

# A GUIDE TO THE COUNTRYSIDE: FARM BUILDINGS & MILKING PARLOURS

by Hunter Adair



## Part I



*A carpet being laid in the cubicle house for the dairy cows comfort*



*An old stone farm building.  
Note the steps where hens would walk up into the loft.*

### A brief history of dairy farming

The agricultural industry's one of the biggest industries in the country and all my life in the countryside I have seen many changes as the industry became mechanised.

When looking at the farm buildings and milking parlours, it is worth going back to the middle of the nineteenth century to look at how the agricultural industry developed. Some farm buildings were built to house the farmer, the cows and the fodder to feed the cows all under one roof. The cows were all tied up by the neck with a chain or rope and most of the cows were milked by hand.

From about the middle of the nineteenth century developments in agriculture had scarcely affected the production of milk and dairy products and efforts to improve cattle had been mainly concentrated on animals for working and for beef. were born and bred.

In Scotland for instance they have numerous breeds of sheep which are all different. The Blackface sheep provides a hard coarse wool which is suitable for mattress making.

Specialised dairy breeds were in a small minority and the idea of milking cows by machine was also being developed from about 1836.

Milk for the small towns was supplied by farms on the outskirts, although delivery was direct, much of the town milk came from the farms in a dirty and sour condition and was heavily adulterated with water.

In London and other large cities, much of the milk came from the town herds. The cows were bought in calf from neighbouring counties, or sometimes from even further afield and they were milked until they were dry and then they were sold off to the butcher.

The practice of selling milk in the London streets, straight from the cow, had almost died out by 1850, although in some rural areas today milk is still sold straight from the cow. In 1850 it was estimated that there were some 24,000 cows in London, one herd at Peckham had 186 cows and another in Kensington had grazing in Holland Park.

Most of the herds were housed permanently and milked three times a day, the evening milking was used to make butter. Since the milk roundsmen were also cowmen and dairy workers, their work was very difficult. A very small proportion of London's milk in the early 1850's came by rail, however it was not until the next ten years that this method of transporting milk became widely used.

Farms away from the towns made their milk into butter and cheese. These were entirely farmhouse industries and the techniques in use were generally centuries old. Milk for butter making was hand skimmed and churned. My mother used to skim the milk which was put in a large round open milk bin at night and the cream skimmed off the bin the next morning. Various types of churns were used to make the butter, a box type, the vertical churn and the barrel type, the latter type seems to have been the most commonly used.

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*A Fergie tractor with 4 ten gallon (45 litre) milk churns which were used for transporting milk from the dairy farms.*



*Some old Stone farm buildings. Note the loft above the archway where hay or grain was stored.*

Most of the Home Counties farms produced butter for the London market. Cheese had long been brought to London by sea from Cheshire and imports were considerable by the middle of the century. Cheese was made in oak tubs, or in brass or tinned copper cheese kettles, holding about 50 gallons (227 litres) of milk. These were heated over open fires and later with steam.

Around this time the rise in the Gentleman farmer came about, aided by the vast profits of the Victorian industrial expansion which tended to make agriculture a fashionable occupation. The “flying herd” system appears to have been quite common on large farms, heifers were bought in calf, kept as milkers for about four years and then sold for beef.

Vast new farm buildings were erected to house the cattle, and the cows were fed on grains, roots, green fodder and hay. It was estimated that the cattle population of the United Kingdom in the early 1850's was eight million, three million were dairy cows producing around 750 million gallons of milk, of which 250 million gallons were fed back as stock feed. The farmer received an average of 8d a gallon or (3 pence), but the part played by milk in the nation's diet was as yet very small.

The first great changes took place in the eighteen sixties and seventies. The output of milk was increasing and agricultural developments abroad were beginning to affect the home market. If any single factor can be said to have started the great dairying movement, it was the extension of the railway system which was almost complete by the 1860's.

Between 1866 and 1868 it was estimated that the quantity of milk carried to London by rail more than doubled to over four million gallons.

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## Part 2



*Cow kennels. Note how low the building is with an opening at the top for ventilation*



*A rotary milking parlour. The cows get milked at the parlour slowly moves around.*



*A Peacock butterfly*

The out-lying farms continued to make butter and cheese in the summer and the town supplier would obtain additional supplies from them in the winter months.

There was still along way to go as far as hygienic milk was concerned. Cows continued to be kept in unhygienic conditions both in the country cowsheds and in the middle of the town cowsheds.

There were two major factors which were responsible for the eventual disappearance of the town herds in the 1860's, the development of the railways and there were a succession of cattle plagues in London. Rinderpest which spread rapidly in the herds and killed the cattle which were riddled with disease. Rinderpest is an infectious and very often a fatal viral disease in cattle, the symptoms are the cattle have skin sores and develop a high fever along with diarrhoea.

At the same time the prices realised for dry cows fell, so the tendency was reinforced for city cow-keepers to become purely milk retailers, obtaining their milk supplies from distant farms by rail.

Around this time there was a rapid increase in the population and a rise in the standard of living which brought about an increased demand for mill and dairy produce even in the years of the great depression, dairy farming remained fairly lucrative. This then was the period when dairying became a branch of agriculture in Britain.

Many of the breed societies were founded at this time and in 1876 the British Dairy Farmer's Association was formed during the first London Dairy Show. The first cheese-making factory was established in 1870 and from that date the factory system gradually extended throughout the country. Towards the end of the century there was a big increase in the number of milk wholesalers, who linked the farms with the market and dealt with the surpluses.

The buyers made yearly and half-yearly contracts with the farmers who usually took their milk to the country factory or to the railway station in churns. Already by the end of the century there were special milk trains and the platform markets at the London terminals grew in size.

The quality of the milk improved very slowly since no legal standards were laid down. Although the adulteration of the milk with water was an offence, there were few positive regulations even in regard to animal diseases.

The larger distributors of milk maintained as far as possible a high standard of cleanliness and of milk quality, and the passing of the Food and Drugs Act in 1899 was followed by the creation of a milk standard in the Sale of Milk regulations of 1901; these standards are still in force today.

Little attention was paid to the refrigeration of milk until the end of the 19th century. Pasteurisation and the sterilisation of milk, however were already well known processes particularly in Germany and Denmark, where pasteurised and sterilised milk was already being retailed in the 1890's.

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## Part 2

In this country pasteurisation was not widely applied, as the Public Health authorities distrusted it, and it was a subject of prolonged controversy which was to continue well into the twentieth century. The early period of the twentieth century was one of consolidation and increasing capitalisation in the processing and distribution of milk and milk products. Even before the war, many wholesalers had combined to form powerful amalgamations. These dairy firms, commanding a large amount of capital were able to introduce pasteurising and bottling of milk to the city consumers.

Prices were not controlled until the end of 1916, although recommended to do so, the Government were not prepared to take over the wholesale milk trade, and the period of control was a short one.

The most important feature of the war years was the growing dissatisfaction with the quality of the milk supply. In 1918 the Milk Control Board introduced a grading system which allowed a higher maximum price to be charged for milk of certain hygienic quality, but very few dairy farmers took advantage of it.

The position was finally clarified in 1923 by the first Milk (Special Designations) Order, which laid down not only the three quality grades, but also gave official recognition to pasteurised milk.

## Part 3

It was during the war that road transport brought a further expansion in production and new marketing problems by opening up the farm butter and cheese making areas. The large city wholesalers established collecting depots in the country and milk was brought in bulk into the cities by road and rail. It is said that, by 1933 half London's milk was brought in this way.

There was also a new emphasis on the human diet and nutrition. The National Milk Publicity Council was founded in 1920. The Education Acts of 1906 and 1921 provided the School Milk Schemes and other provisions for cheap milk were later consolidated and extended by the wartime Welfare Schemes.

The Tuberculosis Order of 1925, the Milk and Dairies Order of 1926, and the Attested Herds Scheme of 1934 were new public health measures and these were supplemented in 1936 by a new Milk (Special Designations) Order, laying down new grades of milk.

The other outstanding feature of this period was the experiment in controlled marketing. Some attempt at marketing control was made by the Permanent Joint Milk Committee, formed in 1922, which sought to regulate prices by collective bargaining between the dairy farmers and the dairies. The committee's efforts, had no legal backing and were only partly successful. In 1933 the Milk Marketing Board was founded which negotiated prices with the buyers on behalf of the dairy farmers.

The Second World War brought a period of complete control. Prices were controlled from the outbreak of the war. The wartime policies led to a vast increase in the output of milk and the virtual extinction of farm butter and cheese making. There was also a great expansion in the demand for milk, it was so great that it was necessary from 1941 to the end of 1949 to adopt a form of rationing of liquid milk. Towards the end of the war, official recognition was given to the method of pasteurising milk and plans were laid for the eventual compulsory pasteurisation of town milk. Further revisions were made to the Milk and Dairies Order, the Milk (Special Designations) Order and the Attested Herds Scheme.

Since October 1960 all milking herds consisted of cattle which were regularly tested in order to maintain a tuberculosis free national dairy herd. At the present day some 99% of milk sold for liquid consumption is heat treated. The dairy farmers are paid according to their hygienic and compositional quality of their milk. The refrigeration, bulk storing and transporting of milk have also played their part in safe guarding and improving the nation's milk supply.



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## Farm buildings



*Farm buildings at Stocksfield in Northumberland which have been converted into workshops. It is a beautiful building*



*A farm building which is known as a cart shed, or barn where horse carts and agricultural implements are stored*



*A modern farm building with a six furrow reversible plough sitting outside.*

The range of farm buildings through the country vary so much that there are no two farms alike, yet there are many buildings on different farms similar and are being used for the same purpose, either for housing live stock, or for storing fodder, grain and machinery. Many farm buildings were built in the nineteenth century and many of these old buildings are still in use today.

Many of the farm buildings were built with local stone which was worked from local quarries. So you will see many old farm buildings built with the stone that was quarried in the area. Many farm buildings in Cumberland for instance were built with sandstone, slate or brick, there is also a number of old farm buildings in Cumberland which were built with clay and straw, the walls of these buildings were built very thick.

In Cornwall many farm steadings were built with granite. In Yorkshire and Durham, limestone was used a lot and in Northumberland both limestone and whinstone was used in the construction of many farm buildings.

Many farm steadings were built following the Act of Parliament in 1801, which was known as the Enclosure Act. The Act empowered commissioners to survey the lands to be enclosed by stone walls and many stone farm buildings were built in different parts of the country after this Act. In the Lake District many farm steadings were built following the Act.

Many of the old farm buildings were built very low, going into some of the cowsheds you have to bend your head when going through the doors. In most cowsheds, byres or shippens the cows are on the ground floor and above some cows are lofts where hay for feeding them is stored, some lofts have a trap door down into the cowshed where you can drop the hay down behind the cows.

These old farm buildings were very hard to work as the cows had to be cleaned out with a barrow and shovel twice a day and their feed was all hand carted.

During and after the Second War agriculture was expanding and many of the old farm buildings were out of date. The development in the farm buildings didn't move as quickly as the development in the farming methods, this was really because of the costs of the building material, and there wasn't the financial returns in farming at the time. New, cheaper building materials had to be found for constructing farm buildings. Timber and tin sheeting was used quite a lot for building lean-to sheds for either storing hay, straw, machinery or for housing dry cows and many other types of young stock.

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## Cow housing



*Cattle in a modern farm building. Note the gaps in the wooden slats which provide the ventilation.*



*Some modern farm buildings on the east coast*



*Cow kennels. Note how low the building is with an opening at the top for ventilation*

As dairy herd numbers increased from around the 1960's many farmers found it too expensive to add another few stalls or standings onto their cowsheds, shippens or byres for the extra cows they were going to keep, so many of them started constructing other types of housing to hold the dairy cows, such as cow kennels, cubicles, loose housing or covering old farm buildings to house the cows loose.

Many kennel houses were built with second hand timber and had a pitched roof, as the buildings were very low. A ridge along the top of the roof was left open about (0.5m) for ventilation. Many of these home made kennel houses didn't look very pretty, some of them looked like a dilapidated building but they served the purpose and funnily enough most dairy cows liked these low kennel houses because they were very warm and comfortable.

Inside these buildings you could make as many kennels as you needed to fit the size of your herd, some kennel houses varied from around 30 kennels upwards.

Each kennel would be about 1.5m long by 1.0m wide, the size of each kennel could be varied according to the breed of the cow.

The partitions between each kennel was also constructed of second hand timber and the bedding used for the cows, was either soil, sawdust or cow muck and straw from a loose box or calf house. The beauty of the kennels is that the cows could go in and lie down when ever they wanted. I have been standing in the middle of a kennel house on a bitter cold winters day when the cows were lying down and you could feel the warmth and comfort of the kennels.

Another thing about the kennel houses, grants weren't available on second hand timber, so many farmers just built the kennels without permission. If the kennels were scraped out two or three times a day, the cows would be kept quite clean, the kennel houses were quite cheap to erect and many of the buildings are still in use today.

The construction and design of dairy cow housing comes under the Milk and Dairies Regulations of 1959. Another type of cow housing that developed was the cubicle house. Many of the bigger herds went for this type of housing.

Steel frames are used in the construction of many of the new cubicle buildings which have cement blocks halfway up the walls and either timber, tin, or asbestos sheeting is used for the top half of the building with corrugated asbestos sheeting or tin being used for the roof. The divisions between each cubicle are usually made of galvanised tubular steel and the size of each cubicle can vary slightly depending on the breed of cow. On average a cubicle will be around 1.5m long by just over 1.0m wide.

The floor of the cubicle houses are normally cement rendered and rubber mats are sometimes laid on top of the cement for cow comfort, chopped straw and sawdust are also used for bedding the cubicles. Cowsheds, byres or shippens are still being used to house and milk dairy cows, they are either one sided or double sided buildings. The floors are cement rendered and the cows stand in pairs, the size of the stalls or stands are around 1.5m long by about 2.25m wide for two cows, again the stands can be varied according to the breed of cow.

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## Cow housing

The partitions between each pair of cows are sometimes made of moulded cement walls which are very strong and are sometimes bolted to the framework of the cowshed, or they can also be cemented into the floor.

There are many different sizes of cowsheds on the farms, anything from four cow stands to fifty stands. One thing about many old cowsheds they are fairly low buildings which are warm and comfortable, although the ventilation in some of these low cowsheds means on a mild winters day the backs of the cows gets soaking wet with condensation dropping from the roof.

The small dairy farmers in the Dales and in Wales are still using cowsheds or shippons for housing and milking their small dairy herds, because their farms are not big enough and financial returns are not good enough on these small farms to put up new expensive farm buildings even although good grants were available to help them in the past.

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## Milk parlours



*A milking parlour with the teat cups ready to milk the cows.*



*An abreast milking parlour where the cows stand side by side.*



*A 28 point straight race polygon milking parlour.*



*A double sided cow byre with automatic muck scrapers.*

As the size of the dairy herds were increasing in the late 1960's and early 1970's other methods of handling and milking the cows were being developed, the various different types of milking parlours were coming onto the market. Dairy cows chained up by the neck, in the cowsheds had to be tied up and loosened twice a day in the summer when they came in and out of the cowsheds to be milked. This involved a lot of manual work for the cowman and other farm staff.

The size of dairy herds in the country in the early 1970's had around 30 cows in each herd and in 1990's the average herd has about 100 cows in it, so you can see why milking parlours and modern farm buildings are a more efficient method of handling large numbers of dairy cows with much less labour.

I can well remember in the late 1950's, we used to milk 45 Ayrshire cows which were chained up by the neck in three different cowsheds. This involved a lot of work as the milk had to be carried in buckets into the farm dairy which was across an open yard.

There were either two or three of us involved with milking, cleaning and feeding these cows at both ends of the day. Farm workers were leaving the land for better working conditions in the cities, as mechanisation was coming into the farming industry. The milking parlours has meant that one man can milk and look after many more cows than when smaller herds were tied up by the neck in cowsheds.

It is now thought that one man can look after and milk over one hundred cows by himself, and milk them in a very short time through a milking parlour. There are various types of milking parlours available. Along with the milking parlours came the milk lines, which are either glass or stainless steel tubes which carry the milk direct from the cows into the farm dairy and into the refrigerated milk storing tank.

The farmers with smaller dairy herds chained up by the neck in cowsheds also installed these milk lines, which saved them a lot of work having to carry the milk in buckets into the farm dairy. The milk on farms is now never touched by hand, it goes straight from the cows direct into the storage tank and is cooled very quickly.

Milking parlours are made with steel and galvanised tubing and there are many types and shapes of parlours. The farmer can have as many stands in a milking parlour to suit the size of his herd, the milking parlour is a point where the cows come to be milked rather than the cowman having to go to the cows. The cowman will normally be standing in a central pit and the cows will be standing about chest level. The cows stand in various different positions in these modern milking parlours which saves labour.

The circular milking parlour is continually moving round slowly by an electric motor. The cows come through a single door from the collecting yard where they are standing waiting to be milked, the cows step onto the rotary milking parlour one at a time, the milking unit is then put onto the cows teats by the cowman and the cow is milked for three or four minutes. When the cow is finished being milked she then steps off the parlour and goes through another single door back into the feeding and lying up area.



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## Milk parlours



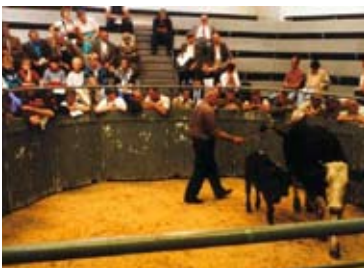
*Some old farm buildings. Note the big stone slates on the roof*



*An old stone three storey building in Hexham*



*Note the charming stone built farm house and buildings.*



*Selling a suckler cow and calf at the market.*

About 20 cows can be milked at one time in the circular parlours, or you can have a parlour made to suite the herd.

An abreast milking parlour is where the cows come in from the collecting yard, or from the cowshed and walk into a stall in the parlour. The cows are standing side by side in these parlours and you can have four to twelve cows being milked at one time depending on the size of your herd. When the cows are finished being milked a gate is opened at the cows head by a hand lever and the cow is let out into the lying up area.

The tandem milking parlour is where the cows stand behind one another in separate metal stalls. The cowman milks the cows from a centre pit and the parlour can be any size from three to six stalls on either side. The cows walk in from the collecting yard into a stall in the tandem parlour and a metal gate is shut behind them by a hand lever, when the cows are milked another hand lever opens a gate in front of the cows and lets them out, the cows sometimes have to walk along a passage on the outside of a tandem milking parlour to get to the lying up and feeding area.

The other type and most common milking parlour used is the herringbone, in this parlour the cows stand at an angle of some 45 degrees on either side of a sunken pit in the middle. The cows are packed tightly together and are held in the parlour by a rump bar which is a metal bar behind the last cow.

The herringbone milking parlour can be any size to suit the dairy herd, you can have anything from five cows standing to sixteen cows standing on each side. There is sometimes a milk jar, or milk metre in the pit below each cow where the milk from each cow is either weighed or recorded before it is pumped into the cooling tank in the farm dairy.

The herringbone is the most modern efficient milking parlour, for milking and handling large dairy herds, over two hundred cows can be milked through one of these parlours in two or three hours.

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## Collecting milk from the farms



*Milk being collected from milk churns after a heavy snow storm*



*The milk tanker arriving at the dairy farm to collect the milk.*



*The back dock at a large dairy in Newcastle*



*The milk being sampled from the refrigerated farm milk tank*

Having to collect milk from About 29,669 dairy farms in Britain every day, or every other day, is a big job and takes a great deal of organising. The milk is to supply the people living in the towns and cities with their fresh milk.

The cows are milked twice a day, both in the evening about 5 pm and about 6 am the following morning. The milk is stored in a refrigerated milk tank in the farm dairy. The milk tankers are based at local transport depots throughout the country and they start collecting the milk from the farms in the morning from about 7.30 am.

The milk tankers collect the milk from about 10 farms, which fills up their 9000 litre tankers. The milk is then delivered to one of the city dairies, where it is either pasteurised and bottled for delivery to the general public, or it is used for manufacture.

Some milk tanker drivers may collect two or three trips a day, this will depend a great deal on how far the farms are apart and how far they have to travel into the city dairies.

During the winter in the north of England, there are sometimes very heavy falls of snow and the farm roads get blocked with snow. When this happens the farmers will either clear their farm roads themselves, or they will bring their milk out to a collection point in a sterilised plastic container, or in milk churns to meet the tanker. Some winters when there has been a lot of snow and the weather was very hard with severe frosts. I have seen the milk in churns from some farms, waiting to be collected and the milk was frozen solid in the churns.

The milk in the churns arriving at the dairy frozen solid, had to be thawed out in a hot water bath before it could be used. The milk will keep fresh for days when its like this. But in normal circumstances the milk is collected fresh from the farms ever day or every other day, and is delivered to the customers as a natural quality fresh product.