

thereby deprive it of the air that is needed and it soon dies. Understanding this simple method by which the louse is killed, it becomes easy to devise some means for its destruction, and therefore it is not necessary to apply a poison. There are any number of remedies on the market that can be used effectually for the destruction of the pest. Many breeders recommend coal oil. This, of course, has a penetrating power, but it is not so effective as when made into an emulsion or when mixed with some oily substance, such as oil or grease. With all the remedies on the market it is quite a problem to keep ahead of the lice, for the nits hatch very fast. Many breeders use a coal tar solution and go over their hogs with a sprinkling can during feeding time, aiming to wet the back of the ears and flanks with the solution. Others simply use coal oil, mixing it with a soapy emulsion or with some oil. When hogs are accustomed to being handled, this is a very handy way and quite effectual; but where they are not used to being handled, they are not quiet and it becomes necessary to place them in a small enclosure and then spray or dip them. Spraying or dipping hogs is at all times advisable, as it is the only safe and rational thing to do if they are infested with lice.

There are a number of dips on the market that have given very good results, such as kresno, zenoleum, and chloro-naphtholcum. The coal-tar dips make a very fine emulsion. The coal-tar solution should be made in the following proportion, which is usually recommended: 1 part of dip to 75 parts of water. Soft water is preferable, as it forms a better emulsion. More satisfactory results are obtained when dips are used warm, for their penetrating power is far greater than when used cold. Cold water and hard water do not readily emulsify and therefore do not give the results wished for. When soft water cannot be obtained, hard water can be softened as follows: Take three pounds of hard soap or ten pounds of soft soap, and one pound of washing soda, and boil with about twenty-five gallons of water until all is well dissolved. This can be added to every thousand gallons of the dip solution. When these rules are carefully followed the lice problem will not be so difficult to handle. Spraying, however, does not suffice alone. Thorough disinfection of the breeding pens and stables should be insisted upon. The hog pens must be thoroughly cleansed and the bedding and all the litter burned. The coal-tar preparations make excellent disinfectants when used at the required strength. The water should be as hot as one can comfortably handle it. The disinfectant should reach every part and all the cracks, in fact everything that may have been exposed or in any way contaminated by the affected hogs. This is by no means easy work. It requires care and persistence. It is on account of the slack way in which the hog pens are disinfected that so many failures are reported by persons not having had the desired results from dipping or spraying. These failures can be wholly attributed to the fact that the parties did not thoroughly disinfect the hog pens, the bedding, and in fact everything that the infected hogs could contaminate. To sum up, in order to have good success with dipping, everything that the affected hogs could possibly contaminate must be disinfected, either with slacked lime or with one of the coal-tar preparations.

Those who do not wish to buy the dip can make the following kerosene emulsion, which has been used with good success:

Hard soap or whale oil 1-2 pound.  
Water, 1 gallon.  
Kerosene, 2 gallons.  
Dissolve the soap in boiling water and while still hot add the kerosene and agitate thoroughly until cool, when the stock emulsion thus obtained should be of the consistency of thick cream and without the presence of free kerosene. When ready for use dissolve in about twenty times its volume of water.

Dipping speaks well for itself. Breeders who have put in a dipping plant and have dipped faithfully once a month, many dipping oftener than that, have found that it leaves the skin in a soft and pliable condition, which is of great importance. Many breeders have testified that since they have dipped their hogs it has prevented hog cholera from gaining a foothold in their herd. It is also a fact that it aids a well balanced ration, for the hogs are in a better condition to assimilate their food. It is a fact that all breeders cannot put in a dipping tank, but those who cannot should use the sprayer often and place posts in the feed lot, wrap them with burlap, and then grease them or soak them with some of the dips. These posts enable some of the hogs to rub themselves and aid wonderfully in keeping down the pest. Every farmer who raises hogs should provide three or more posts for them. These posts are cheap and can be maintained at a very little cost and labor.

The following is the plan and specifications for erecting a pig dipping tank. A galvanized tank can be built

by any tinner or can be purchased on the market, and may be used in place of the wooden one, but the setting and approaches will remain the same. The iron tank is highly recommended on account of its cheapness and durability in all kinds of weather and climate. A wooden tank will require 240 feet 2x12 tank lumber, twelve feet 4x6 white pine or tank lumber, forty feet 4x4, sixteen feet 2x6, sixteen feet 2x4, twenty-four feet 3x4. For the approaches and dripping board will be required ten feet 2x12 tank lumber, 100 feet 4x4 yellow pine, sixty feet 2x6, 114 feet 2x4, 162 feet fencing, seventeen pounds 20-penny nails and seven pounds 10-penny nails, ten square feet of zinc, four T hinges eight inches. A canvas curtain hung at the juncture of the crowding pen and the slide will serve as a blind and facilitate the driving of the animals. All details of construction may be ascertained from the accompanying Fig. 2.

## The Dairy

### Valuable Information.

A bulletin from the Indiana experimental station gives some very practical information in terms any one can readily understand as to loss the farmer sustains in skim milk by imperfect creaming. When we say that milk separated by the centrifugal process shows from .01 to .5 per cent butter fat and from .5 to 1 per cent fat by the gravity process and various other amounts in other processes of skimming it is a little difficult to figure out just what these various showings mean in pounds of butter or dollars and cents in the farmer's pocket. This bulletin from the Indiana station has figured this all out and gives us the results of butter loss from one cow for one year:

By hand separator.....\$ 63  
By deep setting..... 3.99  
By shallow pan setting..... 5.86  
By water dilution..... 6.68

Then the bulletin goes on to show what would be the loss in pounds of butter in a dairy of twenty cows:

Loss by use of hand separator... 64  
Loss by deep setting..... 446  
Loss by shallow setting..... 595  
Loss by water dilution..... 678

With such a showing as above by actual experiment any farmer may see at a glance what he may gain or lose under different processes. The variation of loss in the hand separator between .01 per cent and .5 per cent is sufficient to show the thoughtful farmer the necessity of careful attention to his hand separator. The bulletin above referred to gives demonstrations of the variations when the separator does not run smoothly; when the milk is not at the proper temperature, or when the machine is run at too great or too low a speed. These tests show that there may be from these sources a loss of as much as twelve or more pounds of butter per cow. Quite an amount of the profit of the farm dairy frequently goes out in the skim milk which might be saved by a little careful attention given to the hand separator.

### Dual Purpose Cows.

The more we improve our farm animals the more largely will be increased our revenues. The general idea among farmers in Nebraska that they can breed cattle for two purposes, milk and meat, is one great reason for the low production of dairy product on the average farm in this state. In our state, which is ideal for general farming, nearly every farmer keeps more or less cows and the temptation is strong to try to produce both milk and meat, thinking thereby to get the most possible out of the herd. We would not say that this combination never exists and never can, but we must say it only exists to a very limited extent in some breeds, perhaps strong, in some individuals of those breeds, but it is so limited that it is wholly unreliable. The beef type and the dairy type are distinct, and the attempt to combine these by cross breeding has been, and is likely to be more or less of a failure. While crossing in some cases might prove beneficial, in a great majority of cases it does not, and this practice is, generally speaking, detrimental to the best conditions for profit from the animals.

A grade or cross bred animal can not be sold in the market for a full blood, and yet we find all over the state upon farms where dairying is in progress, herds headed by best bred sires. The owners of these herds are striving for profits from both ends, and will not get the most from either. There is no pleasure in milking cows that yield no profit, but it is a real pleasure to keep good stock that returns good records. Many farmers are wholly unfitted for successful dairymen and might find themselves much better off to devote time and at-

ention to beef production. The two kinds of business are as distinct as are the two types of animals, dairy and beef. The largest profits to be derived are obtained from the best in each type, and not from a mixture of the two. We can't all be dairymen, neither can we all be fat stockmen, but we can improve our stock in either and reap larger profits by so doing.

### Bacteria.

Some of the scientific men have a tendency, it seems to us, to become a little "dippy" when taking up the subject of pure milk supply. The endeavor to guard the milk from the farm which is brought into our cities, in order that it may be, in the judgment of the scientist, absolutely pure, would entail such cost that only the extremely rich would be able to use it and then only in small quantities. It seems to be the theory that a can of milk is the ideal breeding place for every form of hurtful bacteria, and the carryall by which they are borne to human internal organisms. And so when we take a glass of milk with our noon day lunch, or give baby his bowl of bread and milk we take our lives in our hands, so to speak, and also expose baby to all the terrors of diphtheria, scarlet fever, typhoid and all other terrible things. Then too the trouble is ordinary pasteurization don't do any good, for these bacteria are just naturally looking around all the time everywhere ready to pounce into the milk, even after we have it in the glass and ready to drink. Then, too, just one single germ taken in with the milk, under favorable conditions, proceeds to multiply and increase till our whole interior is all filled up with them. Many people reading these reports of our scientists grow nervous, and become afraid to even look on the milk in the cup, lest at the last it may sting like the adder. Let no one get alarmed about bacteria in milk. See to it that the milk is clean, kept in clean vessels and has no preservative to prevent souring in it, and then old folks and babies need have no fear of destructive bacteria or injurious germs. Clean milk is a most wholesome and perfect food.

### Clean Milk.

Clean milk can be obtained only by keeping the dirt out. When dirt is once in machinery it is of little avail. If the energy used in providing apparatus for taking dirt out of milks was applied to keeping it out in the first place, there would doubtless be less poor dairy products, and less occasion for pure food laws as applied to them. The following little poem gives an all too faithful picture on many farms:

### The Dairymaid's Reply.

Once when the milkmaid went to milk,  
I went along, and this I saw:  
The cow first rubbed around the stack,  
And filled her hair with dust and straw;  
Then every time she switched her tail,  
She brushed off litter in the pail.

A green worm anxiously in search  
Of quarters fit to winter in,  
Was hurrying frantically along,  
Somewhat belated in her spin;  
She never made her house of silk,  
For, lo! she tumbled in the milk!

The cow stood in some cowshed ooze,  
That worked up soft, between her toes;  
A big fly came with pompous buzz  
And settled down upon her nose;  
She promptly raised her foot and struck it  
Plumping something in the bucket.

The milking done, the maid arose;  
In either hand she had a pail,  
The milk stool hanging over one,  
Its leg supported by the bail,  
And from it dropped the stuff that stuck  
When she withdrew it from the muck.

I ventured then a mild reproof:  
I told the maid just what I'd seen.  
She smiled, and said that at the well  
She had a strainer white and clean;  
That through its meshes, soft as silk,  
Nothing could ever pass but milk.  
—National Farmer and Stockman.

### Soil Fertility.

One of the profits in dairying seldom recorded and one that should not be overlooked, is the improvement of the soil by this industry. Here in Nebraska with what now seems to us an inexhaustible soil, we give little thought to the matter of the retention and increase of the fertility of our land. In many parts of the state we are skimming the cream from our land, turning its fertility into corn, wheat and other cereals and then sending out this fertility through the elevators, with no thought as to the results of this policy. To see what will happen if this method is generally pursued we need only to examine some of the oldest farms in this state, and we will find they are not one-half as productive today as they were twenty-five years ago. If we are to retain our soil productiveness we must build it up. Intelligent dairying will do more in this direction than any other business in which we can engage. The feed demanded for dairy cattle is of such nature that instead of depleting the soil they add to its fertility. Pasture, the grasses for hay, clover and alfalfa, all tend not only to the retention but to the building up of the soil's fertility, so that a farm that is devoted to dairying becomes better as the time goes on. The farmer who takes off grain



MRS. LOUIS LACOMBE.

SUFFERED FOR MONTHS.

Operation Advocated—Saved By Pe-ru-na.

Mrs. Louis Lacombe, Hayward, Wis., writes:

"I have followed your treatment as closely as I could and am now entirely well."

"We had two doctors and one said that I would have to have an operation performed before I could regain my health."

"We then decided to write you as to my condition, as I had been suffering nearly a year with severe pains and headaches at times so that I could scarcely stand up."

"Now I feel so well after a short treatment with your remedy, and am so grateful that I do not know how to express my thanks."

"I thank you many times for the kind advice I have had from you."

Mrs. Laura Benyo, 324 Ann St., Cincinnati, Ohio, writes: "I am entirely cured of catarrh of the bronchia tubes by Peruna."

crop year by year and sends them away through the elevators is like the man who is writing checks against his bank account. Unless he keeps making deposits he will reach the time when his account is all drawn out. So the farmer will eventually draw out all his stored up soil fertility unless he keeps adding to it. Our population is increasing at a rapid rate. With this increase in population comes an increased demand for all the products of the farm. The intelligent management of the land to meet these increasing demands upon it is one of the most important problems of the farmer today. The keeping of dairy cows is one factor in the solution of this problem, and a very large one.

Andre Autard, who makes John D. Rockefeller's wigs, is a plump and elegant Frenchman with thin black hair, a rich black mustache and black and sparkling eyes.

M. Autard has a shop in the best quarters of Paris. Here all the world goes to be shaved, ondulated, massaged. And here an American talked to the great hairdresser about the exorbitant duty that Mr. Rockefeller had to pay on his last wig.

"It was sharp practice," said M. Autard, in the fluent English that he learned in London. "To compel Mr. Rockefeller to pay such a duty was hardly honest. Sharp practice it was—like the way I was treated in my apprenticeship."

"When I was learning barbering I applied for a post in London. The patron engaged me at a certain wage and at the end of our talk he said: 'Of course it is understood that you speak both French and English.' 'Yes, Sir,' I responded quickly; 'and Dutch also.'"

"We have no dealings with Dutchmen here," said he. "Therefore I will take one-third off that salary!"

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