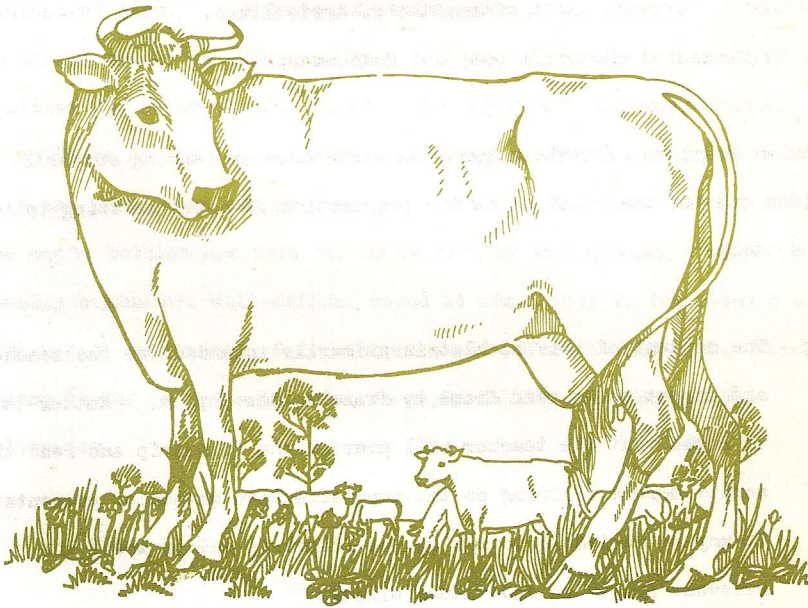


AN ROINN OIDEACHAIS

BAINNE MILK

Curtha ar fáil i gcomhar le
Produced in co-operation with

} Pfizer Chemical Corporation
Ringaskiddy, Co. Cork.



Nótaí chun dul leis an stiallscannán den ainm céanna.
Notes to accompany filmstrip of the same title.

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this topic.

N.B. The content of this booklet is primarily intended for the teacher
and is not to be read frame by frame to the pupils. Rather it
is hoped that the teacher will preview the filmstrip and read the
script before deciding on the most effective method of presentation.
It may be advisable to cut up the filmstrip and to treat the
relevant frames as individual slides.

The notes appear in bilingual form - the commentary accompanying
some frames is presented in English while in the case of others
it is presented in Irish.

Frame 1: Title Frame

Frame 2: Credit Frame

Frame 3: Milk delivery

Ireland is one of the few countries where milk is still delivered to the doorstep, and well over half the homes in the country enjoy such a service. In the early decades of the present century the milk was transported by pushcart or horse-drawn float and delivered, unprocessed, in spoutcans, from which roundsmen measured the required amounts into customers' jugs. Today pasteurised bottled milk, conveyed by electric or diesel truck, is delivered by a milkman, who collects the empty bottles for return to the dairy. The pint bottles, manufactured by the Irish Glass Bottle Co., have an advantage over other containers in that they can be re-used and customers in their own interests should ensure that the empty bottles are left for collection by the milkman. The milkman usually begins his well-defined round at six-thirty in the morning and will visit, on average, four hundred homes before he finishes. On his return to the dairy he unloads the empty bottles and records his deliveries.

Frame 4: Friesian herd being brought to milking parlour

Frame 4 shows cows being brought in for milking. Cows are habit-forming animals and they develop a sense of regularity. Usually they are milked twice a day, early in the morning and late in the afternoon, Sundays included. When milking-time approaches the cows gather near the gate of the field to be brought to the milking parlour. Years ago dairy herds

were of mixed breeds but nowadays, due to her excellent record as a milk producer, the Friesian is the cow most favoured by dairy-farmers.

Fráma 5: Na ba ag fanacht ag an mboitheach

Bíonn leagan amach ar an mboitheach nua-aimseartha, a chuireann ar chumas an fheirmeora a chuid bó a bhleán gan aon chur amú ama. Bíonn slí do líon áirithe bó sa bhoitheach, agus fanann an chuid eile ar a n-uain chun blite i gelós lámh leis an mboitheach.

Frame 6: Cupping of teats

The cows from the pew enter the milking parlour in an ordered sequence, which soon becomes an established pattern. Each cow knows her own stall and as soon as the stalls have been occupied, the milkman sets about his work. He always begins by washing the cow's udder and teats with sponge and water. Then he attaches the cups of the milking machine to the cow's teats.

Fráma 7: An meaisín i mbun oibre

Sa tseanam ba trí fháisceadh láimhe a bhí na ba uile, agus ba mhaslach mar obair í, áit a mbíodh tréad mór. Is le meaisín is mó a dhéantar an obair sa lá atá inniu ann agus sasleamhnán seo, téann an bainne díreach ó bhalláin na bó isteach in áirthach dúnta, agus íslítear a theocht ar a bhealach go tascumar oighreata mar a gcoimeádtar é.

Frame 8: Cows being released from parlour

As soon as the cows have been milked they are released from the milking parlour through a door other than that through which they entered. The vacated stalls are then occupied by other members of the herd, while the milked cows await release to the pasture, when all the cows have been milked.

Fráma 9: An boitheach agus na cuinneoga á ní.

Ní nach ionadh cuirtear an bhéim ar chleachtadh na glaineachta acu siúd a bhíonn ag plé le soláthar bainne. Ach na ba a bheith blite, tosaítear láithreach ar an meaisín bleána, an gléasra um fuartha agus na cuinneoga folmha a ní le huisce agus le púdar níocháin faoi leith. Is daor a dhíolann an té a bhíonn neamartach faoi chúrsaí glanachair as a leathcheal.

Fráma 10: An clós coimeáda á stealladh le huisce.

Ní istigh sa bhoitheach amháin a dhéantar cúram de shlacht agus de ghlanachar. Nítear na clóis go cúramach freisin agus fástar réidh iad don chéad gheábh eile.

Frame 11: Sample from bulk-tank: test tube for analysis at plant.

On many of the larger dairy farms the milk, instead of being brought to the creamery in stainless-steel churns, is transported by large tanker. This requires that the milk be retained on the farms until the tanker comes to collect it. It is kept in a refrigerated tank into which it passes through filters, and where it is cooled to a temperature of 6°C and maintained at that temperature. When the tanker arrives, the driver takes great care to ensure that the milk in the refrigerated tank is in good condition, before he links up the bulk-tank to the tanker. On opening the bulk-tank he examines the milk for visible signs of contamination. His experienced sense of smell tells him whether or not the milk is fresh, and an examination of the tank thermometer completes his inspection. As shown in this frame, he then takes a sample of the milk, which is transferred to a test tube to be labelled and sealed for later analysis in the creamery laboratory.

Fráma 12: Nascadh á dhéanamh idir an tancaer agus an taiscumar

Nuair a bhíonn an tiománaf sásta, de bharr na taithí a bhíonn aige ar a chuid oibre, go bhfuil bail mhaith ar an mbainne, déanann sé píobán ón dtancaer a nascadh leis an dtaiscumar sa bhleánlann. Ansin déantar an bainne as an taiscumar a shú isteach sa tancaer.

Frame 13: View of bulk-tanker taking supply from bulk-tank

Frame 13 shows the tanker outside the dairy. The open box-like compartment is where the sealed test tubes of sample milk are stored. The driver is inside the dairy taking a milk sample, and on his return he will place the test tube in the compartment, which is then closed. In the laboratory the samples are carefully tested by highly-trained staff, and if there is the slightest indication of mastitis or other disease, steps are taken to protect the consumer and to inform the offending supplier, who is immediately struck off the suppliers' list until he satisfies stringent requirements.

Fráma 14: Mar a bhíodh fadó.

Ba le hasal agus trucail a thugtaí an bainne go dtí an t-uachtarlann na blianta fada ó shin. Níorbh fholáir a bheith ar an mbóthar go luath, agus ba mhór mar ócáid chuideachta í an teacht le chéile laethúil ag an uachtarlann. Bíodh go bhfuil deireadh, nach mór, leis an nós imeachta seo anois, tá áiteanna fós ann, a dtugann na feirmeoirí go laethúil a soláthar bainne go dtí an t-uachtarlann i dtancanna speisialta, ar chúl gluaistéain.

Frame 15: Bottling plant.

When the milk has satisfied the laboratory tests, it passes from the tanker to the pasteurising plant. Here it is heated to a temperature of 165°F for fifteen seconds, before being rapidly cooled to a temperature of 40°F. Pasteurising, as this rapid heating/cooling process is known, helps to keep the milk fresh for longer periods. The milk is then transferred to a large storage tank, from which it is bottled. The bottles, thoroughly sterilized through several washings, stand on the machine as shown in this frame. This machine revolves quickly and the bottles, filled at the rate of two hundred per minute, are tightly sealed

with aluminium foil caps before moving along to the crating machine. Other hygienic packaging machines package milk in plastic units of various sizes.

Frame 16: Constituents of Milk

This frame shows the composition of milk as a food. Milk contains many of the nutrients needed by the body, and is probably the most complete single food. The Fats and Carbohydrates supply the human body with energy to keep it active and warm. The fat contained in milk is easily digested, and milk sugar is a good form of carbohydrate. Protein is important for building the body and keeping it in good repair, and milk is a plentiful supplier of protein. Minerals also are needed for body-building, and among the most important minerals for that purpose are Calcium and Phosphorus. Calcium is especially beneficial to the growth of healthy bones and teeth, and milk is very rich in this mineral. Vitamins, though needed in small quantities only, are vital to good health. The main vitamins in milk are Vitamin A, which helps to keep the skin clear, and B₂ which stimulates the appetite.

Frame 17: Butter-testing

The first step in butter-making is the separation of the cream from the skim milk. The cream is then pasteurised to kill harmful bacteria, and is cooled and held at a low temperature to assist texture and firmness. Churning follows, and the buttermilk is drained off to leave butter. Great care is taken to ensure that the moisture content of the butter is not greater than 16%, and butter for export must not exceed that level. The butter is then salted to give it flavour and to help preserve it. Afterwards the butter is further worked to give it body and texture, and when it is sufficiently firm, it is packed in blocks of 56 lbs. and wrapped in vegetable parchment in fibreboard cartons.

Frame 18: Butter-tasting

Here we see the butter being tested for flavour and aroma, body and texture. A semi-circular stainless steel tube is inserted into the mass of butter, and the butter withdrawn is tested. It must be sufficiently solid in body, and must satisfy the testers with regard to flavour and

aroma.

Experienced men do the testing by means of taste and smell, and this method proves more successful than chemical or bacteriological testing.

Frame 19: Automatic cheese-making

Irish cheese, both natural and processed, is made from whole milk. In some countries, farmhouse cheeses are made from fresh milk, but in Ireland pasteurised milk only may be used for cheese-making. About 15% of "manufacturing milk" is used for cheese. Milk, rich in fat, is put into oblong stainless-steel vats, where it is pasteurised. Special Bacteria cultures are then added to increase acidity, and the milk is left undisturbed for twelve hours. If coloured cheese is required, for example red Cheddar, some vegetable colouring matter is added. Rennet is then added, and the mixture is stirred, causing it to set quickly. The resulting curds and whey are cooked, and when the curd is sufficiently firm, the whey is drained off. If the cheese is to be cheddared, the curd slabs are broken into walnut-size sections, to which salt is added. The sections are then placed in block-moulds in the press-room. After some time they are removed from the moulds, wrapped, cartoned and stored in a curing room for about sixty days, after which they are graded. It takes about nine to twelve months for cheese to attain its best flavour. Processed cheese is made from natural cheese. The natural cheese such as Cheddar or Gouda is heated with water and flavourings to a temperature of approximately 165°F. The result is to increase the water content of the cheese, and to reduce the percentage of other nutrients such as fat and protein.

Frame 20: Sachets of Powder milk being filled.

Dried milk, or milk powder, is what remains when approximately 95% of the water-content of the milk has been removed.

Drying milk into powder-form makes for ease of transportations of milk's essential constituents, from which milk may be reconstituted by the addition of water. Milk powder also has the added advantage of having a long shelf-life without costly refrigeration.

Skim milk powder, from which animal fat has been removed, is used for the making of such products as yogurt and confectionery. In this frame we see the milk powder being filled into sachets, and much of the product is for

export to such places as The Federal Republic of Germany, Netherlands, Great Britain, Barbados and many African countries.

Frame 21: Animal Food.

The use of skim milk powder in the preparation of animal feed-stuff is proving very successful. The animal fat, removed is replaced by vegetable fat, which is a cheaper substitute. This animal food is manufactured in four or five centres throughout the country, and is sold under well-known and widely advertised brand-names.

Fráma 22: Fuar-Stóráil

Sé im an príomh-táirge as bainne, agus déantar barraíocht ime in Éirinn. Díoltar cuid mhaith den bharraíocht seo sa Bhreatain, ach tá margai ar Mhór-roinn na hEorpa ag dul i méid. Ní foláir cuid den bharraíocht ime a stóráil, toisc nach bhfuil margai mór go leor ann chun an t-iomlán a thógáil. Is féidir bail mhaith a choimeád ar im sa tslí seo ar feadh bliana.

Frame 23: Quayside Scene - Export

Export is essential to every economy, and here we see "Kerrygold" butter (the brand-name under which Irish butter and cheese are marketed) being loaded into the hold of a ship, which has special refrigeration facilities.

Frame 24: Cattle in rural setting.

Rolling countryside with hills and valleys is typical of much of rural Ireland. Here the cattle seem well-content, and are waiting to be brought in for milking. Some of them are Friesians, and many farmers have mixed herds of Friesians and Shorthorns.

Fráma 25: Bó agus Iao.

Is tábhachtaí bulláin agus mairteoil ná ba bainne i gceantair áirithe den tír. Ní mór cuma beathaithe a bheith ar laonna nuair atháthar á ndíol ag acis áirithe.

