

**Democratic Watchman**

Bellefonte, Pa., September 29, 1917.

**A GOOD RULE FOR ALL.**

When I find myself sitting in judgment Of the faults of a brother man; When I'm tempted to censure his follies, And harshly his conduct to scan; When I tell him, "You shouldn't do that way," And I am morally certain 'tis true; I remember how many do likewise, And say to myself, "Now do you?"

If I notice my friend getting reckless And making too free with his cash; If another appears rather heady And a little inclined to be rash; If one wastes and one hoards and one borrows In a manner I think they must rue; I am somewhat disposed to excuse them When I say to myself, "Have'n't you?"

Is a neighbor exacting and selfish? Is he haughty, disdainful, "the mob"? Is he meddling, clumsy, intrusive, Or a bigot, pendant snob? Is he shallow, unsteady, or stupid? And I find myself taking that view: I revert to the sins that beset me, And say to myself, "Are not you?"

—British Weekly.

**MISJUDGED.**

Solomon Jessel kept "the shop" at Little Ashby—at least the name above the many-paned windows was "Solomon Jessel." The gossip would tell you S'ina Jessel kept the shop and Solomon did the talking.

Solina did not complain; why should she? Solomon was long and limp and not much inclined to work when she married him twenty years since and everyone knows that limps and laziness is not cured by time.

Solina was a little woman brisk and capable, with energy enough for both. Her temper might be raspy now and then, when business was dull and bad debts were plentiful; then Solomon's long form and shiffling ways seemed more conspicuous, and realizing his uselessness, would further complicate matters by "fiddling" the shop—a form of service in which he meant well but failed to gain the appreciation his efforts deserved.

But there was one hour in the week when Solina Jessel abdicated in favor of her husband, and Solomon reigned supreme. This was before closing on Saturday nights. Solina did not relinquish the reigns of government until after the last village matron had made her weekly purchases, and had departed homewards, then were husbands and fathers who had been "minding house," free to wend their way to "Jessel's" in search of tobacco and any news their wives might have missed.

This was Solomon's chance; he could serve tobacco even better than his wife, and he was as good as a weekly paper for news. Many a bit-bit of village gossip he carefully hoarded up for the entertainment of his customers on Saturday nights.

Solomon did not dispense his news recklessly—if only Bob Hortop and Phil Stacey dropped in he had not much to say, but if the circle was completed by old Billy Tresise, Joe Fairweather, Thomas Peters and Mr. Gosworthy, the schoolmaster, Solomon's tongue was loosed, and for one short hour he felt he had found his vocation.

On a certain Saturday night just before Christmas, there was a bigger audience than usual at "Jessel's" for was not Joe Fairweather's brother Dick home from the war? And even Solomon's choicest items of intelligence fell flat when Dick was present to recount some of his experiences with the "Devons" in South Africa.

"This uncommon cold," grumbled a new-comer, a gaunt old man with a sour wrinkled face.

"Come in and shut the door, 'tis warm enough inside," said Solomon, hospitably.

"I reckon Humphrey Deacon," said old Billy Tresise, "if you'd been where Dick's bin, you wouldn't grumble about this 'ere footful saysonable weather or anything else."

"He's had it warm enough anyway," grunted Humphrey, doggedly buttoning his coat closer around him.

"Ay, we had it warm enough, as you say, too warm for some of the poor chaps," answered Dick soberly, "what with the sun like a furnace, an' 'shot falling thick as hail—red-hot, hail too."

"I think I'll go and have a chat with the missus, if she ain't too busy," said Humphrey, a suggestion to which Solomon cordially assented.

"Seems as if he'd never get over it," said Thomas Peters, the schoolmaster, with a jerk of his thumb towards the door through which Humphrey had disappeared.

"Over what? Oh, 'cut and run Deacon, do'ee mean?" said Bob Hortop, with a grin.

"Hush, Bob, he'll hear you," said the schoolmaster reprovingly, and Bob took the correction meekly, for he hadn't left school long.

"What's the story?" asked Joe. "I never rightly 'eard it."

Solomon Jessel, Billy Tresise and Thomas Peters opened their mouths to answer Joe's inquiry, and shut them again to give place to the schoolmaster who told it in a few words.

"Humphrey wasn't the cross-grained man he is now when he had a son to be proud of," he said; "perhaps he set his heart too much on him; he was a fine young fellow when he joined the army, and looked fit to face anything; but 'tis no use to judge by appearance for in his first fight the boy showed the white feather—ran, they say—and was driven back again by the sergeant. They christened him 'cut-and-run Deacon' after that, and made it so hot for him his life was a burden. He served his time, I believe, but there was no more fighting, and he had no more chance. As you know, Humphrey Deacon was a soldier once, a brave one too, I've heard, and when the miserable tale came to the village, Humphrey swore he'd never look at his son again—that is all, but I remember him a genial, happy-hearted man, and now—"

"What a jolly coward the fellow must 'a been," Bob broke out, "no wonder—"

"Don't be hard on him, Bob," said Dick, "you must face the bullets for the first time to find out what you're made of. I didn't run, an' I did my best, but as far as I could see it wasn't the loudest-talkin' men in camp that were bravest when the shells were burstin'—the bravest man I ever met we used to call 'quiet Jim.' He'd been a soldier, and joined again as a volunteer, when the war broke out—name o' Smith; there's lots o' Smiths in the army—'twas on one of our hottest fights; we had orders to storm a hill; just like one o' the Dartmoorers, only bigger; well, we got nearly to the top, and then we were met by a storm of bullets that told us it was time to stop—nothin' livin' cos'n a stood against it. We were willing enough. One young fellow sprang ahead, and fell riddled with shot. We looked out for every bit of cover we could find, and lay as still as possible—an' that's harder work an' more tryin' than fighting. If we showed as much as a hand he was shot through, and to rise meant death."

"As we lay hour after hour the sun baked us, an' the ants swarmed over us till we were nearly crazed. The word went around, 'The guns were comin' up.' Could we hold out? Yes, if we had water. The thrist was awful, and our water bottles were empty. There was plenty o' water at the foot o' the hill, but who would fetch it? Quiet Jim. He crawled out o' the ranks and down the kopje—sometimes hidin', sometimes runnin' like the wind. We thought 'twas all up with 'im, for when the Boers saw one of our lot was movin', they shot for all they were worth, till the hill seemed on fire. I gave him up then and I think I must 'a dozed off, for I woke from a sort o' dream o' bein' a kid again, and paddlin' in the stream for minnies—to find 'Quiet Jim' flat on his stomach by my side, holding a water-bottle to my mouth. Yes, Jim had brought back as many water-bottles as he could manage, but he was a sight to see; only scratches he said they were, when we crouched behind the biggest stone and bound him up a bit. Well, after that we were lying side by side, Jim an' me, listenin' for the guns that were so long in comin', when Jim whispered to me to look at the poor boy I had told you had rushed ahead of us in the mornin'. We all thought he was dead, but Jim had been watchin' him, an' noticed him move his hand, an' then his head a little—so had the Boers, an' a shot or two nearly struck him as he lay.

"Jim's face flushed, an' his eyes got steady-like. 'He was such a bright young chap,' he said, an' he pushes a packet into my hand. 'Take care of it,' he says, an' away he slipped right across the line o' fire. How he did it I do not know—he got to the wounded lad, an' pulled, an' dragged, an' carried him back to our lines. But just as he reached us he fell in a heap with a bullet clean through his lungs, an' never heard the cheer we gave when our big guns opened fire, an' our waitin' time was over; you may fancy we thought o' 'Quiet Jim' when the bugle sounded for the charge."

All were interested in the story, and they crowded round to look at the photographs Dick took from his pocket. One was a boyish soldier with a gentle but irresolute face, the other, the same soldier grown manlier, and with a look of quiet power in his steady eyes and firm mouth.

"'Tis written on 'am 'For father,' whoever he may be, but I don't suppose he'd mind your seein' em,'" said Dick, who handed them in turn to Bob Hortop and Phil Stacey, while the older men carefully adjusted their spectacles.

"He was a plucky one, anyhow," said Phil.

"Why, 'tis like this 'ere, in my opinion," cried Bob the reckless, "once a coward, always a coward!"

"A fool's lie, I tell 'ee!" screamed a voice shrill with passion, as a long, thin hand snatched the portraits from Phil's hand; "'tis my son—my Jim—the bravest of them all—dead!" And old Humphrey Deacon sank into a chair, motionless and half-unconscious.

"Humphrey, my dear old friend," said the schoolmaster, soothingly.

"You know, Humphrey, it's what we must all come to," philosophically murmured Billy Tresise, who did a little in the undertaking way.

"He died a hero instead of living a—" began Thomas Peters, but thought better of it.

"'Jim was an uncommon good-hearted boy," said Solomon, with inspiration; but Bob and Phil and Joe said nothing, they had lumps in their throats and couldn't talk."

"Oh, Mrs. Jessel, will 'ee please make 'em understand? I can't—they're all talkin' to once an' won't listen," said Dick, desperately; whereupon, after hearing his hurried explanation, Solina swooped down on the mournful assembly. With a wave of her hand she commanded attention, a glance disposed of Solomon. Thomas Peters retreated to the doorway, Billy Tresise to his usual perch on the grain barrel; as for the youngsters no one noticed them.

"Why, Master Deacon, cheer up! There, let me lift your head, you're so hasty, like all the men—'cept Solomon—you didn't hear half the news, an' the best half, too."

"His grand old hearer Jim was so brave and good, but that would be terrible sorrowful if you were never to see him again—in this world. 'Shot through the lungs,' was in the cas'alty list an' five other wounds as well, Dick says, but doctors are clever now-a-days. Bless your heart, they can patch a man up when he's all to pieces like an' turn him out as well as evermost—there, now you're better, an' you can understand what I'm sayin'." Jim isn't dead—he was able to walk aboard the transport—he'll be home for the New Year, an' he's got the V. C.!

Now, Solomon, stir round and put up the shutters, an' p'raps our friends 'll come in an' have a bit o' supper with us—an' Dick 'll tell us somethin' more about 'Quiet Jim.'"—London S. S. Times.

**Progress.**

"Are you interested in food control?"

"I have gotten away past it. What I'm interested in now is appetite control."—Washington Star.

—Subscribe for the "Watchman."

**HEALTH AND HAPPINESS.**

"Mens sana in corpore sano"

Number 24.

**SOURCES OF BACTERIA IN MILK.**

Milk When Secreted from the Udder of the Healthy Cow Contains no Bacteria: When it Reaches the Consumer in Bellefonte There are From 1,000,000 to 13,000,000 Bacteria in a Cubic Centimeter. Filth on the Cow, Hairs, Dust of the Cowbarn, the Hands of the Milker, Unclean Utensils, All Contribute Their Quota to the Number.

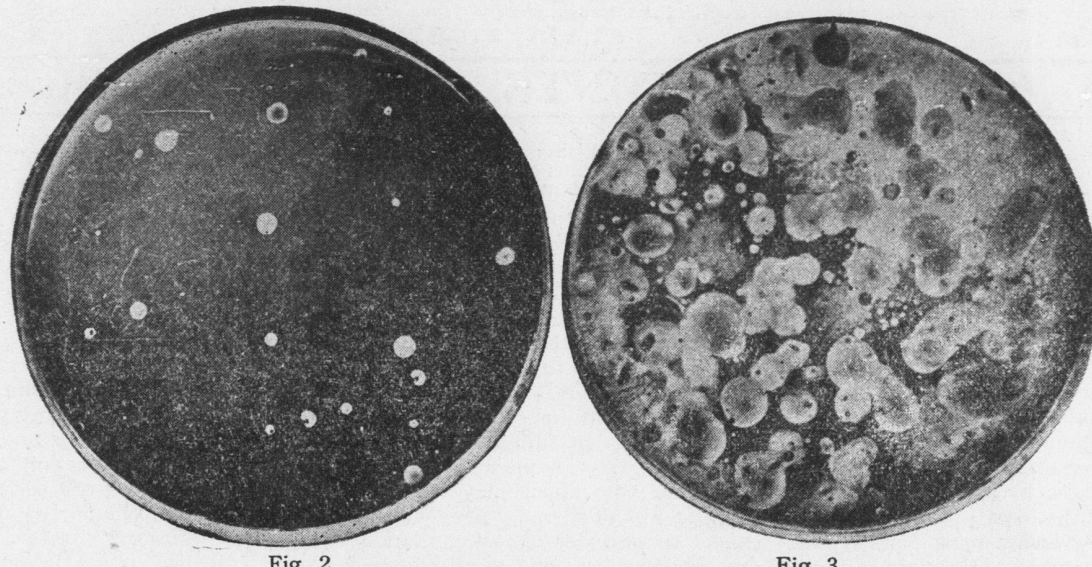


Fig. 2

Fig. 3

**EFFECT OF CONTAMINATED AIR.**

Fig. 2.—Air in well kept barn. Fig. 3.—Air in poorly kept barn. The number of spots indicates the colonies that have developed from the bacteria which fell in one minute on the surface of the sterile plate (3 inches in diameter). This exposure was made at time of milking.

**SOURCES OF BACTERIA IN MILK.**

It is only within the last few years that the relation of bacteria to the changes in milk have been understood by the dairyman but he is now learning that his work, apart from keeping the cow, must consist largely in trying to prevent bacteria from growing in milk or in stimulating their growth in cream, butter and cheese for bacteria are nuisances to the milk producer but allies of the butter and cheese maker. It is not an exaggeration to say that, in this brief time, the application of the discoveries of modern bacteriology has revolutionized all dairy methods from the cow to the consumer's table.

Milk when secreted from the udder of the healthy cow contains no bacteria. They are not found in the circulating fluids of healthy animals and are not secreted by their glands. It has been demonstrated that practically all of the normal changes which occur in milk are caused by the growth of bacteria.

The uniformity with which milk will sour, and the seeming impossibility of preventing it, led to the belief that this change was a normal characteristic of milk but this has been disproven. The agency of bac-

teria in this, one of the earliest known fermentative processes, was established by the work of Pasteur in 1857. It was first shown by Hueppe in 1884 that a particular species of micro-organism was usually associated with the process. It is now known that milk, if kept free from bacteria, will remain sweet indefinitely. Drawn under aseptic conditions it has been kept unchanged for a period of three years. Collected with proper precautions in clean bottles and placed immediately in a refrigerator-room it has been found sweet and wholesome after two to three months. Milk carefully produced and handled has been sent from different parts of this country to Europe without losing its palatability.

As ordinarily drawn, however, milk is sure to contain many bacteria by the time it enters the milk pail, the numbers of this initial content depending, of course, upon existing conditions. Collected with care it may contain a few thousand (2000 to 6000) germs per cubic centimeter (15 drops approximately); with careless manipulation, it may be highly contaminated (50,000 to 200,000 or more.) Since the milk secreted by healthy milk-glands is, as a rule, sterile, these bacteria must come from external sources and these are the following:

(1) The cow herself is the most prolific source of bacterial contamination for, while her milk when secreted is usually sterile, the milk ducts in the teats

of the cow afford a ready pathway for the invasion of the udder. After each milking a little milk is always left in the duct and bacteria from the air and elsewhere get into it and multiply rapidly. At the next milking most of these bacteria are washed into the milk pail with the first milk drawn so that the fore-milk always contains more bacteria than the strippings. It is now agreed by most investigators that milk has a feeble germicidal power and, if it were not for this, the bacteria in the milk ducts would probably grow back into the udder more freely than they do.

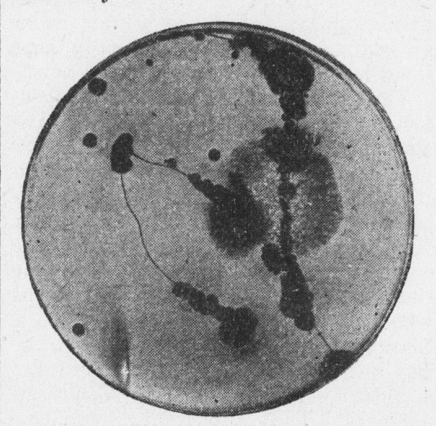


Fig. 4.—Showing the bacterial contamination arising from hair. Three hairs from a cow were allowed to fall on sterile agar plate. The adherent bacteria developed in this medium, and the number of bacteria thus introduced into the milk from these hairs can be estimated by the number of developing colonies. The large "fuzzy" looking spots are molds.

A well known physician, city dweller, tells that he was summer boarder on a farm where he saw the farmer carry potato peelings to the cows in the milk pail and, after emptying the contents, proceed to milk in the pail without any pretense of cleaning it other than knocking out the loose dirt! It is scarcely necessary to add that he changed his boarding place.

(3) The milker himself adds a share to the bacteria in the milk pail as his clothes are usually dirty and his hands unclean. Through carelessness in personal habits of milkmen, it is easily possible to seed milk at this as well as at later stages with germs of serious diseases. It is not uncommon for the milker to begin milking by moistening the hands with saliva and, should he be tuberculous or a "carrier" of diphtheria bacilli, an infection through the milk could easily follow.

(4) Lastly, the air of the cow barn contributes to the milk bacteria, the abundance and kinds depending upon the condition of the barn, time of feeding and nature of bedding. If the cows are fed on dusty hay immediately before or during the milking, the air, of course, will be full of dust and bacteria from this source drop into the milk. (Fig. 3.)

Having finished milking, the pail will sometimes be set aside in a convenient place while the milker goes about other work and, by the time the milk pail is carried from the barn, it is not unusual to see the surface covered with dirt and bits of straw.

The milk thus gets filled with bacteria, and, as it is an excellent food and at the proper temperature when drawn to stimulate bacterial growth, they multiply rapidly and in a few hours may have increased a thousandfold. Within twenty-four hours there may be millions in a cubic centimeter, the number at this time depending upon the initial contamination and the temperature at which the milk has been kept. These excessive numbers of bacteria may seem incredible but are easily understood when it is remembered that, under favorable conditions, bacteria may grow so rapidly as to divide every twenty to thirty minutes. It is this almost unlimited power of multiplication that makes them agents of such significance. The temperature factor is all-important as after milk is once seeded with bacterial life no other factor exerts so potent an effect upon the rate of growth.

Next week—"Influence of Temperature Upon the Growth of Bacteria in Milk."

**Straining milk through cloth or wire strainers, as ordinarily done to clean it from coarser particles of dirt, will not remove bacteria as they pass through the finest strainer unimpeded.**

**Agriculture is Breaking Down.**

From the time of John Stuart Mills down to the present, political economists have condemned tenant farming as destructive of farming and the farmer as well. Herein is one explanation of the decay of agriculture in the United States, writes Frederic S. Howe in the Century Magazine.

Nearly 40 per cent. of our farmers are tenants. Along with this, the public domain of the Nation is gone. There is no more free land. Land values have gone up in consequence. The value of farming land in the United States increased 118 per cent. in ten years' time. It has acquired a speculative price, and is held at so high a figure that buyers can make a living, if at all, only by the hardest kind of application. This has made it difficult for the man with a little capital to become a farmer.

This is true not only in the East; it is true in the West as well, where the great estates carved out of the public domain, sometimes of a million acres in extent, are being cut up into small holdings and sold to immigrants and workers from the cities. Instances have been reported to a California commission of men who had accumulated from \$2,000 to \$5,000 and who

had purchased worthless farms, only to lose their entire savings because they could not meet the annual payments. They paid from \$100 to \$300 an acre for land that was not worth one-third that sum.

One instance was reported of a colony of Russians whose members had invested \$150,000 in worthless hard pan in a western State, while great numbers of persons have been lured into the reclamation projects of the Southwest, which are so inhospitable and hot that women are able to live there only a portion of the year.

I have in my possession reports of individual men who have been induced to invest all they possessed in land on which they worked for two or three years and realized less than \$200 a year from it; of men who had responded to some alluring advertisement, and had lost the accumulations of 10 or 20 years' labor in a worthless investment.

The fact is, agriculture is breaking down. The old order of things really ended 10 or 20 years ago, and a study of land monopoly, of tenancy, of farm credits and marketing conditions confirms the farmer's complaint. Strangely enough, that which has happened to America has happened to other countries, including Australia and

yet recognized these facts or the new Canada. But America is almost the only agricultural nation that has not the necessity of a new agricultural program. We are almost the only people who have not begun to work out a constructive policy for placing people on the land under proper conditions and for the protection of the farmer from exploitation after he has gone there.

**Served Him Right.**

A rather facetious individual called at the house of an eminent literary man of Boston.

"My dear," said he to the little girl who occupied the study while her father was at dinner, "I suppose you assist your father by entertaining the bores."

"Yes sir," said the child gravely, "please be seated."

—The Panama Canal was opened to navigation on August 15, 1914. The first ship to pass through was the United States Government steamship Ancon. The cost of constructing the Canal is officially estimated at \$325,201,000, to which should be added \$50,000,000 paid to the French Canal company and to the Republic of Panama for property and franchise.

**FARM NOTES.**

—We sow today and reap tomorrow. Thus as the seasons come and go we plant seed, gather the crops and prepare for seed time and harvest. There is no time for halting, complaining. The diligent farmer must ever be on the alert to take advantage of every opportunity for larger crops and better harvests.

—Coal ashes are of far less value as a fertilizer than wood ashes are, yet they have a value especially on a soil inclined to clay. They change the soil, making it lighter and more easily handled, and besides this it becomes more productive, because of the mechanical change made to the soil. There also is a slight element of fertility in these ashes.

—Those who have had any experience in handling sheep will know how difficult it is to get them into a barn or shed after dark. The interior is dark and they are afraid to enter. Of course, it is possible to catch one or two and carry them inside, but even then the rest will not follow. A lantern placed where the sheep can see it frightens them away instead of enticing them inside. But a lantern placed just inside the door and to one side, illuminates the interior of the barn and does not frighten the sheep. The sheep will readily and quietly enter a barn lit up in this way.

—The profits of agriculture depend on the intelligent cultivation of the soil and the preservation of its fertility. Dairy farming is increasing in almost every section of the country, largely because it is the most economical form of agriculture so far as soil fertility is concerned. A ton of butter removes from the soil less than a dollar's worth of fertilizing elements. Dairying also is growing because dairy products are an important part of our food supply. Opportunities for dairying are found in every agricultural section of the country, and all need milk and its products, and everywhere there is a ready sale at good prices for all that is produced with proper attention to cleanliness and sanitation.

—Notice the fruit trees carefully. See which tree bears heavily, ripens on time and matures a high grade of fruit. Notice the trees that are shy bearers, the tender trees susceptible to disease and insect injury. It is highly desirable that the fruit-grower become thoroughly familiar with the tendencies of the various trees, so he will know how to treat them. Trees are much like animals. A person can always get better results with animals if he understands their peculiarities. Furthermore, one always wants to know the good trees and the poor trees. The poor will need to be replaced as soon as practical. The desirable trees bearing large crops of highly-desirable fruits may be reproduced. Propagation should be from the best.

—The wise farmer is constantly on the alert to improve his dairy conditions. Much of this improvement can be made (and in the least time and with the least cost) by the use of a pure bred sire. But it is not only important that he should be a pure bred animal, but that he should represent a strain of good milkers. This would be a history back of that sire. It is foolish to go back five or six generations for this history. The important point is, what is the reputation of the immediate ancestors? Are they, or have they been heavy producers? Did his dam, and his granddam on his sire's side, produce milk or butterfat, or both, in large quantities?

If the immediate family history is first-class in every way, the question of pedigree is largely settled. It is immediate ancestry that counts.

—Professor Trueman, of Storrs Experiment Station, in referring to the sire says:

The bull chosen should be a good individual as well as have a good pedigree. It is not wise to use a poor animal simply because his ancestors have been good, for he will be one of the ancestors of the succeeding generations.

The bull should be vigorous as shown by a bright eye, a wideawake, active disposition, a full crest, broad chest, fine silky hair and soft hide. He should have a large deep body, with well sprung ribs, indicating feeding capacity. He should not be coarse and beefy. The hind quarters should not be peaked, but should be comparative light. The thighs should not be overloaded with fat, and he should be well cut up in the withers. He should have a fine straight-away walking gait, not cross-legged. When you find one just right, buy him, and do not be too particular about the price.

This bull should be used on the best cows that can be selected from those available. They need not be pure-breds. In fact, many men will get better results to stick to grades. It does not require as much skill to breed good grades as it does to breed good pure-breds. The pure-bred bull will be prepotent over the grade cows, and the calves will be more than half-blood in actual characteristics. The strong blood of the pure-bred bull impresses the offspring much more than does the weaker blood of the grade, so that the bull becomes more than half the grade bred. On the other hand, in breeding pure-breds together, great judgment is required to get the two currents of strong blood to mix well; otherwise the results made, and often are, disastrous. The two do not "nick" well, and the offspring is poorer than either parent.

The blood of the good bull may be more strongly impressed upon the grades by closer inbreeding than is advisable when raising pure-breds. A strong bull bred to grade cows gets strong heifers, and he may be bred again to his own with a strong likelihood of getting good results. This method gives 75 per cent. of the blood of the sire in the heifers of the second generation. It is not wise to inbreed too much when raising pure-breds, but it may be practiced with excellent results in the case of grades.

The average daily ration fed 2-year-old heifers in the Storrs College barn during the winter of 1908 was as follows: Hay, 8 pounds; silage, 20 pounds; grain, 1 1/2 pounds. The grain mixture was made up of 300 pounds of bran, 100 pounds of cornmeal and 100 pounds of linseed meal.