

Since the cow's gestation or duration of pregnancy is 9 months, only one calf is produced per year. Twins have been known to occur, but are considered quite rare. Like all mammals, the cow must give birth before milk is produced. A dairy cow is usually milked by humans for 10 months or 305 days after she has given birth. This period or duration of milking is called a lactation.

A normal birth weight for a calf is from 11 to 34 kg (25 to 75 lbs.) depending on the breed of cattle.

There are three ways of raising calves. Each method is special to the type of cow the calf is from.

Rearing of the Young

a) Dairy Calf Raising

Modern dairy cow breeds have been developed to produce large amounts of milk for the commercial benefit of humans. During a lactation of 305 days, an average cow could produce 7,625 litres (1,525 gal.) of milk. This would be an average of 25 litres (5 gal.) of milk daily, which could feed 5 calves at 5 litres per day. To accommodate the large amount of milked produced, the 4 teated udder of the dairy cow is much larger than the beef cow, who produces much less milk. The large udder is more prone to injuries, even a suckling calf can cause injury to such a large organ. For this health reason and for the economic reason, dairy calves are removed from their mothers at birth and pail or bottle fed milk or milk replacer for approximately 2 months.

At Maplewood Farm we remove dairy type calves at birth and pail feed up to a maximum of 8.50 litres of fresh milk daily for up to 6 months for each calf. The dairy type of cow is hand-milked twice daily, depending on the season, a third milking is done mid-day for Farm visitors to watch.

b) Beef Calf raising

A beef calf is left with its mother to nurse milk from her 4 teated udder. The beef cow produces approximately 4.5 litres of milk per day, just the right amount for one calf, out of a very small udder. Often beef cattle are kept in large pastures or even on huge ranges of land and may not see humans for many months. Their ability to calve, produce just the right amount of milk for that calf from a compact injury-free udder and have strong mothering-protection instincts, make them ideal animals

Hand-Milking
Demonstration
daily
at 1:15 p.m.

for the free-ranging lifestyle. Beef calves will nurse for many months if not weaned by humans. Usually they are weaned at about 6 months of age.

c) Dual - Purpose Calf Raising

The dual - purpose calf is raised in three ways depending on how the parent stock are kept. Often the cattle are in large specialized herds in large pastures and the calf would be left with the mother to drink as much milk as it wants.

In a smaller farm situation, the calf might be removed at birth the same as the dairy calf and pail or bottled-fed after the cow has been milked.

Another way to raise the calf might be to remove the calf for a period of time each time each day so that some milk can be kept for humans, then release the calf to drink from its mother all remaining milk.

Life Span and Mature Weight

Cattle can live for as long as 20 years, however, in dairy cattle, their milk productivity is greatly reduced after 8 or 9 years.

Mature weights vary according to sex and breed, an average figure could be 545 kg (1,200 lbs.) for a large dairy cow.

Water Consumed

The average cow drinks 50 to 60 litres (11 to 13 gal.) of water per day. This would be an average for an animal that is milking or is not milking. Dairy cows producing 50 litres of milk per day have been recorded to have drank 150 litres (30 gals.) of water per day.

Eaten Food

Cattle are grazers of grass. Cattle on the Farm are fed: Calf Starter, Calf Grower, Full Flow Dairy, Alfalfa and Local Hays. The cattle also receive Supplements. Cattle have a ruminant digestive system. The average dairy cow eats 9 kg of grain mixture and 14 kg. of hay daily.

Uses to Humans - The Dairy Cattle

On farms throughout the world, the dairy cow provides milk, butter, cream, cheese, and beef. Most often, in commercial dairies, machines are used to milk large numbers of cows.

There are at least five breeds of dairy cattle recognized in Canada, most popular being the big black and white Holstein.

Another popular breed is the small brown Jersey with its big dark eyes.

In addition to dairy products, the cow produces replacement milkers with heifer calves, while bull calves that are not kept for breeding purposes are used for veal. By-products are hides or leather.

Uses to Humans - The Beef Cattle

All over the world, the specialized breeds of beef cattle provide a source of protein to the human population.

By-products of beef cattle are hides or leather.

There are many breeds of beef cattle recognized in Canada, probably the most popular is the red, white-faced Hereford. The Hereford has a good reputation of being an easy calver and very hardy in free-range management situations. Another popular beef breed is the Black Angus.

All beef breeds have been developed to produce large masses of muscular flesh particularly in the hind-quarters areas. At Maplewood Farm, beef cows and calves we've kept have often been mistaken for bulls simply because of their large bulky appearance.

Uses to Humans - The Dual-Purpose

Dual-Purpose means the breeds were developed for both milk and beef production. Perhaps not as popular as they once were, the dual-purpose breeds have given way to the more specialized breeds found in the dairy or beef classifications. The dual-purpose was once an animal most useful for the small holding type of farmer. Its udder being larger than the beef but not as large as the dairy breed, the dual-purpose provide the home farm with milk, hence milk and its products for the table, as well as good - sized calves that resemble the beef breeds in build.

Of the many dual-purpose breeds in Canada, perhaps the most popular is the Milking Shorthorn, a beautiful dark liver red colour, splashed with white. Another example of dual-purpose is the Red Poll.

Uses to Humans - Summary

Many peasant farmers throughout the world still use a cow (or an ox) as a draught (draft) animal whose primary use in life is to draw a cart or a plough. In these countries the cow may also provide a little milk and it will be killed and eaten when it becomes too old to work and breed any longer.

Bull is the name for the male, the mature female is called a Cow and the young is called a Calf. A male not kept for breeding purpose is sometimes castrated, and the name for this animal is a Steer. A young female that has not calved is called a Heifer.

Domesticated in Europe and Asia during the New Stone Age, the many breeds of cattle today are divided into three classifications:

- a) Dairy - a lean angular shaped animal being narrow through the shoulders with a large stomach capacity and large udder.
- b) Beef - a fatter square - shaped animal throughout with a relatively small udder.
- c) Dual-Purpose - a combination of the two other classifications but not as lean and angular as the dairy and not as square-shaped as the beef with a mid-sized udder.

Cattle hooves are cloven or split-toed. Horns may or may not be present depending on the breeding, not on the sex of the animal. Both sexes can grow horns. Many modern breeds have been bred not to have horns due to ease of handling hornless animals. Animals that have been developed to be born without horns are called "polled". If horns are present in a breed, they are sometimes removed by various methods at about 1 week of age.

Breeding and Birthing

Age of adolescence is from 8 to 12 months. First breeding is done around 14 to 18 months of age.

There is not a specific breeding season for a domestic cow. The cow can be bred at any time of the year, heat occurring every 18 days until conception. At the Farm, Artificial Insemination is used to breed cows. Bulls are generally unpredictable, potentially dangerous animals to house on the average farm.

In northern climates or on range conditions, bulls are introduced to cow herds so that breeding will be timed to produce calves during the spring months when the weather is favorable.

Introduction to the Mammal Section cont'd

2. Water

Water is the most important ingredient of any living being's diet.

Bedding

“Bedding” or “Litter” are the names given to various materials laid down on the animals pen or stall floor surfaces. This enables the pens to be cleaned easier and keeps the animals cleaner. Bedding materials used at Maplewood Farm are wood shavings from pine, fir or hemlock trees; and oat and wheat straw.

Breed Standards for Domestic Animals

As you will see on the following pages, there may be many “breeds” found in a particular species or type of animal. Often there are associations made up of interested people called “breeders” who set standards for their particular breed. For example, Hereford Beef Cattle breeders have set standards of conformation and performance for their breed of cattle. These standards or rules are then adopted by authorized judges as guidelines for comparing Herefords in a show ring. For at least a century this is how domestic animals have been improved upon, selecting desirable characteristics and then breeding animals who conform to those characteristics.

The Cattle

Every part of the carcass is used, the meat and marrow for eating, the horns, bones and hide for artifacts, weapons and clothing, the fat for tallow (for burning), the hooves for gelatine and glue. From the living animal, the manure is an essential part of the farming cycle and in some countries, it is used for a burning fuel and even as a building material. There are no other animals that provide such a versatile range of resources as domestic cattle.

Field Notes

The male is called a Jack, the female is called a Jennet and the young offspring is called a Foal.

They were domesticated in North Africa, descended from wild asses found there, and are closely related to both the zebra and the horse. They were first used in Egypt and that area of the Middle East. They have spread to all the warm countries and can be found in almost every country of the world.

The sound the donkey makes is called braying. They have long ears, a short upright thin mane and a tail which is haired only at the end. They come in many colours but most typical is the blue dun (ash gray) with a dark line down the back and a "cross" across the shoulders. The hooves are narrow, straight and oval, ideal for rock and mountain climbing.

The animal is most properly known as the ass since his scientific name is "equus asinus". The name donkey came from England where it is a contraction of "dun" referring to his colour, and "ky", being diminutive. Donkey means the small dun-coloured animal. The exact translation of this "nickname" is donkey, in Spanish is "burro". The name burro generally is reserved for the wild asses that roam the southern United States and Mexico.

The Cross Legend

The cross found on the back of donkeys is also seen on mules. The cross is only noted in written works after Christ's crucifixion. The legend holds that the donkey colt ridden into Jerusalem by Jesus Christ followed Him to His crucifixion and the sun, casting the shadow of the cross on the donkey's back made a permanent mark to be noted on the donkey for evermore.

About Mules and Hinnies

A mule is actually the resultant offspring of breeding a donkey jack to a horse mare. Not as well-known as the mule animal, is the hinny, the offspring of a stallion horse bred to a donkey jennet. Due to a mismatch of chromosomes and factors not fully understood, these two types of hybrid animals are sterile and unable to reproduce themselves. The mule takes on more characteristics of the ass father and the hinny takes on more characteristics of the horse father.

Breeding and Birthing

Age of adolescence is 12 months. First breeding is done at about 3 to 4 years of age.

Food and Water

There are two essential ingredients to an animal's survival: Food and Water. The following is a list of food items and their uses on Maplewood Farm.

1. Food

- Grains - in this group are Whole Wheat, Crack Corn, Crushed Oats and Whole or Crushed Barley.
- Pellets - are combinations of grains ground up and then processed into those forms. These types of rations have specific food protein percentages and may contain medication depending on the product.
Processed food products used on the Farm for mammals are:
 - Hog Starter for baby pigs
 - Hog Grower for pigs 2 to 4 months of age
 - Hog Finisher for pig 4 months and up
 - Rabbit Fryer for young rabbits
 - Rabbit Pellets for rabbits of all ages
 - Complete Horse for all ages

- Textured Feed Rations - are combinations of crushed grains and some soft pellets usually bound together by a small quantity of molasses.

Texture rations used on the Farm are:

- Calf Starter for baby calves
- Calf Grower for older calves
- Full Flow Dairy for milking cows
- Goat for all goats
- Hi-Energy for horses and ponies
- Sheep for all sheep

- Hay - two types of hay are used on the Farm: Alfalfa, a very green, sweet leafy type of vine. Local, a duller green of mixed grasses.

- Grass for Pasture - though not essential and not always possible due to the Farm's small acreage, mixed grasses are available in some of the paddocks.

- Supplements - are food items or combinations of items added to the animal's diet to provide additional food value. These supplements contain concentrated amounts of vitamins and minerals. Salt blocks left out for an animal to lick at when it wants is an example of a supplement.
- Milk, Cow and Goat - an important food item for all young mammals at the Farm.

- Fruits & Vegetables - Examples of these are apples, carrots and lettuce. Often the Farm is the recipient of case lots of these items that cannot be sold in markets.

What is a Mammal ?

A mammal is an animal that has grown from an egg inside its mother and is born fully formed and alive. It is warm-blooded usually has some form of hair or fur and drinks milk from its mother. The milk comes through special glands called mammary glands. The baby mammal drinks its mother's milk until it is able to eat other food. The animals on the following pages are all mammals.

Duration of Pregnancy or Gestation Period

| Species | Duration in Days | Duration in Months |
|-------------------|------------------|--------------------|
| Cattle | 282 | 9 |
| Donkeys | 365 | 12 |
| Goats | 151 | 5 |
| Guinea Pigs | 66-70 | 2 1/2 |
| Horses and Ponies | 336 | 11 |
| Pigs | 113 | 3 1/2 |
| Rabbits | 31 | 1 |
| Sheep | 150 | 5 |

Digestive Systems of Ruminants

All animals on the Farm except the cattle, goats and sheep have digestive systems similar to humans. The excepted animals have what is called a "ruminant" digestion or are ruminants. Rumination or "cudding" is the process whereby food is taken into the stomachs of ruminants and returned to the mouth, subjected to a second more thorough chewing, and is again swallowed.

A ruminant digestion enables the animal to eat large quantities of coarse food or "roughage" chewing it only enough so that it can be swallowed and then later, in a relaxed state, regurgitate the food for further chewing to assist in digestion.

The ruminant animal has four compartments where all food eaten must pass through. The first stomach is the "rumen", where all food is stored and sent back to the mouth for the second chewing; the second stomach is actually a fluid reservoir, capable of sending fluid to any compartment that needs it, called the "reticulum"; the third stomach is the "omasum" which receives food products from the rumen after the second chewing then passes it on to the fourth and true stomach, the "abomasum".

The breeding season is usually during the Spring months, heat occurring every 21 days until conception. Considering the length of gestation, this ensures that the foal will be born in the warmer spring months.

Duration of pregnancy is 12 months. The jennet produces one foal per year. Normal foal birth weight is from 11 kg. to 34 kg. (25 to 75 lbs.) depending on the breed.

Rearing of the Young

The foal is left with its mother to drink milk from her 2 teated udder until about 6 months of age, then it is weaned.

Life Span and Mature Weight

Donkeys can live for as long as 40 years. Mature weights vary depending on the breed, from the smallest Sicilian Miniature weighing only 114 kg (250 lbs.) to the Mammoth weighing 636 kg (1400 lbs.)

Water Consumed

The average donkey drinks 9 to 18 litres (2 to 4 gal.) of water per day.

Food Eaten

Donkeys are grass grazers and brush browsers. Donkeys on the Farm eat Local Hay and receive special supplements for pregnancy.

Uses to Humans

There are at least 100 improved types of donkey found throughout the world. Three of these are commonly found in North America.

The Mammoth: - the largest measuring 1.35 to 1.63 m. at the shoulder, is used for breeding to draft horse mares to produce Mammoth Mules.

The Standard: - a mid sized donkey measuring less than 1.35 m but more than 91.4 cm at the shoulder, is most commonly used for driving, riding and packing.

The Sicilian Miniature - the smallest, being less than 91.4 cm at the shoulder, are used for driving, packing and make excellent pets.

One unusual specific use recently re-discovered

The Donkeys

for the Standard and Miniature sized Donkey is as a "guard donkey" for flocks of sheep. Donkeys are extremely protective and can be very intimidating to predators, charging with their jaws open and feet flying, sometimes even able to convince the sheep to get behind the movement to scare the potential attacker away. Another use is as a halter-breaking trainer for young calves and horse foals. A special harness is used so that the procedure is safe for both animals. Donkeys are extremely strong for their size and when paired with an unwilling pupil, the youngster soon learns that the donkey is in charge and that all donkey movements must be followed.

Field Notes

The Wild Birds

Some wild birds that can be observed at Maplewood Farm, depending on the time of the year are:

Great Blue Heron, Green Heron, Kingfisher, Bald Eagle, Coopers Hawk, Pileated Wood Pecker, Yellow Belly Sapsucker, Robin, Crow, Red-Tailed Hawk, Humming bird, Great Horned Owl, Sparrow, Starling, Pigeon, Cedar Waxwing, House Finch and Blue Jay.

Some wild Waterfowl observed are:

Mallard, Buffle-Head, Common Merganser, Pintail, Wigeon, Golden Eye and the Canada Goose.

Field Notes

The Turkey

Turkey feathers are used for decorations, articles of clothing and banded together as hand-held fans. Often white turkey feathers are dyed various colours and sewn into "feather boa" clothing accents.

Field Notes

The Goats

The male is called a Buck, the female is called a Doe and the young offspring is called a Kid. The terms billy and nanny are no longer used to describe goats.

Goats have cloven or split-toed hooves. Horns may or may not be present depending on the breeding of the animals and not on the sex. Both sexes can grow horns. Due to the ease of handling, if horns are present in a breed, they are normally removed by various methods at about 1 week of age.

It is generally accepted that the ancestor of the domestic goat was the Persian Wild Goat which ranged from Greece through Persia and Asia Minor. It has only been during the last century that breed development has taken place.

There are three classification of goats most prominent in North America: Dairy Goats, Hair Goats and Pygmy Goats.

The dairy goat is a classification that contains at least 5 breeds of 3 distinct types.

The Swiss type breeds are the white Saanen, the various-coloured Alpine and the brown and white Toggenburg. All originated from the Swiss Alp region of Europe and all are characterized by their "erect" ears and "dished" faces.

The Nubian was developed in England by crossing native stock with Indian and Egyptian types. They are heat-tolerant and have meatier carcasses than Swiss breeds. They are distinguished by their long wide pendulant ears and Roman noses and come in any combination of colours.

The LaMancha is a newer breed, developed in North America by crossing native stock with Spanish goats, distinguishing characteristics are their small rudimentary ears. The small ear is genetically dominant and the goat comes in any combination of colours.

Dairy Goat

Hair Goats

There are two types of goat in the Hair production category, the Angora and the Kashmir. The Kashmir produces the product "Cashmere".

Angora goats originated in Turkey and are kept throughout the world, generally in the low rainfall regions. They are characterized by curled white hair (Mohair) which lends well to dyeing, pendulant ears and curved horns. The Angora's horns are always allowed to grow so that they can groom their thick hair coats.

Pygmy Goats

The Pygmy goat is small and sturdy with a distinct appearance unique to the breed. Adult Pygmies measure between 41 and 58 cm (16" and 23") at the shoulders with full-barreled bodies on short muscular legs. Colours vary from silver to black and salt and pepper patterns.

Breeding and Birthing

Age of adolescence is their first Fall, usually at about 8 months of age. First breeding is done between 10 to 18 months.

The shorter days of winter trigger the goat heat cycle. The doe goat heat occurs every 21 days until conception during the breeding season which is generally from September to February. Pygmy goats, however, can sometimes be bred throughout the year. The does and kids are free from offensive odours while the bucks are strong-smelling, especially during the breeding season.

Duration of pregnancy is 5 months. Normal dairy goat kid birth weight is approximately 4.5 kg (10 lbs.) each. Pygmy goat kid birth weight is approximately 1 kg each. The female goat kids once per year and can produce up to 6 kids at a time. The usual for all goats, however, is 2 or 3 kids.

Rearing of the Young

Methods of raising goat kids are very-similar to those used for calf raising, with a few changes.

a) Dairy Goat Kid Raising

The modern dairy goat, though still smaller than a dairy cow, has undergone, proportionate to its size, the same types of physical changes as the modern dairy cow.

The male is called a Tom, the female is called a Hen and the young are called Poults.

The turkey is a native to North America but was developed in Europe around 1498. There are 7 varieties of turkey recognized in Canada. The heavy domestic turkey cannot fly but can flap its wings to help it to jump up on objects.

Breeding Season

The breeding season is in the Spring months. One tom is used to service several hens. (Commercially-raised turkeys are usually serviced by artificial insemination.) The breeding season finds the tom performing his drumming "gobble" sound, puffing up all body feathers and fanning his tail feathers similar in manner to the Pea Cock.

The featherless area on his head and part way down his neck is capable of changing colours and shape. Depending on his mood, colours seen are blue, white and red and combinations of all three.

The hen can produce quite a few large beige, brown-spotted eggs in this season, but an average clutch would be 8 to 10. Turkey poults are difficult and challenging to raise, mortality can be quite high when they are raised by the turkey hen.

Life Span and Mature Weight

Turkeys can live for as long as 8 years. The average weight is 11.36 kg. (25lbs.)

Food Eaten

The Farm's Turkeys are fed Strong Start, Turkey Finisher, grains, seeds, live food, supplements, green stuffs and grits.

Uses to Humans

The wild type of turkey is thin, dark brown in colour, stands quite tall and is capable of low altitude flight. The domestic turkey has been developed by humans to produce a large quantity of flesh for the basic bone structure. The large "Holland" variety are the preferred bird, raised commercially for meat.

The Pea Fowl

Life Span and Mature Weight

The Pea Fowl can live to be 60 years old. Both the pea cock and hen are considered mature at 4 years of age. The average mature weight is between 4.55 to 6.82 kg (10 to 15 lbs.)

After each year's feather moult, the cock's tail feathers are replaced with bigger and more colourful feathers until his fourth year when the full glorious tail feather potential has been reached.

Food Eaten

The Farm's Pea Fowl are fed Strong Start, seeds, grains, supplements, live food, fruits, vegetables, green stuff and grit.

Uses to Humans

As indicated by their name, Indian Pea Fowl are native to India. In the past, they were considered sporting game birds by hunters in that country, valued for their flesh as well as their feathers. Today they are considered exotic ground or estate birds, kept for their beauty rather than food value to humans. Their tail feathers can be seen sold individually in stores as accent items.

Field Notes

The Goats

The higher milk production from a larger 2 teated udder has consequently necessitated the removal of the kids from the mother at birth.

While goat kids adapt well to pail feeding like calves, a preferred method of milk feeding is with a "Kid-bar" or a "lambar". This feeding system was first developed in Australia for feeding orphaned lambs, hence the name. The lambar is a bucket with holes drilled in the sides that hold rubber nipples. On the inside, hoses that run to the bottom of the bucket are attached to the backs of the nipples. When the kid sucks on the nipple, the milk is drawn up through the hosing, working just like straws in our own drinking glasses. A dairy goat kid raised on a lambar can drink 1 to 2 litres of fresh goat milk daily.

At the Farm, dairy goats are hand-milked twice daily and the goat kids are fed goat milk from the lambar immediately following the milking. They are weaned at approximately 6 months of age.

b) Angora and Pygmy Goat Kid Raising

While some people actually remove the Pygmy young at birth or soon after and raise them in much the same way as outlined in the dairy goat section, at the Farm the kids are left with their mother to raise. The Pygmy and Angora goats have relatively small teated udders that are not as prone to injury as the larger dairy goats. When raised this way, the kids are weaned at about 4 months of age.

Life Span and Mature Weight

Goats can live as long as 12 to 17 years. Dairy goat milk production starts to decrease at about 8 years of age. Mature weights vary according to sex and breed. An average weight for a dairy goat doe is approximately 57 kg (125 lbs.)

Water Consumed

The average dairy goat drinks 4.5 litres (1 gal.) of water per day. Pygmies and Angoras drink proportionately less water.

Food Eaten

Goats are brush browsers. They will graze on grass but do not crop it off closely. They prefer to browse on brush.

The Goats

Goats on the Farm are fed: textured Goat Grain, Alfalfa and Local Hays. They also receive supplements. Goats have a ruminant digestive system.

Uses to Humans - Dairy Goats

The goat milk and other goat milk products industry is still in its infancy in Canada. Commercial dairies are few compared to the huge dairy cow industry. Dairy goats tend to be providers of small farm home use milk products and by-products. Often the small farm keeps goats for exhibition or show purposes as well. By-products of dairy goats are hides and leather. Goat meat is called "chevon", and when it is from young goats, it is a very popular tender meat.

Uses to Humans - Hair Goats

The Angora is the producer of the valuable fibre "Mohair". In North America their hair is completely shorn off in a manner similar to sheep, twice a year, usually in March or April and then again in September. Each shearing will produce from 2075 to 505 kg (6 lbs. to 12 lbs.) of mohair per animal. They are kept in large numbers on ranches, as well, they are popular on small farms for home use of the valuable mohair product.

Angoras produce by-products of hides or leather. Angoras are a fat type of goat and for this reason are valued as meat producers. Other goats are much leaner in comparison.

Uses to Humans - Pygmy Goats

Pygmies are economical to maintain, consuming only about a third of a dairy goat's daily ration.

Because of their small size and excellent dispositions, Pygmy goats have proven useful laboratory animals. Their gentle affectionate nature makes them equally perfect for family pets or companions for other farm animals. They are sometimes hand-milked for home use.

The West African Dwarf goats, a family that includes the well-known Pygmy goat as well as the Nigerian Dwarf, Cameroon Dwarf and other miniature breeds, have origins that are difficult to trace. In their West African homeland they are important agricultural animals existing on minimal food resources and providing milk and meat for their owners.

Field Notes

The Pea Fowl

The male is called a Cock, the female is a Hen and the offspring is called a Chick.

Of the two breeds of Pea Fowl kept domestically, the Farm keeps the Indian Blue which can have at least three other recognized colour forms or mutations.

The standard India Blue mature cock has a solid blue coloured neck, black and white speckled shoulders and the familiar long train of blue and green-hued tail feathers. The Blue hen is brown-grey bodied with greenish blue neck feathers and does not grow long colourful tail feathers.

Some mutations or variations of the standard India Blue are the pure Whites, the Black Shouldered and the Cameo Oaten. In the White variety, both cock and hen are completely white with pink pigmentation on their legs, beaks and around their light blue coloured eyes. The cock's tail train is solid white having an iridescent sheen. The white variety is not considered an albino. The Black Shouldered has basically the same colouration of the standard Blue with the exception that the mature cock has solid black rather than black and white speckled shoulders. The Cameo Oaten has a blue neck with beige, brown and white mottled combination of colours on other feathers.

The Pea Fowl is capable of low altitude flight used mostly when alarmed. Both male and female birds have a distinctive call that sounds like they are saying, "help-help", most often heard in the breeding season.

Breeding Season

The breeding season is in the spring months. One cock is usually used to service several hens. This season is highlighted by the previous mentioned vocalizations as well as a few others, and of course, the beautiful tail feathers fanning displays of the cock. While the hen does not grow a train of tail feathers, she too can be seen engaging in the same type of display activity as the cock.

Pea hens can produce quite a few large beige eggs in the breeding season but an average clutch would be 8 to 10. Pea chicks are difficult and challenging to raise, mortality can be quite high when they are raised by the pea hen.

The Guinea Fowl

The male is called a Cock, the female is called a Hen and the offspring are called Keets. There are three colours of Guinea Fowl: the Pearl, White and the Lavender, which is most common.

These are the odd-looking, fleet-footed "alarm" ground birds capable of low altitude flight. Easily recognized by their helmet type of hard comb on the top of their white heads and the conical red wattle that protrudes out from either side of the beak. They have a distinct "buck-wheat-buck-wheat" sounding call, and the sexes are impossible to distinguish one from the other. They use their call as a warning to their fellow birds and consequently all other animals and birds, when they spot a predator or danger.

Breeding Season

The breeding season is in the Spring months. One cock can service several hens but pairing can occur under ideal circumstances.

Guinea Fowl eggs are beige in colour and have an unusual pitted, craggy surface on the hard shell. A clutch of eggs is probably less than 10. Under ideal circumstances, a Guinea hen can lay up to 100 eggs per year. These are difficult birds to breed and do not normally make good parents, probably because of their flighty wild nature.

Life Span and Mature Weight

Guinea Fowl can live for as long as 8 to 14 years. Average mature weight is 1.36 kg (3lbs.)

Food Eaten

The Farm's Guinea fowl receive Strong Start, grains, seeds, live food, supplements, green stuffs and grit.

Uses to Humans

In Africa, their country of origin, Guinea Fowl are sought after by game bird hunters. The characteristics and behaviour of the domestically kept Guinea Fowl have been altered little by humans. They are raised commercially, considered a fancy game bird and are served in restaurants as "Guinea Hens". They tend to be rather thin and lean, yielding a small amount of meat per bird.

They are a high-priced bird due to difficulties in raising them. Their unusual speckled feathers are frequently seen as accent items on hats, etc. On a small scale, Guinea Fowl are interesting unusual birds and tend to be kept for ornamental purposes.

Field Notes

The Guinea Pigs

The male is called a Boar, the female is called a Sow and the young offspring is called a Piglet.

Guinea Pigs are actually rodents of the Caviidae family, more properly called "Cavies". The ancestor of this domestic pet is a native of the western part of South America, Peru in particular.

There are a few theories as to how the name Guinea was applied to the animal. Guinea was an English usage for the word "foreign"; that they were sold for a guinea (approximately one pound sterling); and that they went to England on slave ships via the country Guinea. It may be that it is called a pig because it sometimes squeaks, squeals or grunts. Guinea pigs also whistle.

Guinea Pigs come in many colours and in three hair classifications. The long hair is called Peruvian; the Abyssinian has short hair with whorls all over the body; and the English is very short-haired.

Breeding and Birthing

Age of adolescence is one month. First breeding is done at about 3 months of age. There is no specific breeding season for guinea pigs. They can be bred at any time during the year.

Duration of pregnancy is 63 to 70 days, an average of about 68 days. Guinea Pig litters range from one to six, with an average of three. A sow might have a maximum of 5 litters per year. Babies weigh just a few grams each at birth.

Rearing of the Young

Babies are fully formed and fully furred at birth and can run with their mothers hours after being born. They nurse from their mother's two teats for about 4 weeks after which they are weaned.

Life Span and Mature Weight

Guinea Pigs can live for as long as 10 years, probably an average is seven years. Mature weight for an English type is 2 kg.

Water Consumed

A Guinea Pig drinks approximately 100 ml of water per day.

The Guinea Pigs

Food Eaten

Guinea Pigs on the Farm are fed: Pellets, Vegetables, Fruits, and Local hay. They also receive supplements.

Uses to Humans

Guinea Pigs have been used in heredity, nutrition and disease research. They also make excellent pets.

Although they are not considered as such outside of their native land, the guinea pig is much like a rabbit - edible. Peruvian Indians consider them a delicacy and have developed superior varieties of fast growing large animals. Often they are housed inside the home of the native.

Field Notes

The Geese

Waterproofing

A gland at the base of all waterfowl tails provides oil for the birds to "preen" throughout their feathers. This renders the bird waterproof enabling it to float in the water without sinking or getting wet.

The male is called a Gander, the female is called a Goose and the offspring are called Goslings.

Geese were first domesticated in Egypt about 4,000 years ago. Most domestic geese are incapable of flight because their bodies are proportionately larger than the wild species. Occasionally the Farm is host to wild Canada Geese that fly in.

The breeding season is in the Spring months. A pair of geese will mate and stay together for life providing nothing happens to either bird. Should misfortune befall one, the other will sometimes take up with another unattached bird.

Mating takes place in the water. The goose will lay a clutch of up to 20 eggs in a deep large nest of twigs and grasses. Like the duck, the goose drops a great amount of downy feathers in the nest which insulates and camouflages in her absence. The goose is the one who sits on the nest while the gander stands nearby as a fierce guard. Geese can cause injury by beating an intruder with their large wings or snapping with their bills.

Predator problems are the same for geese as those encountered by the ducks.

Life Span and Mature Weight

Geese can live for as long as 25 years. The average domestic goose weight is 5.5 to 6.4 kg (12 to 14 lbs.)

Food Eaten

The Farm's geese are fed the same diet as the ducks and at the same time - Cracked Corn and Whole Wheat. Geese are very good grass grazers.

Uses to Humans

There are three principle meat-producing varieties of geese: Toulouse, Embden and the Pilgrim. While some of their white eggs are eaten by humans, geese are mostly used for their meat, large feathers, down feathers and their value as oramental or pet stock.

Field Notes

The Ducks

When the duck has to leave. Throughout the incubation and even after hatching, another risk posed is that by predator crows.

Ducks can be quite fierce and protective of their nests, puffing up their feathers so that they look larger, striking the intruder with wings and snapping with their bills. Since the Farm duck frequently has no specific mate, the security of the nest and ducklings are her sole responsibility. Ducks protect themselves by the previous mentioned methods, as well, as in the case of wild breeds, flight is another possibility.

Life Span and Mature Weight

Ducks can live for as long as 8 to 14 years. The average domestic duck weighs 3.6 kg. (8lbs.) and the drake weighs 4 kg (9lbs.)

Food Eaten

The Farm's domestic ducks, and the wild ducks that choose to fly in, receive equal portions of Whole Wheat and Cracked Corn grains. These are fed once daily in the water of the natural pond. Ducks also eat live food, grit and greenstuffs.

Uses to Humans

Breeds such as the "Khaki Kampbell", a khaki brown-coloured duck, have been developed as an egg-laying breed, producing a light beige-coloured large egg. This breed has been recorded to produce 335 eggs per year, under ideal circumstances.

-The Meat Producers

Breeds such as the "White Pekin", introduced to North America in 1870, can be so large they resemble a small goose. Developed for this bulk, they are a valuable meat-producing bird. A Pekin can produce up to 110 eggs per year under ideal management.

Other Uses

Ducks make endearing pets, imprinting easily onto adoptive human parents. Large duck feathers are used for pillow decorative accents. Duck down feathers are used for pillow ticking, insulated clothing, etc.

Field Notes

The Horses and Ponies

The male is called a Stallion, the female is called a Mare, the young offspring is called a Foal. A young male horse is called a Colt, a young female is called a Filly. Male horses not used for breeding purposes are often castrated, making them easier to handle - they are called Geldings.

Evolution of the Horse (*Equus Caballus*) is well documented back to the tiny four-toed "Dawn Horse". About the time of the Ice Age today's true horse appeared in his one-toed, long legged form. It is speculated that domestication of the horse started about 5000 B.C. in China or Mongolia.

The Horse was a "re-introduced" species to North America by Columbus in 1493. For yet to be explained reasons, the horse disappeared in the New World about 30 or 40 thousand years ago.

North American Indians probably began using the horse in the 1500's. The horse was re-introduced to Eastern Canada in 1610 to the French colonies of Acadia on the Atlantic coast. The horse did not reach the Canadian prairies for a hundred years after arriving on the East Coast.

Three distinct primitive stocks are thought to be ancestors of the present day 60 types of Horses. The Celtic in the British Isles produced the Pony breeds. The large heavy eastern Europe and British Isles horses were the ancestors of the so-called cold-blooded Draft or Heavy horse breeds. The Barbary states in ancient North Africa produced the fleet of foot, so-called hot-blooded Arabian breed, hence, ancestors of the Light Horse classification.

A horse is half grown when it is one year old. Adolescence is around 18 months. It takes five years to be fully grown. First breeding is done between 3 to 5 years of age.

The breeding season is during the Spring months, heat occurring every 21 days until conception. Young

Breeding and Birthing

normally being born in the Spring months.

Duration of pregnancy is 11 months. The mare produces one foal per year. Normal foal birth weight is approximately 11 to 34 kg (25 to 75 lbs.) depending on the breed.

The foal is left with its mother to nurse milk from her two teated udder until about 6 months of age, then it is weaned.

Life Span and Mature Weight

Horses can live for as long as 30 years. The Guinness Book of World Records notes a horse that lived for 62 years.

Pony mature weights are from 182 to 273 kg (400 to 600 lbs.); Light Horses weigh from 273 to 545 kg (600 to 1,200 lbs.); Heavy or Draft Horses weigh from 591 to 909 kg (1,300 to 2,000 lbs.).

Water Consumed

The average Light Horse consumes 23 to 56 litres (5 to 12 gals.) of water per day. Ponies would drink proportionately less and Draft Horses would drink proportionately more.

Food Eaten

Horse are grass grazers, having teeth on their top and bottom jaws. Horses on the Farm eat Local Hay and receive special supplements seasonally.

Uses to Humans - The Pony Breeds

Of the many pony breeds, perhaps the most well-known is the Shetland, originally from the rocky Shetland Isles northeast of Scotland. The Shetland Pony's small stature was developed for existence on the minimal diet found on the islands. This animal was used for draft work by the Scottish farmer. Another example of a pony breed is the Welsh Pony. Today most pony breeds are enjoyed for riding by young people and for pleasure and show cart driving by young and old.

Uses to Humans - The Light Horse Breeds

The Arabian is perhaps the most well-known of the Light Horse breeds. They are the oldest and purest of Horse breeds. Many other Light Horse breeds have Arabians as their ancestors. Other examples of Light Horses are the Quarter Horse, used for western work and the racing Thoroughbred.

The Ducks

Waterproofing

A gland at the base of all waterfowl tails provides oil for the birds to "preen" throughout their feathers. This renders the bird waterproof enabling it to float in the water without sinking or getting wet

The male is called a Drake, the female is called a Duck and the babies are called Ducklings.

Most of the year, the Farm is home to approximately 100 ducks, both domestic and wild species.

Ducks have been domesticated for about 2,000 years. Most domestic ducks are incapable of flight because their bodies are proportionately larger and their wings smaller than the wild species.

Breeding Season

On the Farm, duck reproduction follows a fairly natural course. The breeding season begins as early as February and can continue well into the Summer. On the Farm, we've observed ducklings born as early as March and as late as the end of July.

The duck that roams about on the Farm will mate with many different drakes, either on land or in the water. The breeding season is a particularly precarious time for all ducks and most of them go through temporary behavioural changes.

Drakes fighting drakes and drakes ganging up on ducks both on land and in the water are all commonly-seen sights at this time of the year. Severe top of the head skin injuries frequently occur as well as drownings as a result of this seasonal fighting and breeding.

Raccoon predators, as well, take advantage of nesting ducks during the breeding and duckling rearing season, eating eggs and sometimes even the duck.

Wild drakes too young to be breeding will often leave the Farm compound, landing on neighbouring lawns and using available water puddles, just to avoid the hectic activity on the home front!

Ducks produce eggs at various times throughout this season. Usually a duck will produce only one clutch of eggs, about 20. A duck preparing to set on a clutch will probably lay an egg a day until she has laid about 20 in the deep grass and twig-lined nest. When she is broody or is prepared to set on the clutch of eggs, she loses or drops her "down" feathers into the nest. This down insulates the eggs and helps camouflage the nest.

The Chickens

Uses to Humans

Chickens have become very specialized birds through intensive breeding and selection.

The Egg Layers

Breeds such as the Leghorn, usually white but available in 3 colours, are considered the commercial white egg-laying breed. The eggs you buy, if they are white, probably were produced by a Leghorn hen. These birds are super producers and specialized to the extent that they carry very little body flesh, being quite slender and require less feed than the following birds.

The Dual-Purpose Birds

To name a few, breeds such as the Rhode Island Red and the Barred Plymouth Rock are considered ‘‘dual-purpose’’, meaning they have been developed for both egg and meat production. Such breeds are often popular with the small stock holder or hobby farm owner. They differ in appearance from the egg-producing type by weighing more, carrying more flesh on their breast and thigh areas. Often the dual-purpose breeds produce brown eggs.

The Different sizes

Chickens, as you’ve probably noticed, come in all shapes and sizes, just like humans. There are ‘‘standard’’ sized types, as those noted above and ‘‘bantam’’ sized chickens. The bantams are usually scaled-down versions of standard breeds, approximately one half standard size. Bantams often are considered decorative or ornamental.

Other Uses

In addition to meat and egg production, another product of chickens is feathers. The small, light, downy type of feather is used for pillow ticking, stuffing for insulated clothing, etc. The larger more colourful feathers are used for decorative accents.

Field Notes

The Horses and Ponies

Uses to Humans

- The Draft Horse Breeds

In the past, the Light-type of horse was used for riding and carriage or a cart driving and some general farm work. The engine powered machines have displaced the horse in most areas of work they used to do but people still enjoy riding horses. They are raced at the tracks, used in circuses, rodeos, horse shows and in sports such as polo. Horses are still used on ranches to round up cattle for branding and vaccinating.

The ancestors of the Draft Horses were the War Horses of the Middle Ages, able to carry the heavy load of warriors in armour. The five main draft breeds found in North America are: the Clydesdale, the Shire and the Suffolk Punch, all three originally from the British Isles; the Belgian from Belgium; and the Percheron from France.

The importance of the large Draft Horse cannot be understated. They were once called the backbone of North America. Their agricultural contributions have been enormous, pulling farm machinery on the prairies, sometimes requiring teams of 18 or 20 animals. In 1920, the big change over from horse power to machine power occurred on the Canadian Prairies bringing a decline to their populations and changes to all areas of business associated with them.

Today the Draft breeds are making a welcome comeback. Found to be less ecologically damaging to forests, they are often used as economical workers in small logging and selective land clearing sites. Some smaller acreage farms still prefer to use the draft horse for their farming needs. They are popular and impressive animals in parades and shows. The Draft mares are bred to Mammoth Donkey Jacks to produce Mammoth Mules.

Uses to Humans - Summary

Horses provide humans with pleasure at riding, driving and showing. They are important working animals on large ranches. They are used by some people for their meat and milk. They produce by-products of hair, hides and leather.

Field Notes

The male is called a Boar, the female is called a Sow and the young offspring is called a Piglet. A young male not used for breeding is often castrated and is called a Barrow. A young female is called a Gilt.

The Pig or Pigs are more correctly called Swine; their scientific name is Sus. Throughout the world are 200 breeds of domestic and wild stock. Swine were domesticated about 7000 years ago in Asia. Columbus, on his second voyage in 1493, is credited with introducing swine to the New World.

Escaped domestic swine, gone wild, roam some southern North American states damaging forests and croplands. In California and recently discovered in British Columbia, are roaming strains of wild stock. Swine are not indigenous to North America and due to their nature, have few enemies or animals that predate upon them. Swine are prolific breeders producing large litters. "Wild" stock have caused great concern for environmentalists.

There are 8 breeds commonly found in North America: 4 were from England originally, 3 were developed in the United States and one breed is from Denmark. Two popular breeds are the Landrace and the Yorkshire. All breeds of swine can be classified into 3 types: the fat or 'chuffy', the leggy and the meat type. All produce varying degrees of fat or flesh type.

A recent introduction to the North American continent is the Pot Bellied Pig from Vietnam. Favoured as a clean and house-broken pet, they are not for everyone, since they often grow larger than people expect.

The pig has a "cloven" hoof (2 toes that bear weight on each foot) and a digestive system similar to a human (see further reference under "Uses to Humans").

A pig "wallows" in mud to control body temperature when the weather is hot. Most body sweat glands are found in the nose, which is a powerful digging and scenting organ. Since they cannot bend around to scratch or lick themselves, they use posts or buildings to rub

Breeding age males, a year old and up, can be called Roosters or Cocks. Younger males are called Cockerels. Breeding or egg-laying females are 5 months and older, are called hens. Younger females are called Pullets. Young chickens are called chicks.

There are approximately 200 breeds of chicken recognized in Canada. Roosters are the birds that "crow" in the morning. Depending on the breed or type of chicken, the rooster usually has a larger "comb" on top of his head and longer tail feathers than the hen.

A good producing hen should lay one egg each day starting at about 5 months of age until about 2 years of age at which time egg production decreases with age. An average hen will lay 220 eggs per year.

Natural occurring daylight factors effect egg production. The Farm's chickens produce more eggs in the Spring and Summer months, tapering off in the Fall and Winter when daylight hours are shorter.

Chickens that produce eggs commercially are housed in buildings with a controlled environment. Daylight hours, food and water are all provided and scientifically monitored to gain the maximum egg production from each bird.

At Maplewood Farm, approximately 1/2 of the number of chickens are kept "free range", during the day then are shut into pens at night to protect them. The other half of the flock is kept in separate pens for special egg collection and breeding.

Breeding Season

Chickens do not have a specific breeding season, However, broodiness in the hen is more likely to occur in the Spring months. It is more desirable to have the chicks born in the warmer Spring and Summer months. One cock is usually used for several hens.

Life Span and Mature Weight

Chickens can live for as long as 8 to 14 years. The average mature chicken weight is 2.3 kg. (5lbs).

Food Eaten

The Farm's chickens eat seeds, grains, chick starter, chick grower, layer pellets, green stuffs, live food, supplements and grit.

The Aviary

An aviary is a pen or series of pens where assorted birds are kept for the enjoyment they give when viewed or listened to. The various birds you will see in the Farm's aviary were domesticated on the average about 100 years ago.

In the aviary, male birds are called Cocks, females are called Hens and the offspring are called Chicks. Bird types popular for aviaries are: Ground Birds - pheasants, partridge and quail; Flight Birds - pigeons, doves, parrots, finch and canaries.

Breeding Season

The breeding and egg-laying season is in the Spring and Summer months for all the aviary birds.

Food Eaten

All the birds in the aviary are given an assortment of seed, grains, Strong start Crumbles, grit, supplements, fruit, vegetables and water.

Uses to Humans

Most often aviary birds are kept for enjoyment of listening to and for viewing, however, there are other uses. Many of the inhabitants can provide an incredible assortment of feathers, as well, some of the larger specimens are valued for their meat.

Field Notes

The Pigs

against. It is believed that their inability to clean themselves is the reason that they are usually careful about their toilet habits.

Colour patterns can vary according to breed but basic swine colours are black, red and white.

Breeding and Birthing

Age of adolescence is 5 months. First breeding is done at about 8 months of age.

There is not a specific breeding season for domestic pigs as they can be bred year-round. The female cycles every 21 days until conception.

Duration of pregnancy is 113 days. They produce 2 to 3 litters per year. Litters are of 5 to 10 piglets each. Normal piglet birth weight is 1 to 2 kg. each (2.2 to 4 lbs.) Farrowing is the name given to the pig birthing process.

Rearing of the Young

Piglets are left with their mother to nurse milk from her 10 teated udder. Piglets are born with "needle" or "wolf" teeth which must be snipped down by the farmer so that the sow's udder does not become injured. At peak milk production, about 4 weeks after having given birth, the sow produces about 9 litres (2 gallons) of milk in a 24 hour period. A piglet will suckle frequently and start to eat some solid food at about 2 weeks of age. Often the sow is confined to a "farrowing" crate or pen that allows limited movement by her, but offers maximum protection to piglets who can scurry around the pen. Mortality in piglets can be high due to the sow accidentally crushing them. (Remember, the pig cannot bend or turn its head, imagine trying to avoid 10 little pigs.)

Piglets are weaned at 6 to 10 weeks of age, when they weigh about 16 kg (35 lbs.) The pig has been scientifically proven to grow more rapidly than any other farm animal. At 6 months of age, a 1.36 kg piglet will have increased its weight by 7000% to 100 kg (220 lbs.)!

Life Span and Mature Weight

An average life span for swine is from 10 to 20 years. A record age has been recorded at 30 years. Mature body weight is 364 kg (800 lbs.) and a record high is 865 kgs (1904 lbs.) Pot Bellied oigs can weigh up to 36 kgs (80 lbs.).

Water Consumed

An average 6 month old pig drinks about 9 litres (1.88 gallons) of water per day. A lactating sow will drink up to 45 litres (10 gallons) per day. Swine that are fed a wet slop-type of food require less water per day.

Food Eaten

Swine are rooters and diggers, having sharp teeth top and bottom of their jaws. Swine on the Farm are fed: Hog Starter, Hog Grower, Hog Finisher, Cow and/or Goat Milk, Eggs, Fruit and Vegetables.

Uses to Humans

In Old times the "chuffy" or fat type of pig was favoured for the production of lard which yielded burning fuels and soaps. The "swineherd", or the person in charge of rounding up each villagers' swine in the morning, would herd them off for a day of land clearing and foraging, returning them at night to the individual farms.

The pig has evolved into a very important and useful animal to humans. A university study found pigs not only are the smartest of all farm animals, but also more intelligent than dogs, mastering any trick or feat accomplished by canines in much less time.

An unusual use of the swine's scenting ability is in France and Italy where they are used to hunt the rare black and white fungi called "truffles", delicacies valued at \$200 per 500 grams.

As a producer of meat for humans, the percentage of food obtained from the pig exceeds that from any other domestic animal. 65% is processed as food, the remainder makes more than 500 other products, everything from a bacteria destroyer to wood glue.

The pig has a digestive system similar to ours and eating habits, blood, teeth and skin that somewhat approximates ours. Scientists have obtained from the pig a chemical and glandular concentration that has been used most successfully in treating human diseases: ACTH, a pituitary gland extract, is used to reduce the pain of arthritis and treat leukemia and rheumatic fever; thyroxine; heparin to prevent dangerous blood clots.

3. Water

Water is the most important ingredient of any living being's diet.

Domestic Bird Breed Standards

The "American Standard of Perfection" is an official listing of 342 breeds and varieties of domesticated Land and Water Fowl. It was established in 1873 by American and Canadian domestic fowl experts and acts as a guideline for the breeding of those birds, providing complete detailed descriptions of how various breeds should look. Occasionally, over the years, varieties have been added and old breed standards changed or updated according to the changing ideas of breeders.

Introduction to the Bird Section

Food and Water

There are three essential ingredients to a bird's survival: Food, Grit and Water. The following is a list of food items and their uses with birds on Maplewood Farm:

1. Food

- a) Seeds - in this group are Sunflower, Peanut, Clover, Millet, Rape, Linseed, Flax, Canary, Alfalfa, Poppy and Negra.
- b) Grains - in this group are Whole Wheat, Cracked Corn, Crushed Oats and Whole Barley.
- c) Pellets - Pellets or the crumbled pieces of pellets are combinations of grains ground up and then processed into these forms. These types of rations have specific protein percentages and are considered complete, balanced rations.

Processed food products used on the Farm for birds are:

- Chick Starter for the first food of chicken chicks.
- Chick Grower for older chicken chicks.
- Layer Pellets for egg producing chickens.
- Strong Start Poul Crumbles for young turkeys.
- Turkey Grower for older turkeys.
- Turkey Finisher for completely grown turkeys.
- d) Green Stuff - in this group, a wide range of green vegetation including grasses are eaten.
- e) Live - in this group are insects such as flies and things such as slugs.
- f) Supplements - are items added to the diet to provide additional food value. Those offered to the birds are:
 - Oyster Shell - broken bits of the shells supply calcium for strong egg shells. Most large birds use oyster shell.
 - Cuttle Bone - is the back bone of the cuttle fish and is a softer source of calcium supplement offered to smaller birds.
- g) Fruits and Vegetables - fruits such as apples and vegetables such as lettuce or corn are offered for diet variety.

2. Grit

Birds do not have teeth to grind their food. For digestion of food to take place, a bird must eat "grit" or bits of gravel. The size of grit eaten is determined by the size of bird, bigger birds requiring larger grit pieces.

The Pigs

More than sixty thousand people are alive today because of implanted heart valves taken from pigs and mounted in circular stainless steel and Dacron frames. This device (made possible only by the similarity of pig and human tissue) virtually eliminates blood clotting problems which occur too often with mechanical artificial valves.

Pig skin is used by doctors. Placed over burn tissue, it relieves the pain of burn-exposed flesh and becomes a second skin until the burned surface grows back. It adheres without adhesive and can be peeled off painlessly.

The pig is the only animal, other than human, that will voluntarily drink alcohol, so it has been used for scientific studies on alcoholism.

Field Notes

The male is called a Buck, the female is called a Doe and the young offspring is called a Kit or a Bunny.

Domesticated several centuries ago, there are conflicting reports as to what country domestication occurred in. Countries named are: France, Africa, Spain, Belgium and Rome. It is said that rabbits were used in Asia at least 3000 years ago. Geologists claim to have proven that rabbits and opossums are the oldest known living animals and date back 30 or 40 million years.

The Easter Bunny Legend

The Easter Bunny legend descends from the Teutons (Germans). According to one account, a goddess changed a bird into a rabbit which was understandably so appreciative of this miraculous metamorphosis, that when the goddess scheduled her spring festival, it laid coloured eggs for the occasion.

The rabbit is not actually a rodent but a "lagomorph", a gnawing mammal of a different order. There are 50 individual breeds and varieties of domestic rabbits recognized by rabbit societies, ranging from the Giants to the Dwarfs.

All breeds fall into 4 categories by weight:

- a) The largest rabbits are called Giants. Flemish Giants are the world's largest rabbits, weighing up to 9 kg (20 lbs.) Giant Chinchilla and Cheekered Giants weight 5 to 7 kgs (12 to 15 lbs.) Fryer or meat stock animals from this group cost more to produce due to their large size.
- b) The Middleweights or Medium weight rabbits reach 4 to 7 kgs (9 to 12 lbs.) at maturity. Among the most popular in this category are the New Zealand Whites and the Californians. Fryer stock of the desired 2 kg size is consistently produced from this category.
- c) Small rabbits include the Tan and the Dutch weighing 2 to 3 kg (4 to 7 lbs.) Even as slightly older animals, they produce the fryer size.
- d) The Dwarf mature weight is 1 to 1.36 kg

| Species | Days |
|---------|------|
|---------|------|

| | |
|-----------|-------|
| Canary | 14 |
| Dove | 14 |
| Finch | 14 |
| Lovebirds | 24 |
| Pigeon | 18-19 |

The above species are examples of bird eggs usually incubated by the parent birds.

Moultling - Feather Loss

Birds replace all of their feathers once each year. This process is called "moultling". Moultling usually occurs after the breeding, egg laying and baby rearing season but prior to winter so that the bird is fully cloaked in a new set of feathers. The months common to see moultling are June, July and August. The collection of decorative feathers such as pheasant and peafowl is done during these months. Young birds do not moult before their first winter, their first moult occurs the following summer.

Digestive System

Birds do not have teeth but they do have a unique way of grinding food for proper digestion. A bird must eat gravel or "grit" which is stored in a muscular compartment of the digestive tract called a "gizzard", where all food items must pass through. The size of the grit eaten is determined by the size of bird. Bigger birds require larger grit. The muscular contractions of the gizzard, full of grit, grind up the food eaten.

Bedding

"Bedding" or "Litter" are the names given to various materials laid down on the bird pen floor surfaces. This enables the pens to be cleaned easier and keeps the birds clean. Bedding materials used at Maplewood Farm are wood shavings from pine, fir or hemlock trees; and oat or wheat straw.

Egg Hatching Incubation

For egg hatching on the Farm, we use 'natural' incubation with hens who are broody and 'artificial' incubation. Broodiness of the female bird is the behaviour assumed after a certain quantity or clutch of eggs has been laid. Broodiness is the desire to 'set' on those eggs for the purpose of hatching out young. A broody bantam hen, for example, can be given pea fowl eggs to hatch out.

Artificial incubation is done with an electrically-operated egg incubator. One of the incubators used by the Farm automatically turns the eggs and maintains the proper internal temperature and relative humidity.

Egg Hatching Time for Birds

| Species | Days |
|-------------------|-------|
| Chickens | 21 |
| Ducks | 23-28 |
| Geese | 31-33 |
| Guinea Fowl | 28 |
| Partridge | 23 |
| Pheasant | |
| Silver | 26-27 |
| Amherst | 23-24 |
| Red Golden | 23-24 |
| Quail | |
| Bobwhite | 21 |
| Button | 16 |
| California Valley | 21-22 |
| Coturnix | 16 |
| Turkey | 28 |

The above species are examples of bird eggs usually incubated by humans. All require a temperature of 38 C with a relative humidity of 53%

(2 to 3 lbs.) This classification includes the Netherland and Dwarf and the Polish. As pet stock, this category displaces hamster, gerbils and guinea pigs.

Rabbits are also categorized by fur types:

a) Normal fur dominates the species. Examples can be found in each weight group including the Flemish Giant, New Zealand, Tan and the Netherland Dwarf. Normal fur is about 25.4 mm (1" long and lies flat. Good normal fur returns quickly to its natural position and lies smoothly over the body when stroked towards the rabbit's head. The under fur is fine, soft and dense.

b) Rex fur is found on Rex rabbits only, which are in the medium weight group. Short and plush-like, Rex fur stands upright and has guard hair almost as short as the undercoat. Rex fur is only 2 cm long.

c) Satin is a popular fur which comes in a wide range of colours. All are in the medium weight class. Satin fur consists of a small diameter hair shaft and a more transparent hair shell than is displayed by the normal furred breeds. This greater transparency of the outer hair shell gives the Satin fur more intense colour and more luster compared to normal furred breeds, with the exception of the Tan, whose normal furred luster is unsurpassed. Satin fur is about 25 mm (1") long.

d) Angora Wool is found on Angora rabbits. Angoras are small to medium size rabbits, their wool is about 75 mm long and comes in many colours. The Angora rabbit requires frequent brushing and clipping to keep its wool from matting.

Breeding and Birthing

Age of adolescence is 6 months. First breeding is done at about 8 months of age.

There is not a specific breeding season for domestic rabbits. There are differing opinions as to the cyclic behaviour of the doe. One is that she cycles only after service by the buck; another opinion is that she is fertile for 12 days followed by 2 days during which she cannot conceive.

Duration of pregnancy is 31 days. By the 27th day of pregnancy, the doe makes a nest with available hay bits and pulls hair from her belly or underside, to line the nest cavity. To "kindle" or "kindling" is the name given to the rabbit birthing process. The warmth and security of the nest is most important for the babies that are born with eyes closed and lacking fur. Litters number 1 to 10 babies with an average of 6. Babies weigh just a few grams each at birth. Commercially, does are bred to produce 5 to 6 litters per year.

Rearing of the Young

Rabbit babies are perhaps the most defenceless and helpless domestic farm animals. They are born with eyes closed and lacking fur. By 10 days, their eyes are open and at about 3 weeks they will spring out of their nest box. For their first 4 weeks of life, the babies are reliant on their mother's milk for nourishment. The mother has 8 teats for feeding the young. At about 3 weeks of age, they start to sample feed pellets. Babies are weaned from their mothers at 6 to 10 weeks of age.

Life Span and Mature Weight

Rabbits can live for as long as 10 years, an average is 7 years. There is a record of a rabbit having lived as long as 18 years. (See mature body weights listed on first page of rabbit information).

Water Consumed

A rabbit consumes about 200 ml of water per day.

Food Eaten

Rabbits on the Farm are fed: Rabbit Fryer, Rabbit Pellets, Alfalfa and Local Hays, Vegetables, Fruits and Supplements.

Uses to Humans

With the exception of the Angora, rabbits in North America are not raised primarily for their coats. Fur is a by-product of the meat rabbit and because the North American market prefers the young "fryer-broiler" rabbit (2 kgs), the fur is immature and unsuitable for garments. New Zealand Whites are most popular for meat production, its by-product white pelt lending itself well to dyeing. These pelts might produce mittens, gloves, muffs, toys, novelties, hats, collars and cuffs. At various times, there has been a market for fryer fur as "felt" to the hat trade. Rabbit fur coats are made from European pelts because Europeans use mature or "roaster"

What is a Bird?

A bird is a warm-blooded animal that has grown from a hard-shelled egg that was laid by its mother and requires various combinations of time and temperature to develop within the shell before breaking out as a fully formed little two-legged bird.

Two types of bird babies are born from hard shelled eggs:

Ground Birds

Parents that normally lay their eggs in a nest on the ground usually produce a type of baby that is covered with fur-like feathers called "down." These little birds eat smaller particles of the same type of food as the parent eats. They do not need the parent to show them how to eat, their main requirements, other than food and water, is shelter and warmth until the down is replaced by adult feathers. Often it is the female parent that raises these babies alone. Babies of this type can be successfully incubated and raised by humans. Birds in this category often have limited flight, spending lots of time on the ground. Examples of this type of young are: chickens, ducks, turkeys and pheasants.

Flight Birds

Parent birds that normally construct nests in trees to hold their eggs produce babies only partly covered in bits of fluffy down. These little birds need plenty of shelter and eat regurgitated food fed to them by both parents. The regurgitated food is easier for the young bird to digest. This type of baby takes longer to become independent of the parents. When it has grown feathers and can fly, it is called a "fledgling" or has fledged. Birds in this category are considered "flight" birds. Examples of this type of young are: doves, pigeons, parrots and smaller aviary-type birds.

Introduction to Maplewood Farm continued

This booklet is designed to give the reader a basic outline of breeds of domestic animal and bird species as well as their care and uses to humans.

Who looks after the Animals and Birds?

The people who look after the Farm's animals and birds are called Farm Attendants. Farm Attendants are very busy people. They have approximately 200 animals and birds to tend to every day of the year!

Each day two Farm Attendants put in a work shift each, covering eleven hours in total from 6:30 a.m. to 5:30 p.m. There's usually a cow and at least 5 goats to hand-milk every morning after feeding hay, grain and water to about 1/4 of the total Farm population. Then there's the cleaning chores, all of the stalls, pens and paddocks where the animals and birds live and play must be done. Late in the afternoon, a lot of the early morning chores must be repeated such as milking, feeding and watering.

The Farm Attendant has good observation skills. They monitor any changes in behaviour or health of their charges. The Farm Attendants are friendly too, for they must be prepared to answer questions from the many visitors. The fixing of or repairs that must be done on the Farm grounds or buildings are performed by the handy Farm Attendant. As you can see, the Farm Attendant is a person of many talents who enjoys a work life in the great outdoors.

The Rabbits

(4.5 kg) sized meat rabbits which yield a thick prime hide. Rabbits are a popular meat source in England and Europe. It is predicted that as land grows dearer, the popularity of rabbits as a meat source will increase in this country. One doe can produce 32 to 43 kgs (70 to 95 lbs.) of dressed edible meat each year, about nine times her own live weight. More rabbits are raised year-round for meat production than any other use.

The rabbit's use in the medical research field has long been established. About 3 million rabbits are used in North American medical and pharmaceutical laboratories each year.

Breeding stock comprises another portion of the world's domestic rabbit population. Pet stock, apparently is minimal.

The rabbit's uses to humans fall into these categories, listed by order of importance in numbers: Meat, Laboratory, Breeding and Pet stock.

Uses to Humans - Summary

Field Notes

Ram is the name for a male sheep, the female is called a Ewe and the babies are called Lambs.

Sheep are among the earliest animals domesticated by humans. The Stone Age tribes of western Asia are believed to be the first sheep herders more than 8000 years ago.

There are countless breeds of sheep that can be found throughout the world. 45 are recognized in England and North America. From the relatively newly-developed short-tailed breed called "No-Tail" to the short-haired goat-like "Barbados Blackbelly", the variety to be found in the cloven-hoofed sheep world is endless!

Some sheep breeds have horns that grow on both the ram and the ewe. Most modern sheep breeds have been developed not to grow horns. The old world "Jacob's Sheep", rescued from extinction, grows 4 horns: two of which are very large and grow upright while the other 2 smaller ones grow down towards the sides of the face.

Of the many breeds of sheep kept domestically, some common and popular ones are: the white Dorset; the black-faced and legged, white fleeced Suffolk; the white Romney and the black Lincoln; all originated in the British Isles.

Breeding and Birthing

Age of adolescence is their first Fall, usually at about 8 months of age. The first breeding may be done between 10 to 18 months of age.

As with goats, the shorter, darker days of Winter triggers the ewe's heat cycle. The ewe cycles every 21 days until conception during the breeding season which is from September to February.

The gestation period or duration of pregnancy is 5 months. Normal lamb birth weight is approximately 4 kg. Some breeds such as the Barbados Blackbelly can produce 2 sets of lambs per year. Most sheep breeds

Introduction to Maplewood Farm

Maplewood Farm is a 2 hectre (5acre) Municipal Park Farm, owned and operated by the Parks Department of The Corporation of the District of North Vancouver and opened in June of 1975.

While the Farm has, on various occasions cared for some wild animals and birds, it is a facility specializing in domestic farm animals and birds.

Rules for Visiting the Farm

- Obey feeding signs; no popcorn in any form allowed
- Do not chase animals or birds.
- Loud noises frighten birds and animals.
- Use caution when petting any animals.
- Do not pick any animals.
- Do not pick growing flowers or trees.
- Don't climb on fences, trees, or farm machinery. The Farm provides a safe playground on the other side of the parking lot.
- No pets (seeing eye dogs excepted).
- **Most of all, enjoy your visit to the Farm.**

What are Domestic Animals and Birds?

Domestic animals and birds were once wild but were tamed by humans thousands of years ago. These tamed creatures, which have been developed as food, friends and helpers to humans, are called "domestic animals". The chicken, for example, was first domesticated in India by taming the wild Red Jungle Fowl. From there, chickens spread to Egypt, China, Greece and Italy.

Historic Background

Historical records, sketchy as they are, tell us that Maplewood Farm has existed on the present site since at least 1914 when it was owned by Mr. Akiyo Kogo. From 1924-1944, Mr. Joseph Ellis owned substantial improvements including construction of the buildings and the start of a dairy business.

In 1944 John and Helen Smyth bought the 6 1/2 acre dairy farm. The address then was Pole 26 and the phone number was "north".

The barns housed about 25 head of Holstein and Jersey dairy cattle in those days. Today's Poultry Barn was the dairy room where the Smyths bottled their milk before delivering to homes in the Cove, Seymour and Lymnour areas. In 1946 the dairy business was sold to what is now the Fraser Valley Milk Producers Association when new laws requiring pasteurization of milk came into force.

Mr. Smyth then started a business training, boarding and breeding Hunting and Bird dogs. The business flourished and the Smyths made many improvements to the land and buildings. The Ticket Booth was at that time the office for the dog business. Being avid gardeners and landscapers, the Smyths left Maplewood with many of the large trees now in evidence on the Farm.

The Smyths were a very community minded people and the Farm shows many recollections of this. The floods in 1948-1949 saw the Smyths allowing workers access to the Seymour River from the Farm. They also allowed storage on the Farm of much of the equipment needed to control these floods. In return the workers dredged out of the creek to form the 'natural pond' that we enjoy today. The large Maple tree on the east side of the pond was a favorite spot for neighbourhood children to swing out on a rope over the Pond.

In 1964 the Smyths sold to Robert and Rita McClung who continued to operate a dog boarding facility. The McClungs also trained and bred guard dogs.

In 1970 the District of North Vancouver negotiated a land exchange and the Farm became a rental property for a few years. Early in 1974 the then Parks Superintendent, Dirk Oostindie, proposed using the Farm as a children's farm. This came to pass in June 1975. A newspaper clipping from March of 1975 quotes Mr. Oostindie as saying "this Farm should compensate for the loss of rural feeling and the increasing urbanization by showing some old things and exposing children to basic things..... the Farm will provide a rudimentary education and provide experience for children they wouldn't normally have" we like to think we are still fulfilling the original mandate.

The Sheep

Rearing of the Young

Lamb once per year in the Spring. Usually producing single or twin lambs. Some breeds such as the Finnsheep, frequently have 4 lambs at each birthing. A record has been 6 lambs!

Lambs are left with their mother to nurse milk from her 2 teated udder. At about 2 months of age the lambs are weaned. All of the lambs at the Farm are born without horns and have long tails. At about 1 to 2 weeks of age, the tails on the ewe lambs and some ram lambs that will be used for breeding, are removed or "docked" to keep their backsides cleaner. The lambs do not have their wool shorn off until they are a year old. The first- ever shearing from a sheep produces the best "virgin wool" the animal will ever produce in its lifetime, all other cuts will never equal its excellent quality.

Life Span and Mature Weight

Sheep can live for as long as 10 years but 7 years is average. Mature weights vary according to the different breeds. Average weight for a Maplewood Farm ewe is 57 kgs (125 lbs.)

Water Consumed

The average sheep drinks 4.5 litres (1 gal.) of water per day.

Food Eaten

Sheep are grazers of grass and because of their slightly split upper lip, are capable of chewing grass off to ground level. They clip grass off shorter than any other type of grazing animal.

The sheep at the Farm eat: Sheep Grain, Alfalfa Hay, Local Hay, Grass, Supplements, Fruits and Vegetables. Sheep have a ruminant digestive system.

Shearing of the Wool

All sheep are shorn once each year, usually after lambing in the Spring. The wool used to be clipped off down to the skin surface with a large sharp scissor type of tool called shears. Most people who keep sheep today use the shears only for occasional trimming. The process of cutting all the wool off is still called shearing but most often an electrically powered hand-held cutting tool is used.

The electric shears make shearing very fast. In other countries like Australia where sheep form a major part of the agricultural business, competitions are held to see who can shear a sheep and how fast. There it probably takes 3 minutes per animal.

Fleece is the name of the useable good wool that is shorn off of a sheep. When done properly the wool stays together in a large "batt" that is then rolled up and tied together. "Raw" wool, wool that has had nothing done to it other than being removed from the sheep, is sold as a bundled fleece and by weight. The average sheep produces a 2.27 to 2.75 kg fleece.

Annual Sheep Fair

At Maplewood Farm every year, usually the last Sunday in May, a Sheep fun is held. A professional "shearer" shears all the year-old wool off of each sheep; the sheep are "worked" by a sheep dog and local crafts people show what is done with wool and other fibres.

Uses to Humans

Early in the history of living with man, the sheep's main use was a provider of milk. Sheep milk is very rich, being high in natural sugars. Some countries today still use the milk from sheep, making special cheeses and other dairy products. In early times, sheep also provided another source of fat for burning fuels and soap making.

In this country, sheep are used for their wool, meat and hides. The Romney breed is a very popular producer of fine quality long wool. A Romney fleece can weigh 5.45 kg (12 lbs.) The Suffolk and Southdown breeds produce marginal to poor quality wool but are specialized to produce meaty fast-growing lambs. The meat from animals less than 1 year old is called "lamb"; the meat from animals older than a year is called "mutton". Lamb is very light flavoured meat compared to mutton.

Sheep skins are becoming popular again. The comfort they provide as mattress covers for bed-ridden people and babies is being re-discovered.

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A Guide to Maplewood Farm

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Operated by the Parks Department
of the District of North Vancouver