sores around the beak
- reduced feeding and/or water intake
- changes in appearance of eggs
- lameness, inability or unwillingness to stand, nervous signs or paralysis
- discomfort walking.

If unable to identify and correct the cause of ill-health, assistance from a veterinarian familiar with poultry breeds, should be sought. Any signs of illness or injury, and treatment given should be documented in the appropriate records.

Should an outbreak of feather picking or cannibalism occur, or appear imminent, environmental factors should be examined and adjusted as appropriate e.g. stocking density, light intensity, temperature, humidity, disturbances to the pecking order.

Any deaths or other unexpected adverse events need to be recorded and this information should be sent to the QSAEC using the Unexpected adverse event report.

3.13. ANIMAL EMERGENCY ARRANGEMENTS

The school must have an emergency management plan to deal with events in and out of school hours. Details of the plan will vary according to the needs of each school and must include:

- signage that includes emergency contacts, animal identification details
- monitoring of animals, including on weekends and school holidays
- a first aid kit for animals
- at least one local veterinarian on call
- strategies to withdraw individual animals (e.g. due to illness or death) or all stock (e.g. due to equipment issues, leaks, natural disasters, vandalism)
- arrangements for power outages (e.g. checking on back-up power, battery level checking)
- a list of who is competent to euthanase animals if necessary
- a schedule of persons authorised to respond to emergencies and engage veterinary assistance.

3.14. HUMANE KILLING AND EUTHANASIA

Where an animal has become so sick, diseased or injured that recovery is unlikely or undesirable on humane grounds, euthanasia must be arranged with a local veterinarian or a person competent in the technique for poultry.

In emergency cases, for small and medium-sized birds, euthanasia can be achieved by neck dislocation by a person competent in the technique.

Deaths and other unexpected adverse events must be advised to QSAEC as soon as practicable after the incident's occurrence, using the Unexpected Adverse Event Report. The signed hardcopy should be held in the school's animal activity register.

3.15. DISPOSAL – FATE PLANNING

Forward planning (e.g. how and when to retire an animal from the program) will support animal welfare and wellbeing and ensure that animals used are fit to fulfil the needs of the program.

Chickens, ducks, geese or turkeys can be sold privately, at auction or consigned to a registered processor/abattoir. Carcasses must be disposed of in accordance with local council regulations.

A fate plan should be considered before using poultry in any programs. Birds that are no longer required must be re-homed. Chickens, ducks, geese and turkeys must not be released into the wild.

SECTION 4 | APPROVED ACTIVITIES

All activities must be conducted in line with industry and veterinary standards. Chemicals and drugs used must be judged to be required by a qualified instructor, must be registered products, and must be used in accordance with Materials Safety Data Sheet information and manufacturer's instructions.

Note: Instructor:student and student:animal ratios cannot always be specified with accuracy given the wide variety of class sizes, student ages and settings in which activities are being conducted. Careful consideration must be given to determine ratios that are most effective in supporting and safeguarding animal wellbeing.

4.1. ADMINISTRATION OF EYE-DROPS, CREAMS, OINTMENTS, BANDAGES

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Administration of eye-drops, creams, ointments, bandaging	To instruct students in the procedures for the administration of eye-drops, creams, ointments, bandaging	Videos, simulations	Instructors:Students 1:30 instructing 1:2 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11.

When using medications and equipment, care must be taken to:

- read labels carefully
- determine correct dosage/rate
- store chemicals/medications/bandaging being used appropriately
- use protective clothing when required.

4.2. ADMINISTRATION OF ORAL PREPARATIONS AND INJECTIONS

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Administration of oral preparations and injections	To instruct students in the administration of injections and the oral administration of internal parasite control and other preparations	Theoretical learning, modelling, videos, simulation	Instructors:Students 1:30 instructing 1:2 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11.

It is important to maintain a program of vaccination and control of parasites for all birds. When treating for internal and external parasites, all birds should be treated at the same time. These activities need to be documented in the appropriate records.

Oral medications to be administered include worming compounds and vitamin and mineral supplements. They may be administered in the feed or water depending on instructions. If water-based treatments are to be used, water is generally withdrawn from birds overnight to increase their thirst. Avoid water withdrawal during the day, particularly in hot weather. Drink containers need to be suitably anchored to prevent tipping.

When using medications, animal-care chemicals and equipment, care must be taken to:

- read labels carefully
- use correct animal weight to determine correct dosage/ rate
- adhere to withholding periods
- store chemicals/medications/bandaging being used appropriately
- use protective clothing when required.

4.3. BROODING

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Brooding	To instruct students in the process of brooding chicks for the first 5-6 weeks of life	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:4 supervising Students:Animals 30:1 observing 4:1 performing	SCARM Code, ss 2.4.4, 7.1

Programs need to be documented in appropriate records. Requirements for brooding, feeding and watering as detailed in the previous section must be satisfied.

4.4. COLLECTION OF FAECAL SAMPLES

Category 2 – low impact				
Activity	Objective	3R activities	Ratios	References
Collection of faecal samples	To instruct students in procedures for the collection of faecal samples	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11.

Place the bird in a wire-floored pen, elevated off the ground, so that faeces can be collected. Do not force faeces from a bird. Faeces can be collected from the ground. A face mask over the collector's nose and mouth is required when shovelling poultry manure. Gloves should be worn and proper hygiene procedures during and after this activity should be followed.

4.5. DIPPING AND SPRAYING

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Dipping and spraying	To demonstrate the procedures for the control of external parasites affecting poultry	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:1 supervising Students:Animals 30:1 observing 1:1 performing	SCARM Code s.11.5

Dipping and spraying needs to be documented in appropriate records. External medications should be stored and used in strict accordance with the manufacturer's instructions and recommended methods of administration. Expiry dates and withholding periods must be strictly observed.

4.6. INCUBATION AND HATCHING EGGS

Category 3 - moderate impact				
Activity	Objective	3R activities	Ratios	References
Incubation and hatching eggs	To demonstrate the procedures for incubating and hatching eggs	Theoretical learning, modelling, videos, simulations	Refer to QSAEC's Poultry Egg-Hatching Standard Operating Procedure	Refer and adhere to QSAEC's Poultry Egg-Hatching Standard Operating Procedure

4.7. MEASUREMENT OF BODY WEIGHT

Category 2 - low impact				
Activity	Objective	3R activities	Ratios	References
Measurement of body weight	To instruct students in the measurement of body weight	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:2 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11.

Only use birds that are accustomed to being handled. Young birds can be weighed directly on a triple beam balance. Older birds may need to be restrained in a light cardboard box.

For growers and adult birds, a spring balance with a suitable scale is required for weighing. The reading should be taken as quickly as possible so that the bird can be returned to a normal position.

Growth is usually measured by body weight changes. Growth can be shown by photographing or drawing a bird against an appropriate background grid or scale.

Use a sufficient number of birds to determine individual differences. Video-taping or digital imaging can also show a bird's growth.

4.8. MEASUREMENT OF BODY TEMPERATURE

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Measurement of body temperature	To instruct students in the measurement of body temperature	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:2 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11.

A clinical thermometer is inserted into the vent or cloaca. Warm the thermometer in cold weather. Slide the thermometer in carefully. Wash the thermometer before using it with another bird.

4.9. MEASUREMENT OF RESPIRATION AND PULSE RATE

Category 2 – low impact				
Activity	Objective	3R activities	Ratios	References
Measurement of respiration and pulse rate	To instruct students in the measurement of respiration and pulse rate	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:15 supervising Students:Animals 30:1 observing 1:1 performing	Animals are restrained as per Item 4.11.

As birds have a very high pulse rate, it is difficult to measure. A stethoscope is required.

For the measurement of the respiration rate, it is best to observe birds in warmer weather as indications of respiration are more obvious. Observe and record a bird with its beak naturally open and the tongue moving. The number of tongue movements can be recorded.

4.10. NAIL TRIMMING

Category 3 - moderate impact				
Activity	Objective	3R activities	Ratios	References
Nail trimming	To instruct students in the process of trimming nails to a normal length that enables the animal to walk with a normal gait	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:2 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11; SCARM Code, ss. 13.5, A3.3.2

Overgrown nails will become crooked and detract from the bird's appearance, and may cause problems when walking or lead to infection. As they are made of keratin, overgrown nails can be trimmed. Dog clippers may be used to trim a bird's nails with the addition of a cautery blade (or pocket knife and heat source).

While the bird is being appropriately restrained, cut between the vascularised area (the "quick") and the end of the nail, taking care not to cut the quick. If bleeding occurs, apply the cautery blade/heated pocket knife.

4.11. HANDLING, RESTRAINT AND INSPECTION

Category 2 - low impact				
Activity	Objective	3R activities	Ratios	References
Handling, restraint and inspection	To instruct students in safe and humane handling methods to enable procedures and close observations	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 2:1 performing	SCARM Code, ss. 11, A4.2.2, A5.3.1

Birds should be captured and handled only when necessary. Use birds that have become accustomed to handling from a young age. Avoid chasing birds as this agitates them and causes them to pile up in corners. If a catching hook is used, a bird should be drawn towards the handler firmly but not so quickly as to damage shank, leg or joints. Firmly and quietly transfer the bird to the holding position.

The holding position involves restraining one hock joint between the index finger and thumb, and the other hock joint between the third and fourth fingers. The bird's breast, or keel bone, sits comfortably on the palm of the hand with the bird's head pointing towards the handler's body and the vent away.

When walking with a bird, its head can be tucked under the carrier's upper arm. The non-holding arm can be used to assist with restraining the bird and prevent the wings from flapping.

Ducks: Care must be taken in catching ducks to avoid creating panic and subsequent injury or smothering of the birds. The proper handling of ducks requires special skill, and it should be undertaken only by competent persons who have been appropriately trained. In hot weather, handling or movement of ducks should be carried out during the coolest part of the day. Day-old and young ducklings should be picked up bodily in the palm of the hand or if handling groups by the neck. Older ducks should be lifted by the neck or wings and they should be supported either by taking the weight of the bird by a hand placed under its body, or by holding the bird with a hand on either side of its body with the wings in the closed position. Once sufficiently developed, lifting by the wings is the best method, providing support is given under their body. Ducks must not be lifted by a single wing. Ducks must never be held or lifted by the legs.

Geese should always be caught by the neck and must never be caught by the legs.

Guinea fowl, quail and turkeys: A person must not lift or carry guinea fowl, quail or turkeys by the head, legs, neck, wings, feathers or tail feathers unless otherwise supported by the breast.

4.12. TAMING

Category 2 – low impact				
Activity	Objective	3R activities	Ratios	References
Taming	To instruct students in the appropriate methods of training domestic poultry to regular human handling in cage facilities	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 2:1 performing	SCARM Code, ss. A4.2.2, A5.3.1

Qualified instructors must have the safety and welfare of animals as the principles of operation. Inhumane procedures must not be used. Procedures should be adapted to the specific bird and animals not suitable for training should be excluded from the activity.

4.13. TRANSPORT

Category 3 - moderate impact				
Activity	Objective	3R activities	Ratios	References
Transport	To demonstrate to students the appropriate procedures for transporting poultry	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing Students:Animals 30:1 observing	Code of practice for transport of livestock (Schedule 3 of the Animal Care and Protection Regulation 2012)

Prodders must not be used.

Poultry must not be lifted or carried by the head, neck, wing feathers or tail feathers unless supported under the breast. Legs of poultry must not be tied. Turkeys may be lifted and carried by the tail feathers and neck together, or by 1 leg and 1 wing together. Adult geese or breeding chickens may be lifted and carried by the base of both wings alone. Ducks may be lifted and carried by the neck alone or by the base of both wings alone. Other poultry may be lifted and carried by one leg.

Containers holding poultry must be loaded/unloaded carefully without being dropped or thrown; must be placed on vehicles in an upright position without excessive tilting; must be securely attached to the vehicle; must be suitable for the species or class of bird being transported. The loading density of the birds in containers must minimise the risk of harm to the birds. Refer to S.16 (3) for considerations about risk minimisation.

Maximum journey times, maximum time off water and minimum spell durations are specified. A person with custody of poultry more than 5 days of age must ensure, within 12 hours before starting a journey, the poultry is provided with adequate food containing sufficient nutrients to ensure the bird's good health and vitality. For poultry less than 5 days of age, reasonable measures must be taken to minimize the risk of harm to the bird from chilling or overheating during the journey. Birds removed from an incubator to be transported must be returned for at least 24 hours to a suitable brooding environment that provides them with adequate feed, water and warmth within 72 hours, or 60 hours for birds transported in containers without reasonable access to water.

All persons involved in the transport of livestock must ensure that they are aware of and comply with their obligations under the *Code of practice for transport of livestock*.

4.14. WASHING AND GROOMING

Category 2 - low impact				
Activity	Objective	3R activities	Ratios	References
Washing and grooming	To instruct in methods of preparation of poultry for showing	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 2:1 performing	Animals are restrained as per Item 4.11.

As poultry generally groom their feathers as necessary, care should be taken to ensure washing and grooming is only undertaken if necessary or for showing. Use appropriate pet shampoo and wash in a room temperature bath. Dry the bird with a towel or blow dry as required (particularly if the temperature is cold).

4.15. MEASUREMENT OF MILD DIETARY EFFECTS

Category 2 – low impact				
Activity	Objective	3R activities	Ratios	References
Measurement of mild dietary effects	To observe the impact of adapted diets on affected poultry	Theoretical learning, modelling, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 1:1 performing	

Variation to diet can be achieved by using commercially prepared foods which use a different formula to the usual one provided. Any variation to the diet should be an enhancement to, rather than deprivation of, the diet. The minimum level of protein, energy or fat selected for the trial must be the minimum acceptable for the life stage of the particular bird type. The trial period should not be longer than is necessary to achieve a clearly observable result. Ten to fourteen days is sufficient for young birds, after which the birds should be returned to their normal diet.

Where comparative food trials are being undertaken, no less than the minimum protein levels should be fed to birds. The maximum amount of protein permitted is 20% above the minimum levels.

4.16. MEASUREMENT OF LIGHT EXPOSURE AND YOLK COLOUR

Category 2 – low impact				
Activity	Objective	3R activities	Ratios	References
Effect of light and yolk colour	Students to observe the correlation between light hours poultry is exposed to and yolk colour	Theoretical learning, modelling, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 1:1 performing	

Variation to light levels should be an enhancement to minimum light levels as prescribed in section 3, rather than a deprivation of light.

4.17. FOOD PALATABILITY

Category 2 - low impact				
Activity	Objective	3R activities	Ratios	References
Food palatability investigations	To instruct students in palatability investigations	Theoretical learning, modelling, simulations	Instructors:Students 1:30 instructing 1:30 supervising Students:Animals 30:1 observing 1:1 performing	

For adult birds, use a variety of commercially prepared layer pellets and mash, ensuring a plentiful supply of clean fresh water. Observe two adult birds in separate pens and record the food selection of the birds.

4.18. LEG BANDING

Category 3 - moderate impact				
Activity	Objective	3R activities	Ratios	References
Leg banding	To instruct students in leg banding for identification	Step-by-step guides, modelling, videos, simulations	Instructors:Students 1:30 instructing 1:2 supervising Students:Animals 30:1 observing 2:1 performing	

Leg bands can be used for identification of birds. A school farm may use different coloured leg bands to identify birds born each year. Leg bands must be checked regularly and loosened appropriately or removed if they begin to become too tight. Legs bands that become too tight can cause pain and injury to birds.

SECTION 5 | GLOSSARY

3R activities	Animals used for teaching and training are not being used to discover, prove or develop new ideas and techniques, but to communicate scientific concepts and to develop manual skills and expertise in specific techniques. 3R activities provide opportunities to communicate scientific concepts and develop technical skills and expertise, ensuring animals are used only when necessary and minimising the impact on animals used.
Alternatives to animal use	Replacement of animals with other methods/activities for educative purposes must be sought and used whenever possible.
DAF	Queensland Department of Agriculture and Fisheries
QSAEC	Queensland Schools Animal Ethics Committee
Poultry SCARM Code	<i>Model Code of Practice for the Welfare of Animals – Domestic Poultry</i> , 4 th Edition, SCARM Report 83.
Supervision	Supervision in all instances means supervision by a suitably qualified person familiar with the procedures as well as normal and abnormal animal responses.
The Code	<i>Australian code for the care and use of animals for scientific purposes</i> 8 th Edition, 2013.
Transport code	Code of practice for transport of livestock, <i>Animal Care and Protection Regulation 2012</i> , Schedule 3.

SECTION 6 | REFERENCES

- Animals in Schools – Poultry (Ducks and Geese, Fowls, Turkeys), NSW Department of Education, NSW Catholic Education Commission, Association of Independent Schools of NSW
<http://nswschoolanimals.com/poultry-ducks-geese/>, <http://nswschoolanimals.com/poultry-fowls>,
<http://nswschoolanimals.com/poultry-turkeys>
- Australian and New Zealand Council for the Care of Animals in Research and Teaching
<https://www.adelaide.edu.au/ANZCCART/resources/>
- Department of Agriculture and Fisheries – Poultry
<https://www.daf.qld.gov.au/business-priorities/animal-industries/poultry>
- Proposed Draft Australian Animal Welfare Standards and Guidelines for Poultry, Animal Welfare Standards
<http://www.animalwelfarestandards.net.au/files/2015/07/Public-Cons-Version-Poultry-SnG-Nov-2017.pdf>
- Model Code of Practice for the Welfare of Animals: Domestic Poultry, 4th Edition, SCARM Report 83, 2002
<http://www.publish.csiro.au/book/3451>
- NSW Government Department of Primary Industries – Poultry and Birds
<https://www.dpi.nsw.gov.au/animals-and-livestock/poultry-and-birds>
- NSW Government Department of Primary Industries – Raising Japanese Quail
https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0005/145346/Raising-Japanese-quail.pdf
- NSW Government Department of Primary Industries – Small Scale Poultry Keeping - Brooding and Rearing Chickens
https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0013/203521/small-scale-brooding-rearing-chickens.pdf
- Poultry Australia - Keeping Poultry
<http://www.poultryaustralia.com.au/keeping-poultry>
- RSPCA – What Type of House Should I Build For My Backyard Hens
https://kb.rspca.org.au/what-type-of-house-should-i-build-for-my-backyard-hens_102.html

POULTRY STANDARD OPERATING PROCEDURE

APPLICATION/ACTIVITY NOTIFICATION FORM

SCHOOL			
ACTIVITY LEADER'S NAME			
PHONE		EMAIL	
SCHOOLING SECTOR/ SCIENTIFIC USER REGISTRATION NUMBER (ISSUED BY DAF)			
<input type="checkbox"/> State School 102		<input type="checkbox"/> QCEC	<input type="checkbox"/> ISQ
ACTIVITY TITLE			
CURRICULUM REFERENCE (PEDAGOGICAL JUSTIFICATION)		YEAR LEVEL/S	
SPECIES OF ANIMAL/S		NUMBER OF ANIMALS	
DECLARATION BY THE ACTIVITY LEADER			
<p>I acknowledge that I am the teacher appointed/authorised teacher representative who will conduct this animal-use activity. In that capacity I agree that:</p> <ul style="list-style-type: none"> • I and all others involved are familiar, and will comply, with the <i>Animal Care and Protection Act 2001 (Qld)</i>, the <i>Animal Care and Protection Regulation 2012 (Qld)</i> and the <i>Australian code for the care and use of animals for scientific purposes, 8th edition 2013</i>. • I have read and understood <u>Responsibilities of school personnel under the Code</u>. • No animal will be used in this activity except as described in this SOP and application form. • Adequate resources will be available to undertake the project. • Health risks and infection controls have been considered and assessed. • All staff members and students involved in animal-use activities are competent to perform the necessary tasks with care and knowledge of their ethical and legal responsibilities and the conditions imposed by the SOP. <p>I agree that I have considered the 3Rs of animal welfare:</p> <ul style="list-style-type: none"> • replacement of animals with other methods (alternatives) • reduction in numbers of animals used • refinement of techniques used, in order to reduce adverse impacts on animals. 			
ACTIVITY LEADER'S SIGNATURE			
PRINCIPAL'S NAME		<input type="checkbox"/> I have read and approved this application. <input type="checkbox"/> A hard copy of this application will be held for 7 years for audit purposes.	
PRINCIPAL'S SIGNATURE			
DATE			

All fields must be complete before lodging this form.

Email this **signed Application/Activity Notification Form only** to animal.ethics@qed.qld.gov.au.

Ensure that you keep the signed hardcopy of this application on file in your school's animal register for auditing purposes.