THE RELATIVE VALUES OF CASEIN AND FAT

Bulletin No. 156, from the Wisconsin experiment station, describes "A Simple Test for Casein in Milk, and its Relation to the Dairy Industry." At the outset we would say, once for all, that it seems to be another case of "I told you so." The conclusions reached by the author of the Bulletin are the same as those we put forward about 15 years ago. This seems quite a long time to wait before one's views on an important question are accepted by others, but it is at least some satisfaction to know that the truth will out in some cases before a man aboffles off this mortal coil. If we could see a few men repenting because of the stand they took in this controversy fiften years ago, we should be ready to exclaim, like one of old, "Now let thy servant depart in peace, for mine eyes have seen," etc. The following extracts from the introduction in the bulletin have a more or less familiar look:

"But the proposition that the percentage of fat is also a measure of the value of nearly all milks for cheese production has not been generally accepted.

"This clearly shows that for cheese

cepted.

This clearly shows that for cheese sproduction, the amounts of casein and that should be known to both producer—the man who owns the cow—and the man who buys the milk.

'In the milk of individual cows there is certainly no definite and constant relation between the amounts of fat and casein.

casein
"On the basis of cost of production,
it is a fair assumption that it has caused the feeder as much to produce a
pound of casein as a pound of fat. The
proteins to which casein belongs are
nitrogen-containing bodies, and are the
farmer's most expensive nutrients. When
the farmer sells casein he is selling nitro. the farmer sells casein he is selling nitro-gen; but when he sells fat he sells his cheapest source of nutrients, the air and

gen; but when he sens tat he sens his cheapest source of nutrients, the air and water. It appears that there is something irrational and unbalanced in the relative commercial values of these two products. From the farm point of view, the sale of casein represents a greater agricultural drain than when the fat is sold, and from this viewpoint alone it would appear that these two milk constituents should at least have a closer commercial value."

With all of which we heartily agree, yet we find persons talking and writing as if the value of milk for all purposes depends upon the fat contained. We trust that the management of our fairs will not concede any more points to those who are continually clamoring for more value to be placed on milk fat. For butter production fat is undoubtedly the constituent of milk which determines its value, and for butter making, fet is its value, and for butter making, fag is all that we need consider. But the making of butter is a comparatively small industry in the Province of Ontario. The great bulk of the milk is used directly as a food, or is manufactured into cheese. All public tests, based on production, should take into consideration the fact that the bulk of the milk produced in Ontario is used for the manufacture of cheese. To place too much importance on the fat alone is more or less an injustice. This is not written in a controversial spirit, nor with the object of "hitting" anyone, but with the hope that those responsible will see the justice of the foregoing, and not cater any further to the "fat" cry.

The writer goes on to say: "One animal may yield a milk containing 2.7 per cent. casein and 6 per cent. fat, while another produces a milk of 2.7 per cent. casein and 4 per cent. fat; and still another a milk carrying 3.5 per cent. casein and 6 per cent. fat, while another produces a milk of 2.7 per cent. casein and 6 per cent. fat, there may be anywhere from 40 to 73 pounds of casein. Surely it is clear that, for cheese production, a milk carrying for every 100 pounds of fat 73 pounds of casein, would yield more cheese than one containing but 40 pounds of casein."

One more quotation: "Another matter its value, and for butter making, fat all that we need consider. But the mal

yield more cheese than one containing but 40 pounds of casein."

One more quotation: "Another matter of considerable importance in the discussion of the relativé amounts of casein and fat in cows' milk presents itself, and that is the relative commercial values of these two constituents. Both casein and fat are important foods, casein belonging to that generally more expensive class of nutrients—the proteids, and popularly called the flesh-builders. Yet at prevailing prices at our creamery a pound of fat is worth 25 cents, while a pound of casein, as allowed for skim milk, at 30 cents a hundred, is worth 12 cents. If we allow the same value for fat in cheese as it commands in butter, then the casein per pound in cheese is then the casein per pound in cheese is worth 18 cents. On the theory that the feeding or nutritive value of these two constituents depends on the amount of heat they can produce, the fat could have about double the value of casein, but nutritive value and heat-producing capa-city are not with contents.

about double the value of casein, but nutritive value and heat-producing capacity are not with certainty to be so closely co-related."

We should like to emphasize the latter part of the preceding sentence. In our humble opinion the method of valuing goods according to the heat produced is far from satisfactory. As anyone knows, the proteids or muscle formers are the most expensive forms of foods. The workingman in Great Britain has found Canadian cheese at sixpence a pound the very cheapest muscle-former he can buy. He may not know much about the chemistry of food, but he knows that cheese "keeps up his muscle" better than any other food, considering cost, hence he buys and eats cheese in large quantities. If he could not get it at sixpence he would be willing to pay more, but none can blame him for getting it as cheaply as possible. We look for the time when can blame him for getting it as cheaply as possible. We look for the time when as possible. We look for the time when farmers will be ready to pay as much for cheese as for prime cuts of beef. It would pay to have the food value of Can-adian dairy products demonstrated week-ly in such a place as the Exchange build. ing in Manchester, Eng., and at other points.—Prof. H. H. Dean.

A Young Life Saved.

"About two years ago I caught a severe cold, and unfortunately did not do much for it. It developed into a chronic condition, and very soon I had Catarrh. I took different kinds of medicines, but none of them did me much good. I coughed continually, had soremess in my throat and chest, and a pain over the eyes. I was afraid my lungs were affected, and got Catarrhozone. It gave me relief at once, and completely cured that awful disease that was hanging over me like a nightmare.

"Since using Catarrhozone I have kept perfectly well."

Mrs. De Shaw-Wny didn't you con-tribute to that charity? Mr. De Shaw-

Didn't have my chequebook with me, Mrs. De Shaw—But a quarter would have seemed big to them. Mr. De Shaw—Bow could I write my name on a quarter!—Cincinnati Commercial Trib-



A "JUMPER" CORSET COVER.

No. 762.—One of the simplest and daintiest designs for a corset cover is shown in this pretty model. It is in "jumper" style and slips on easily over the head. The plain front affords an excellent place for a bit of hand work, shadow embroidery being especially suitable and very effective. The neck and armhole edges are finished by lace and ribbon-run beading. The fulness at the lower edge is adjusted by a tape run in a casing. Handkerchief linen was used for the making, but other materials such as nainsook, lawn, cambric and longcloth are available. For 36-inch bust measure 1 yard of 36-inch material will be required.

Ladies' and Misses' "Jumper" Corset Cover. No. 762. Sizes for 30, 32, 34, 36, 38 and 40 inches bust measure.

The pattern here illustrated will be mailed to any address on

Address, "Pattern Department," Times Office, Hamilton.

It will take several days before you can get pattern.

Our Scotch Corner Our Scotch Corner

The first Armad.

The first Ar

shouting, "Come in, doctor, I dinna ken fat tae dee wi' my Robie noo, for he hism only fulled himsel', bit he's teen in the herd loon, au' he's deed fou tee." The doctor accordingly left his gig and entered the house to see the picture Marget had portrayed. When he opened the door he found Robie apparently askep on a couch, and the herd loon lying in the same condition in a corner on the floor. In a minute or two the boy began to be sick. This roused Robie, sufficiently to emit the pertinent question, "Hi. Meggiet is that me or the loon that's at it noo?"

A country gentleman one day meeting Jamie Fleeman, thought he might take the liberty of taking his fun off one so much his inferior, and asked him in a rather offensive manner. "Who's fool are you?" Jamie eyed him for a moment with his own peculiar odd kind of stare, and replied, "Oh! I'm Udny's feel. Wha's feel are ye?"

SOME DIVORCES ARE RIGHT.

The Times has been asked to publish the following letter, which appeared in the Detroit Free Press of Sunday last:

The frequency of divorce in the world is certainly deplorable, and any measures that can be adopted to lessen their number, would be a boon to mankind; but it seems to me they are going about it the wrong way. Men and women are not going to make themselves miserable, and live lives of wretchedness simply because either church or State has passed laws prohibiting divorce or the remarriage of divorced people. Divorce is not entered into for sport; nor is it impelled by pique or temporary disappointment.

The Divorce Court stands for the discounter of the court of the discounter of the discount

ment. The Divorce Court stands for the dissolution of ties that mean bitter, de-spairing wretchedness; ties which, if there were not some way of dissolving

spairing wretchedness; ties which, if there were not some way of dissolving them, would result many times in murder. The man who talks of forcing men and women, who are unhappy in their marriage relations, to continue living together or who speaks of preventing their divorce, does not know what he is talking about. Also the man who speaks of the sanctity of the marriage contract which is entered into from improper motives knows not what he is saying.

Marriage is a divine institution, instituted by God and based upon love; and where persons are married from the proper motives there is no doubt they are as near heaven upon earth as it is possible to be; and the Divorce Court is rarely if ever sought by persons who are thus married. But where persons are married from improper motives (such as money, convenience, position or a home) after the novelty of the position has worn off, their lives are about as far from being heaven upon earth as it is possible to imagine. And it is such persons who fill the Divorce Courts.

Does anyone, priest, minister or learners.

persons who fill the Divorce Courts.

Does anyone, priest, minister or layman, mean to say that persons who are married from improper motives are joined together by God? Suppose a woman married, a man for the express purpose of murdering him and coming into possession of his money, instances of which have been known. Has God anything to do with joining them together? Yot by any means; nor has He to do with the joining together of any couple who are married from an improper motive, and it is, the height of absurdity to suppose that because such persons have been legally married by priest or minister they have been joined riest or minister they have been joined

persons have been legally married by priest or minister they have been joined together by God, or that such unions are sanctioned by Him.

Marriages that are entered into from any other motive than love are no marriages at all; they are simply legalized prostitution, and the sooner such persons are divorced, and shown the position in which they stand the better.

If we want to do away with the evil of divorce we must strike at the root of the matter, the improper marriage; and for teaching in this line we must look to the church. But it is a very singular thing that while ministers will get together and pass all sorts of laws with regard to divorce that will not have the slightest effect in diminishing the same,

AND TERRIBLY MANGLED

Doctor Withdrew his Remedies in favor of Zam-Buk.

Mr. Ab. Wheeler, Marine and Stationary Engineer, of 145 Front St., Belleville, Ont., says: "Two months ago, while employed in a steam laundry in this city, my left hand became caught and was accidently drawn into a hot mangle. As soon as possible the machinery was stopped and my hand was extricated, but not before the flesh on the palm of the hand was literally cooked to the bone and the fingers flattened out of shape. However, quite soon after the accident my hand and arm became frightfully swollen to the elbow and the hand presented a shocking sight. No one can imagine what I now suffered and endured. Not only was it hard to bear on account of the cruel pains, but it was a great shock to my nervous system. It was some time after the injury before the cooked flesh could be removed from the palm and then only a very little at a time. As soon as all this had been well removed, healing balms were applied, but as the improvement was so slow I obtained permission from the Doctor for Zam-Buk to be used exclusively, as several of my men friends (having previously used it for severe injuries) spoke in the highest terms of its unusual healing qualities and urged me to give it a trial. From the commencement Zam-Buk soothed and relieved the pains and drew out the soreness. Inowbegantoenjoyagoodnightsrestandsieep. In about three-weekstime the palm of my hand wasnicely bealed over thro'dally application of this wonderful remedy Zam-Buk, and all inflammation and swelling was thoroughly banished from both hand and arm.

FREE Why not start your own skin treat-ment now? All you have to do is to post this coupon with sc, stamp to the Zam-Buk Co., Toronto, who will promptly send you a dainty sample box. 4K3



Sample Bank Cures eccena, had legs, piles, running sores, ulcers, pimples, boils, rashes, early discussed, barber's rash, sore and aching feet, poisoned wounds, cut's, bruises, bursa, scad's and all diseased, injured, inflamed or irritated conditions of the skin. Of all drugglests and stores, soc. box or postpaid from the Zam-Buk Co. Toronto. Well rubbed in it is good for rheumatism, sciatica and nerre pains.

****** WINSLOW

Mr. Samuel Cooper is still quite poor-ly and very weak.

The surprise party at Mr. Fred Sorge's on Thursday evening last was well attended, the guests numbering

Mrs. Philip Naergarth is still very

Mrs. Prinip Saergaren is sent very opporty.

The many friends of Mr. Daniel Hitch-tock, of Bismark, will regret his death which took place last week.

Mr. Fred Sorge intends moving to Junuville on Wednesday of this week.

Mr. Sorge has been a resident of this place for nearly forty years and will be much missed by a large circle of friends.

friends.
Sunday, April 12th, will be the last
Sunday for Rev. G. F. Brown at this
place, before the annual conference.
Scores of friends of Mr. Brown hope
and trust that the conference will return him again to this appointment:
Mr. William Griffin intends improving
his farm by the underdraining this
spring.

his farm by the underdraining this spring.

Mr. Allen Angle, of Smithville, and Mr. William Beamer, of Attereliffe, called on friends of this place last Sunday, Robert Cosby, of Grimsby, was in this place on business on Friday last.

Mr. and Mrs. James Brewer, of Ridgeville, attended church here last Sunday morning.

orning. The rain on Sunday made the roads

quite bad again.

quite bad again.

The attendance at church last Sunday morning was not nearly as large as it should have been considering the fine weather and good roads.

Mr. M. B. Cosby and family of Smithville, visited at home here last Sunday.

Mrs. James Brewer, of Ridgeville is visiting with her sister Mrs. Philip Naergarth, of this place, for a few days.

NORTH-WEST

Homestead Regulations

Homestead Begulations

A NY even numbered section of Dominion Lanods in Manitofa or the Northwest Provinces, excepting 8 and 28, not reserved, may be homestended by any person the sole head of a family, or male over 18 escaled to the sole head of a family, or male over 18 escaled to the sole head of a family, or male over 18 escaled to the sole head of a family, or male over 18 escaled to the sole head of the s

fault. A homosteader whose entry is not the subject of cancellation proceedings, may, subject to the approval or Dopartment, re-subject to the approval or Dopartment, re-silinguish it in favour of father, mother, son, deughter, brother or sister if slighle, but to me one cise, on filling declaration of aban-domment.

Mrs. James Brewer, of Ridgeville is visiting with her sister Mrs. Philip Naergarth, of this place, for a few days.

KELVIN

KE

Minior Regulations

Coal.—Coal mining rights may be leased for a period of twenty-one years at an annual rental of \$1\$, per acre. Not more than \$2,600 acres shall be leased to one individual or company. A royalty at the rate of five cents per ton shall be coilected on the merchantable coal mined.

QUARTZ—A person eighteen years of age, or over, having discovered mineral in place, may locate a claim 1,000 x 1,500 feet.

The fee for recording a claim is \$5.

At least \$100 must be expended on the claim each year or paid to the mining recorder in lieu thereof. When \$500 has been expended or paid, the locator may, upon having a survey made, and upon complying with other requirements, purchase the land at \$1\$ per acre.

Many Cases
other requirements, some control of the payment of royalty of 25 per cost. on the sales, royalty of 25 per cost on the sales, Placer mining claims generally are 10 per payment of the payment

wearls
An applicant may obtain two leases to dredge for gold of five miles each for a term of twenty years, renewable at the discretion of the Minister of the Interior.

The lesses shall have a dredge in operation within one season from the date of the lease for each five miles. Hental \$10 per annum for each mile of river leased. Royalty at the rate of 2½ per cent. collected on the output after it exceeds \$10,000.

W. W. CORY. N. B.—Unauthorized publication of this advertisement will not be paid for.

CIGARETTE PAPERS.

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CIGARETTE PAPERS.

Practically the World's Supply is Made by France.

Rice paper, with which cigarettes are made, has nothing to do with rice, but is made from the membranes of the bread fruit tree, or more commonly of fine new trimmings of flax and hemp.

France makes cigarette papers for the whole world, says the London Tribune, the output of Austria and Italy being insignificant.

Cigarette paper should be of the bread and every effort is made by manufacturers to provide a paper free from injurious elements and effects is due to bad paper, the deadliest thing a smoker can consume. This is due to bad paper, the deadliest thing as moker can consume. This manufacturers have recognized, and the cigarette paper is now as pure studied by the contain nothing but the pures maper ficely combustible and give off the minimum of smoke. Before being rolled with tobacco they are analyzed to prove that they are free from all devices the provided and the pures maper fibre.

Only new material—flax and hemp trimmings—is used, and these are well mixed by a revolving fan and then reduced almost to dust. This dust.

The contained the world's Supply is stance may be eliminated it understance may be eliminated in the purpose. The pulp stance may be eliminated it understance may be eliminated in the purpose. The pulp stance may be eliminated in the purpose. The pulp stance may be eliminated in the purpose. The pulp stance may be eliminated in the pu is placed in a solution of lime and