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QUALITIES OF THE AYRSHIRE.

C. M. Winslow, secretary of the Ayrshire association, says: "While an Ayrshire cow should be shapely and handsome to look at as she stands or walks, she should when handled reveal much looseness of vertebra, flatness of rib and width between the ribs, indicating large dairy capacity. The Ayrshire is a tough, hardy cow, with a vigorous appetite, and not too particular what she eats. She is always hungry, eats greedily and chews her cud rapidly. You can rarely see an Ayrshire cow when not taking in food or chewing what she has already gathered. While at pasture she does not wander around looking for sweet patches of grass, but goes to work rapidly gathering what is most convenient, either of grass or browse, and when full lies down to chew her cud, with no time wasted, and when going to and from pasture will chew her cud while walking and often continue to chew when started into a run.

"The general appearance of an Ayrshire as you look at her is striking. She is alert and full of life and reserved energy. She is a healthy cow, rarely having ailments of body or udder, and you seldom see an Ayrshire cow that does not have four healthy quarters in her udder, yielding a uniform quantity of milk from each. She is a very persistent milker, giving a uniform quantity well up toward calving, and many of them are dried off with difficulty.

"She is very intelligent, quick to learn and of a retentive memory, easily taught to take the same place in the stable and, if required to change, will in a few days readily take the new place. She is quiet and pleasant to milk, not easily disturbed and will, as a rule, yield her milk as readily to one milker as another and does not seem disturbed by any amount of noise in the stable.

"As a dairy cow she is particularly adapted to the production of milk for the milkman and for table use, as her medium size, vigorous appetite and easy keeping qualities make her an economical producer, while her even,

A FINE IMPORTED AYRSHIRE.

uniform production makes her a reliable supply, and the richness of her milk in total solids places it above suspicion from city milk inspectors. Her milk is particularly adapted to transportation, as it does not churn or sour easily, and when poured back and forth a few times will readily mix the cream back into the milk, which will not again readily separate, giving it a uniform quality until the last is sold or used. It has a good body, is rich looking and never looks blue. The milk itself, being evenly balanced with casein and butter fat, is a complete food, easily digested, nutritious and is particularly adapted to children and invalids. Stomachs that are weak and unable to digest other milk find no trouble with Aryshire cows' milk."

Keep Stock Separate.

There used to be a theory that everything could run together in the barnyard—the colts, the calves, the cows, pigs and chickens should all have access to the same yard. After the farmers began to keep better stock they saw the advisability of giving each class a yard for itself. It is hardly right to keep the cows and the calves in the same lot for evident reasons. The colts and the cows will not harmonize because the exuberance of the former tends to irritate the latter and lessens the milk flow. The chickens and the pigs should not be kept together because there is a chance that the hogs may get to eating hens. Every farmer has had experience with all of these things. The only peaceable plan is to have a yard for each kind of stock. If you want to run the pigs in the barnyard, do so for a time each day, but not when the calves and hens are there. It is just as advisable to keep stock upon the farm separate as it is to use separate fields for the crops.

Clover For Winter Feeding.

The question is asked if clover can be ensiled for feed next winter instead of corn silage. Clover may be ensiled and will make a good feed if it is correctly handled, but it requires more care in the handling than does corn. It should be cut when in full bloom. If allowed to get old and woody it is apt to overheat and mold or fire fang and have little feeding value. If ensiled with too much moisture on, as after a shower or heavy dew, it is apt to become more acid than is desirable. The material must be well distributed in the pit and should be thoroughly tramped and covered to exclude the air. Clover silage is apt to slime if not well packed when put into the silo. —L. W. Lighty.

Variety Is Spice For Stock.

Animals relish a variety of feed and will give better results when they have it. A feed of corn stover now and then and a barrel of salt lying in the yard, with four or five staves cut out between the hoops so that they can always help themselves, is a good thing.

THE BERKSHIRES.

A Farmer Tells Why He Prefers Them to Other Breeds.

Writing of Berkshires in Rural New Yorker, F. D. Squires says: After trying nearly all of the various breeds I am thoroughly convinced from a business standpoint, in dollars and cents, that the Berkshires are the most profitable animals I ever tried. There are just four reasons why I should choose the Berkshires for the business

A BERKSHIRE BOAR.

farmer's business hog. And when I say the business hog I don't mean a hog for show, as I don't believe in show animals for the average business farmer. If by chance he should produce a show animal my advice would be to sell it for a show animal to a show animal man and invest it in an animal for profit.

First, activity, combined with strong digestive and assimilating powers, returning a maximum quantity of flesh for food consumed.

Second, their pigs are strong, active and vigorous at birth.

Third, their flesh is of the highest quality of pork, and their loins are much sought by butchers as being of finer quality than any other breed.

Fourth, they can be fattened at an early age on less feed than any other known breed.

The brood sow should be long and deep bodied, with ribs well sprung, jowls full and heavy, running well back on neck; shoulders smooth and even on top and in line with side; ham deep and thick; legs and feet short, straight and strong, set wide apart with hoofs nearly erect, and, above all else, she should have at least twelve well developed teats.

Treat her kindly and give her plenty of nourishing food, but not fattening, during farrowing season, and she will present you with a fine sample of her progeny, and at killing time you will never be sorry you selected the Berkshire for profit.

Pasturing Sheep on Alfalfa.

Every now and then the statement is made that sheep may be successfully pastured on alfalfa. In some instances they can. In other instances they cannot. Under some conditions they can. Under more conditions they cannot. In a very dry atmosphere sheep may be safely grazed on alfalfa when accustomed to it. If fed dry food early in the day, such as grain, they may safely graze on it.

But the fact remains that there is usually some danger that sheep will be lost through bloating more or less while being thus grazed. Moreover, the further fact remains that the sheep graze so closely that under many conditions they injure the alfalfa plant and shorten its period of growth. When the alfalfa grows with grass crops, the element of danger from bloat is practically eliminated.—Professor Thomas Shaw.

THE DAIRYMAN.

I used to have a lot of trouble feeding calves their milk, says a dairyman. So will anybody who sets a pail over the fence and lets the calves do with it as they have a mind to. But finally I woke up to the idea that stanchions are just as good to feed calves in as they are for cows. I picked up a few pieces of boards such as are to be had on almost any farm and fixed up a nice little pair of stanchions, with mangers to feed hay in besides. That ended my troubles in that line.

A Big Influence.

The bull is one half of the herd. The cows are the other half. The bull exerts his influence, his breeding, over every cow in the herd, whether it be for good or bad. If his breeding or pedigree is of the wrong sort—that is, for example, of a poor dairy sort—his influence is for bad, and the young stock will not be of the kind that develop into useful animals. This influence is not on one cow, but on all the herd. With cows it is different. If in the herd there be a poor cow her effects are felt only on her calves, while the calves of her sisters in the herd will be good or poor according to the individual cow. The good bull will make his good qualities felt in all the cows.

Protect the Cream.

A great deal of cream leaves the farm in fine condition for the creamery, but in being exposed to the sun on the road to the creamery or receiving station the development of souring germs rapidly begins. In delivering a can of cream throw a wet blanket over the can and a dry cover over the wet blanket. The dry blanket prevents the evaporation of water from the wet blanket and will enable the farmer to deliver cream only a few degrees warmer than when it left the farm.

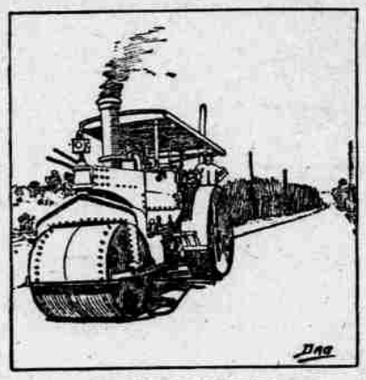
Testing the Milk Giver.

The farmer can learn to operate a hand tester in a half hour. His results will not be accurate to a fraction, but close enough for all practical purposes. There is no way to determine the actual value of a cow except the milk be weighed and tested. It is worth many dollars a year to know what each cow is doing and is worth while to buy a tester and find out. The more a farmer knows about his dairy the better he will be pleased with the creamery treatment.

ROLLER ARMED WITH SPIKES.

Machine That Rips Up a Road For Repair Work.

A big machine has been at work on the roadway at the north end of Lincoln park, in Chicago. It is a monster steam roller, with a double row of spikes in one of the wheels, and the function of the contrivance is to loosen up the old material in the roadway, preparatory to covering it with a fresh coating of crushed stone. As the wide tired wheel rolls on the roadway the spikes sink in the old stone material that has hardened from many years' wear. This serves to loosen the material, so that when the fresh sup-



NEW ROAD MACHINE.

ply of crushed stone is applied it may be forced down into the old bed by running an ordinary steam roller over it. The spikes are removable, so that the wheel may be used also for a packing stint.

Scores of persons gather around the big sharp toothed crusher and ask all kinds of questions. When the puncher has been rolled along the road until the rows of holes reach the width of the driveway it presents the appearance of a sheet of perforated postage stamps, and the whole operation has to be explained for the benefit of the onlookers.

GOOD ROAD CONGRESS.

Purpose and Features of the International Gathering at Paris.

Colonel Charles S. Bromwell, Clifford Richardson and William Page have been appointed by President Roosevelt to represent the United States at the international road congress to be held in Paris during October, 1908.

Napoleon was a great advocate of road building, and since his time France has spent between $500,000,000 and $600,000,000 on her highways. The advent of the automobile has proved a serious menace to the surface of the roads, and the purpose of this congress is to hear opinions of experts on the subject and to condense them into a practical idea of the treatment and care of the surface of a road.

This congress, to which the governments of the various nations have been officially invited to appoint representatives, will be opened Oct. 11 and will be in session seven days.

It is proposed during the life of the congress to give several festivals in Paris and also excursions, one particularly to Nice, to enable the members to visit especially fitted up roads or roads in course of preparation.

The United States government has made several tests at Washington lately, principally by taking photographs of the clouds of dust raised by each automobile, going at different rates of speed at from five to sixty miles an hour. These dust clouds were weighed in order to determine how much of the surface of the road was taken off by a motor going at an excessive rate of speed. This point and a number of others which have been ascertained by the government of the United States undoubtedly will be brought to the attention of the congress by one of the American representatives, and it is more than likely that Colonel Bromwell will read a paper.

SPLIT LOG DRAG EFFECTIVE.

Heavy Rains Give Implement a Fine Chance to Prove Itself.

The heavy fall of rain that the Red river valley and northern Minnesota experienced recently proves beyond doubt the extreme efficacy of the split log drag as a good roadmaker. The streets of Thief River Falls and many of the rural highways leading into the city have been consistently worked by these drags for two years. The results were most apparent and striking the other week, just following the heavy rains.

In spite of the amount of traffic that the streets of Thief River Falls carry daily, they are in excellent condition, nicely graded and as hard as a paved street. The country roads that have been dragged for two years are as passable as during the driest season in summer, while the roads that have not been worked by the drags are almost impassable.

Novel Highway Proposed.

A novel proposition has been made for the beautification of the highway between Thermal and Coachella, in California, a distance of three miles. The waste waters from the Coachella ice plant are diverted along this highway and extend almost to Thermal before they are absorbed by the soil, says the Los Angeles Times. The proposition is now made that fig trees be set along the highway, on the water ditch, where they would be kept growing by the waste water. Within a year these trees come into bearing, and the three mile highway, lined with bearing fig trees, would not only be a most attractive drive, but might be made to yield a profit for road improvement.

THE SIMPLE LIFE

The simple life I love to sing
Because it's musical
With bleating lambs and mooing cows
And barnyard jing-a-ling.

We wear a bright red sunbonnet
And loosely fitting prints;
We never dress for minuets
Nor put on beauty tints.

We have our cow and chickens, too,
A hog, a mule, a churn;
We never could return to you
In city heat to burn.

We've done for aye with city strife.
Give us our hogs and chickens,
We're badly stuck on simple life;
For fun it beats the dickens.

C. M. B.

THE WYANDOTTES.

This breed was at first commonly called "American Sebrights," which was changed to "Wyandotte" after the Indians of that name. Historians have failed to trace the time and circumstances of its origin, but all claim it to be an American bird with Dark Brahma and Hamburg blood in its veins. Today the man who originates a breed erects a marble statue to himself if no one else will. The varieties are Silver, Golden, Silver Penciled, Partridge, Columbian, Black, Buff and White.

STANDARD WEIGHTS.

Cock ..... 8½ lbs. Hen ..... 6½ lbs.
Cockerel .... 7½ lbs. Pullet ..... 5½ lbs.

The White Dotte is the most popular and is a bird of beautiful curves. The original of this picture is a feathered aristocrat. How kingly! What vigor

IDEAL HEAD FOR BREEDERS.
[White Wyandotte from life.]

What a proud pedigreed prince! Then think of the big brown eggs from his harem and the fluffy, bright eyed chicks, instructed in wormology and scratching stunts by his snow white cackling queens! Then smack your lips as you smell the savory odor of a basted Wyandotte! Round, yellow, velvety, smooth as silk, it is the unsurpassed epicurean bird. In dining on Dottes hold yourself in check at least till the blessing is asked. In breeding avoid single combs, or hybrids, by using broad combed males.

For brassiness and cream in White Wyandottes use no-corn cream cure.

FEATHERS AND EGGSHELLS.

Cleanliness is the keyhole to success in the poultry business, but some chicken raisers, like the man late home from lodge, can't find it.

"Money makes the mare go," but it doesn't always make the hen lay. The millionaires going into the business don't always strike Standard oil.

If you knew it all, you would be drinking government cream on an experiment station, while your typewriter would be working overtime on chicken reports from the cyclopedia.

Continual feeding of one kind of grain often brings indigestion, loss of appetite and bowel troubles. If this is your feeding method and you are making a profit you deserve a monument.

The farmers are buying bone cutters, and the butchers have such a rush for bones that they are always engaged. Once more the American hen registers by knocking out Mr. Rags Bones and Gum Boots.

Have you reached the broiler stage? Don't jump from the frying pan into the broiler. Raising cockerels in zero weather to sell at Alaska prices isn't what it's cocked up to be. Beware of a broiler explosion!

Now that the hatching season is here get out your signs of the zodiac so you get your hen set in the right sign. Better look for signs of lice and set your hens right and give them better attention. You'll get more chicks.

It has often been asked why the New York poultrymen keep mostly White Leghorns. Simply because the New York epicures demand large white eggs. Bostonians possess a predilection for brown eggs. Why? Oh, Browning, of course!

As the chicks dry off under the hen remove them in a soft lined basket to a chair beside the kitchen stove. Have a soft woolen cloth hanging down in the basket to warm their backs, but arrange so they cannot get on top of the cloth, as they may smother each other. By this plan the old hen cannot trample them in the nest.

When spring is in full bloom you may expect to hear that the American hen has invaded Panama. We are told that the chickens on the isthmus are a sorry set. When a newly wedded couple, bound for the big ditch, found eggs were 10 cents apiece they simply sent an order north for an incubator and 100 Rock eggs. Good luck!

The number of poultry books advertised is a sign of the interest manifest in the business. You can get a full fledged library for $2.50. They will help you, but don't forget what experience teaches you. It doesn't deal in theory.

L. M. Barnitz.

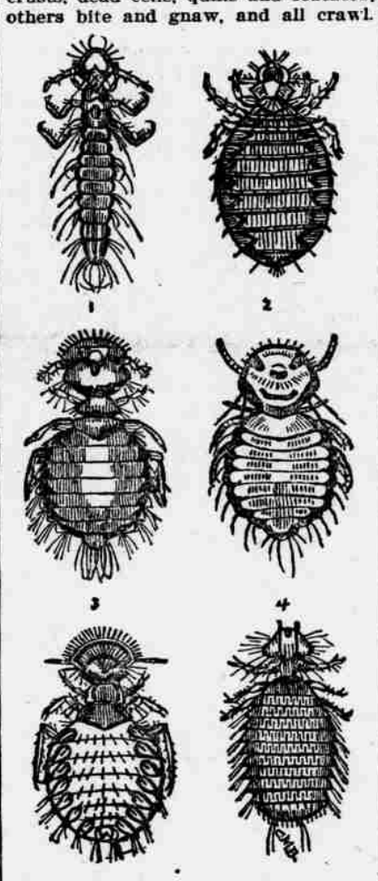
THE ROGUES' GALLERY.

Strange that the $250,000 Hall of Fame at New York university thus far contains only thirty-seven famous names and down on Mulberry street at the rogues' gallery there are 18,000 pictures of famous people. It gives one a cold chill to look into the eyes of all those cutthroats and thieves, but you feel crawly all over when you get into the poultryman's rogues' gallery. The skunks, foxes, weasels, minks, rats, hawks, owls, mites, pigeon ticks and sand jiggers occupy murderers' row.

Louse crooks, alias mallopha, are everywhere. One declares there are fifty varieties, another counts a thousand, while the man who escapes from a crawling coop swears in all languages that there are 20,000,000.

Scientists class lice in four genera—lipeurus, goniodes, gonicotes and menopen. When these marry and intermarry, from the lipeuruses down the line to the menopens, there's something doing for the stork, for in twelve weeks a single louse can become great grandpapa to 125,000 lousy little folks. Thus ten of these multiplex multipliers hatch out 1,250,000 creepers in three months—all crooks for chicken cash.

They vary in size from one-thousandth to one-sixth of an inch, and few suck blood. Some live on scales, crusts, dead cells, quills and feathers; others bite and gnaw, and all crawl.



[1. Lipeurus variabilis. 2. Goniodes eynsfordii. 3. Goniodes dissimilis. 4. Gonicotes hologaster. 5. Gonicotes gigas. 6. Menopen pallidum.]

The four genera are represented in the cut.

No. 1, Lipeurus variabilis, you find in wings, primary and secondary feathers of chicks.

No. 2, Goniodes eynsfordii, is the head and neck louse.

Nos. 3, 4, 5 and 6 are tramp lice, hen hoboes.

No. 6, Menopen pallidum, the pale louse, is most common. The simple mention of a louse running around your neck, down your spine and up again across your bald head makes you scratch.

TO DESTROY LICE.

Clean up. If house is tight, burn two pounds sulphur to every hundred square feet of floor space or spray house and fixtures thoroughly with mixture of six ounces crude carbolic acid to gallon hot water. Allow fumes to escape before fowls return.

Dust hens with Persian insect powder three times in three weeks or dip them into a solution of a teacup full of chloronaphtholeum to four gallons of water. Pure lard in moderation for head lice on chicks and clucks.

Sulphur ointment, tablespoonful sulphur to two ounces lard. Apply on head, under wings, around vent of fowls, not with chicks, and not in wet weather. Louse paint, two pounds napthalene flakes dissolved in two gallons kerosene.

Louse powder, five pounds tobacco dust, one pound air slaked lime, one pound naphthalene flakes. Mix and apply for lice on poultry, plants, cattle, for sheep ticks, ants, moths, etc. These are sure good stuff, but don't forget the dust bath, and remember that as men have more faults than fair women so crowers have more crawlers than cacklers.

OIL IN ROAD BUILDING

How Petroleum Is Used on Top of a Macadam Bed.

A FINE SURFACE OBTAINED.

Better Than Asphalt, Does Not Crack and Lump—Rolling Must Not Be Done In Wet Weather or When Ground Is Soft.

The old system of "oiling roads and streets" is clearly a flat failure except for a moderate improvement of some of the worst thoroughfares. The new system of "making roads with oil" is proving a success whenever proper methods are pursued.

The oil and natural soil no longer go where real results are wanted. The use of the heavy ten to eleven gravity petroleum has become quite general. Its superiority has been well demonstrated, but there is a wide difference between different oils of this gravity and with the same amount of asphaltum. Some of that sold is well nigh useless, although it is unquestionably of the specified gravity and contains the required percentage of asphalt. The oil must possess the adhesive quality and be able to bind the rock and asphaltum together—in other words, the necessary petroline.

The best roads are undoubtedly the macadamized highways found in older sections. The building of such thoroughfares with the use of oil on the surface to form a top dressing and

ROAD READY FOR OILING.

present a surface like asphalt pavement is just in its infancy in southern California, says the Los Angeles Times. In Pasadena there are a number of streets of this kind, notably Madison avenue, prepared at a cost of 12 cents per square foot and with a depth of seven inches of foundation. Blocks of this street are scarcely distinguishable from asphalt paving. There are others similar, but some are not equal to this. At the same time they are superior to those prepared in the old way.

The new method of macadamizing and oiling as laid down in a set of specifications used for a number of streets may be outlined substantially as follows: For the foundation grading is done by the removal of all earth, stone, loose rock, cement, shale, hardpan, etc., to a depth of seven inches below the intended finished surface and to a farther depth of two feet below the subgrade whenever mud, sand or other soil material is encountered, the space to be refilled with good earth or gravel. The whole is rolled with a roller of not less than twelve tons in weight until the surface is unyielding, all depressions made by the roller being filled up and rolled again. All portions that cannot be reached by the roller must be tamped solid, and the rolling must not be done in wet weather or when the ground is soft and muddy. This subgrade must be checked by the street superintendent before proceeding with work.

On this grade a bottom course of macadam is laid consisting of stone not exceeding three inches in diameter and not less than one and a half inches. This layer will be five inches in thickness and is rolled with a twelve ton steam roller until the stone ceases to sink under the roller or to creep in front of it.

A top course of stone between three-fourths of an inch and an inch and a half in diameter will cover this to a depth of two inches and will be rolled as before after a first coating of oil (one-half a gallon to the square yard) is applied evenly so as to saturate the entire top layer. Then all voids are filled in with rock screenings of the same material as the macadam not exceeding three-quarters of an inch in diameter, with a top dressing of the same material laid to the depth of half an inch, after which there is given a second coating of oil to the same amount as before and the whole rolled and tamped until no evidence of the oil remains on the surface except as shown in the color of the screenings. Sharp sand is to be sprinkled wherever any oil remains to absorb it. These specifications provide that oil shall be of 10 to 11 gravity, with 80 per cent asphaltum at 80 penetration and with not more than 2 per cent water.

The Pacific Electric and Los Angeles Interurban railways are using this method on their rights of way in Pasadena, Long Beach and one or two other points. It is said to be better than the use of asphalt, as it gives with the pressure of the rails under weight of cars and can be taken up and replaced without difficulty. It does not crack and lump, as does the asphalt. It is hard to tell it from the latter, sometimes impossible, for the average person. In Long Beach the result has been very good.

New Road Machine.

C. A. Baldwin of Pasadena, Cal., is experimenting with a new machine, built on the principle of a disk plow, for the purpose of keeping oiled roads in condition.