

KEEPING LAMBS IN GOOD CONDITION IN SUMMER'S HEAT

At present mutton of the finest quality is in demand, and the best quality is found in the young and early matured lambs. If the greatest profits possible are to be realized, the lambs must be put in the best possible condition for high quality on the cheapest feed that can be found. There are plenty of sheep growers who will furnish a creep for the lambs in the spring, give them a good start and then turn them loose when grass comes to shirk for themselves. The result is the lambs get a check in growth and do not make much progress until they are put in to feed for fattening the following fall. It then takes a whole year to attain the weight that they might have made in six months.

During August, 1904, it was my privilege to visit in a neighborhood where there were several breeders of pure-bred Oxford sheen. They had been doing well by their lambs, and as it was well known that I had had some experience in raising coarse wool lambs, they set me to examining their weights. Not being satisfied with the estimates made, we got out the scales and weighed quite a large number. We were all surprised to find that several of the heat ones weighed around 150 pounds each, and yet they were not fully six months old.

The incident set me to thinking on the problem of feeding lambs through the summer while they are running with the ewes. In the first place, the lambs are getting a part of their living from the ewes. They are eating grass, which is a cheap feed, and the addition of a few oats, wheat and bran and shelled corn will produce the gains in weight much faster and cheaper than can be done later in life. In the second place, there is much time saved, as the market weights are attained much sooner, and the price that can be realized is in hand without further trouble and risk. In the third place, the lambs on the ewes is not as heavy as when the lambs are depending on the milk from them to sustain and make their growth. They are in better condition to start in the coming breeding season, which is also a saving of vital energy as well as feed that would be needed to put them in good breeding condition.

The farmers in the older portion of the country who raise lambs can, by feeding them some grain through the summer, easily raise a better quality than will bring the money sooner, than by the plan usually followed of letting them shirk through the summer on grass and then feed them through the winter on hay and grain. The cost represented by summer feeding will be much less than to feed the whole year to attain to the popular market weights.

The first essential for raising thrifty and profitable lambs is good, thrifty stock. Ancestral influence is an important factor and should not be overlooked. Therefore, it should be understood that lambs sired by a pure-bred ram are of greater value as feeders and meat producers than those sired by the grade or mongrel ram.

During the long period of years that breeds have been forming under favorable conditions and generous feeding, the thrifty habit has been formed, and as is well known by experience, has a telling influence on the capabilities of the progeny. Material influence is also of importance. A weak, sickly ewe cannot impart strength and constitutional vigor; therefore, the necessity of using such ewes as breeders as are endowed with great physical strength and are capable of furnishing a liberal supply of milk.

Many new regions in Canada are being opened this season. A number of irrigation projects are being developed, and much raw land in Western Canada is being opened. The settlers in these regions must be content with pioneer conditions. They must expect much hard work, many discomforts, and possibly small crops. They must not be disappointed if swamps have to do as well as in older settled communities. There is danger of warm fever and other troubles incident to a new locality. Keep a stiff upper lip, and stick to it. These troubles can be reduced to a minimum by doing thorough work and using great care. A small acreage of field crops must necessarily be seeded to provide feed for the coming season, otherwise the expense of opening the farm will be great. Best results are secured by giving the most thorough preparation to the soil, even though the land be exceedingly rich and virgin. If the planting cannot be done as early as desirable, do not hesitate to plant a little late. You may secure a good crop, even with late seeding, consequently you will be just that much ahead. The care of horses is even more important. Many new settlers are short of feed. Grain is high in a new country, and the temptation is strong to feed little and depend largely upon new grass. This is the worst kind of a mistake. Horses doing hard work should have an abundance of grain feed, with some hay, if a can possibly be secured. There is nothing better than oats for horses. If a full feed of oats cannot be secured, mix in a little barley, which is usually available. Be sure and provide good water. This is most important. Plenty of grain feed and pure water will ward off swamp fever, which is the most trying horse trouble in a new region. At the end of the season, if the results have not been quite up to your expectations, remember that you have not given the country a fair trial, and stick to it another year, at least.

A good example of the ease with which an infectious disease may be scattered broadcast throughout the country is illustrated by our Southern neighbors' recent experience with foot and mouth disease.

An official report issued by the bureau of animal industry at Washington states that upon investigation it is found that a large firm of manufacturing chemists in Michigan accidentally infected smallpox vaccine virus with the virus that produces foot and mouth disease. The calves upon which the propagating was done were kept in a stock yard at Detroit a few hours before shipping to a farm near that place.

Later three carloads of cattle were put in these pens temporarily and later distributed, being sent to Buffalo and other eastern points. It was these cattle that took the disease and scattered it throughout portions of New York, Pennsylvania and Maryland.

This experience with foot and mouth disease, which is now happily entirely eradicated, cost the Government alone \$300,000, to say nothing about the expense incurred by states, railroads and private individuals. It was only through the well equipped system of federal inspection that the disease was eliminated with no greater damage.

Hon. James Wilson, secretary of agriculture at Washington, has issued an order permitting the importation of sheep from Canada May 20 to October 10, for the purpose of exhibiting at the Alaska-Yukon Pacific Exposition, to be held at Seattle, Wash., from June 1 to October 15, without being subject to the thirty days' quarantine, provided they pass satisfactory inspection at port of entry.

SUMMER IN THE SHEEPFOLD.

(By H. U.)
This is the season when sheep are threatened with more dangers than at any other time, except at lambing time. Negligence at this time may cause heavy losses.

A most serious trouble is the attack of flies. Lambs are often killed by these pests. The insects, working day and night apparently, will very often destroy a lamb before the stockmaster is aware of it. Sometimes fly-blown sheep that are neglected lie in misery for days, while they are actually eaten up.

I make it a practice to visit my flock once and sometimes twice every day in summer, and frequently give the animals a close examination in order to prevent any close injury from this cause and others. I give my flock the best green pastures possible, and as wide a range as I can furnish.

I am especially careful to see that the water supply for the sheep is pure, as but little impurity would be sufficient to bring disaster.

Pure water is a factor of great importance, and too much care cannot be taken about what sheep are allowed to drink.

It is a mistaken idea that sheep do not need much water. They can, however, go longer and do better with out water than any other farm stock, but thrive much better with an ample supply.

I give my flock a change of pasture frequently and provide good shelter from the sun.

As they are prone to crowd together in hot weather with their heads to the ground, they will suffer greatly if not provided with shelter.

DAIRYING

AN INCREASING DEMAND FOR GOOD BUTTER MAKERS

Trained Men Save Money To Wise Farmers.

AMES UNIVERSITY EXPERIENCE.

BY C. V. GREGORY.

The great strides Iowa is making along dairy lines are strikingly noticeable in the dairy department of the college at Ames. The efforts of the department are devoted, not to getting positions for the students who are already there, but to turning out men fast enough to fill the applications that come in. So far, they have been utterly unable to do this.

Twenty-five men entered the one-year dairy course last fall. Only five are left at present. The other twenty have gone out to fill positions in creameries in Iowa and the surrounding states. Ten men entered the course in January, and four of these have already left to take up creamery work. Only two of these have gone

out at salaries as high as \$60 per month, and of them start at \$75 to \$80 with prospects for later advancement. This one-year course has been put in especially to train men to take charge of creameries as butter makers. The work given is very practical. The aim is, not to give the men much theory, but to turn them out well equipped to handle the creamery in the best possible manner. In addition to this one-year course, a four-year course is also given.

The four-year course is a great deal more thorough than the other, turning out men who are fitted to become investigators, teachers, or butter experts in large establishments. All the men who will graduate from the four-year course this spring are going out at salaries not less than \$1,200. One of them will get \$2,100 and another \$2,300.

Realizing that it was utterly impossible to keep up with the demand for trained creamery men with these two courses, the department, several years ago, inaugurated the idea of giving a two-weeks' course in instruction during the winter. This course is designed primarily for men who already know something of the business. Last year, creamery men from all sections of the United States attended this course, and the capacity of the department here were taxed to the utmost to provide for all the students who sought admission.

A one-week's short course in farm dairying was also given last winter. This is to be made still more of a feature next winter. One of the greatest causes for the strong demand for trained buttermen is the fact that the co-operative creameries throughout the country are beginning to realize that it pays to employ good men.

When these co-operative creameries were first organized, they regarded \$50 as a liberal price to pay butter-makers. Most of them have learned by experience that a \$1,000 man will save many times the amount of his salary in a year. Professor Mortensen, who is at the head of the dairy department, states that he has more demand for trained men than he can fill. The department also has a course in cheese making and has started in, this spring, giving a large amount of work in the making of various forms of ice-cream.

In an experimental way a great deal has been done in the department at Ames. Under the direction of Professor McKay, practical and easily worked methods of controlling the moisture content of butter, have been worked out. By following these methods it is possible to keep below the sixteen per cent limit set by law and at the same time not so low that the over-run is materially decreased or the quality of butter lessened.

A quick and satisfactory method of determining the per cent of moisture in butter has been worked out by Professor Bower. This gives the creamery man a method of readily determining whether or not he is keeping the moisture contents within the desired limits.

Another interesting line of work is that which has been carried on by Professor Bouka. His work was along the line of the use of starters in butter-making. He cleared up many points in regard to this much discussed topic, also doing some little experimental work along the lines of substitutes for milk in making starters.

Goalsing Enjoy Greens, such as lettuce, spinach and clover from the very first day in their crops. When three weeks old they will make their own selection of given range.

If only the trees from which fruit is expected are sprayed, they may become infected later than those untreated.

Let no guilty weed escape in the garden this month. Hoe around the weeds, vegetables, not around the weeds, and favor vines.

AGRICULTURE

RETAIN MOISTURE AND YOU WILL HAVE A GOOD CORN CROP

Careful Watching Necessary During Dry Months.

LABOR THAT IS WORTH WHILE.

BY GEORGE STEEN.

After the question of fertility of the soil for corn comes the moisture part. Very seldom is there sufficient rainfall when the crop needs it most. It does not require much until about tasseling time. Up to this time it has been getting ready for work. When the tassels and the silks come, there is more and more need of water. At this critical time, usually in August, is unfortunately also a dry time. Such being the case, it becomes necessary to adopt some measures that will save water, not for a rainy but for the dry days. Much can be done by what is known as the dust mulch. Cultivated ground loses moisture rapidly by evaporation at the surface.



RAVEN DARE, A SPLENDID TYPE OF UTILITY SADDLE HORSE.

The saddle horse pictured herewith is just a little nearer the ideal type of saddle horse than one often sees. The erect way in which he carries his head and neck and the manner of holding his tail indicate energy and makes for ideal behavior. Raven Dare is a thoroughbred and is worth several hundred dollars.

moisture as well as put the soil in fine tilth can be adopted. If the land had been in corn the year previous, it is disked and harrowed before plowing. This provides a lot of loose soil to turn down in the bottom of the furrow and makes good pasture for the roots of the corn plants later. If the land be stubble or old, cultivated ground, the plow should follow in the way, making half day and smooth down the plowing to prevent clods forming.

Should the sun not shine and the wind blow, it is not important that the harrow follow the plow, as clods are not formed under such conditions nor is the evaporation great. A brisk south-west wind and the sun shining will help to dry the soil. In this way moisture is retained in the soil. A whole season to pulverize, harrowing, disking and other cultural methods used in making a mellow seed-bed are necessary to break up the crust that forms. In this way moisture is retained in the soil, and a high wind and a low humidity.

In order to prevent this rapid evaporation it is necessary to break up the crust that forms. In this way moisture is retained in the soil, and a high wind and a low humidity.

The department of agriculture is in receipt of a report of some experiments made in England with potatoes as a basis for the tests. Planting sprouted tubers resulted in larger crops and a greater production of tubers of large size than when unsprouted tubers were planted.

The use of 20 tons of barnyard manure per acre was slightly more profitable than the use of 10 tons when the price was not more than 96 cents per ton. A light dressing of barnyard manure with a suitable application of a commercial fertilizer was more profitable than the use of barnyard manure alone. The results also indicated that large and profitable crops of potatoes can be grown with the use of a complete mixture of commercial fertilizers.

When barnyard manure is to be used in conjunction with commercial fertilizers the following application per acre is recommended: Barnyard manure 10 tons, sulphate of ammonia 1 1/2 cwt., superphosphate 4 cwt., and muriate of potash 1 1/2 cwt. and well stored lime or soil, which have been liberally treated with barnyard manure in previous years, the use per acre of 2 1/2 cwt. of sulphate of ammonia, 6 cwt. superphosphate, and 2 1/2 cwt. of muriate of potash is considered adequate for satisfactory crops.

Do not set the plants when the soil is so wet that it will dry hard around them. Better have the plants in water and set dipping in soil only moderately moist.

Let no guilty weed escape in the garden this month. Hoe around the weeds, vegetables, not around the weeds, and favor vines.

POULTRY

SELL YOUR SPRING CHICKENS EARLY THE SUREST PLAN

Save Cost of Longer Feeding and Get Good Market.

CITY IS BEST MARKET.

BY MRS. MILLIE HONAKER.

As a rule I have found that the best time to sell young chickens is just as soon as they reach marketable size. This is for several reasons. First, prices are usually better, especially on early chicks, so that more money may be actually obtained for a chick at an early age than for the same chick later. Spring chickens are scarce early in the season and in good demand at a small size and a large figure. Later, when chickens become more plentiful, larger chickens are not so much wanted nor so well paid for. I have sold one-pound chicks in May for as much as two-pounders later out of the same lot a month later.

This brings me to the second reason, which is that cost of longer feeding may be saved and possible losses avoided. I have seldom gained enough for the feed cost and other expenses to cover the loss of chicks after I might have sold them, which losses, of course, reduced the profits on the lot. Another reason for selling early, especially where only the culled and surplus are to be disposed of, is that the rest may have the more room and the better care. A flock of fifty chicks will develop more rapidly and evenly than one of 100 and with fewer losses, and where winter layers are an object the earlier the pullets can be matured the better.

I seldom sell spring chickens to local buyers. Usually they buy by the pound, offering what looks like a fancy price, but which in reality is far below what it should be. City markets make quotations by the dozen on early chicks, prices usually running around \$6 a dozen. These prices are for one-pound chicks early in the spring and two-pound broilers a month or two later. The local buyer does not often pay above 12 or 15 cents a pound, which is quite a little less than I feel justified in accepting. So far I have found it most satisfactory to sell through city commission men. Many people hesitate to ship off a lot of stock to an unknown party or firm without anything to show for it, but I have had no more trouble in getting my chicks to market from them than from face-to-face buyers. In fact, I do not recall a single instance when I did not obtain satisfactory results. I have shipped in various cities, but always with about the same results. I usually write for market quotations ahead of the time I expect to ship, and keep myself posted as to prices and weights. Quotations are furnished regularly upon request.

For shipping crates I use light boxes and let them go with the chicks. I once used nice crates, which cost me something to get. I thought to have them returned each time, as one is supposed to be able to get ten cents each, but after a series of exasperating

delays and a number of losses I resorted to cheap boxes. For the most part I use two-quart glass can boxes, which may be obtained at any grocery store in the fall for the asking. A one-quart can box will hold a dozen one-pound chicks, while a two-quart box will hold the same number of two-pound size. I see that sides and bottoms are securely nailed, and cover with lath as far apart as is safe. Sometimes I use cracker boxes. These hold about a dozen and a half, which are as many as can be safely shipped in one apartment. In hot weather I remove the sides and replace with lath. I have never had any losses from poor crates, nor any complaints.

Large clover pastures are becoming more popular every year and many farmers are using ten acre fields for this purpose. Under such a system, large numbers of sows and pigs are turned in together. How to stop them satisfactorily is a problem that often confronts the farmer. As commonly done a man is about knocked over by the sows and pigs, and the big greedy sows gobble the feed down before the rest get a chance at it. This is neither pleasant for the feeder, nor satisfactory to the fed, except to the few lucky ones who capture all the prize. Some way of stopping them should be devised whereby the feeder is not molested, and whereby the sows and pigs will get their share.

One of the most satisfactory methods of stopping them is to use a large trough about one rod wide and two or three rods long, fenced off for this purpose. This is divided into two parts, one division being used for the sows, the other for small pigs. Each is fitted with a gate, which should swing easily and be large in order that the hogs may pass through it in large numbers without too much crowding. Across the gate posts of the part the pigs are to use, a board should be nailed, high enough to lead the pigs pass through it but not high enough for the sows.

With such an arrangement stopping can be easily and satisfactorily done. The feeder can pass into the lot, close the gate, and fill the troughs without the sows scrambling all around him. If necessary, he can throw them a few ears of corn to divert their attention while he gets into the feed lot with the sows. When the trough is all full the gate is opened and the sows are let in together. Under such circumstances both large and small sows ought to get an equal chance, provided the trough is of reasonable length, whereas when the sows are turned in pallid by partial while the sows crowd around it is always the

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SWINE

CARE OF YOUNG PIGS MEANS LESS TROUBLE LATER

A Hog Is Half Made With Weaning Over.

POPULAR CLOVER PASTURES.

BY D. A. GAUMNITZ.

A hog is half made when past the weaning period without a stunt or kink in its growth. Every check or halt in prosperity through its first two months is more expensive than at any later period. Too much rich, feverish milk of the dam, causing thumps or other ailment, may leave harmful results, perhaps as much so as scant feeding or other neglect of the sow. More injury may be done to a pig's growth in two or three days than can be repaired in a month, even if he is made the subject of special care, which, where many are raised, is a rule, not easily practicable. "Good luck" with pigs calls for attention, and that not occasional, but frequent and regular.

From the first week after farrowing until weaning time the sow will be little else than a milk machine, and to be a high-power machine in perfect operation she must have proper care. Nothing else so well calculated to make pigs grow as a bountiful supply of wholesome sow's milk, and the pig that has plenty of other feed with the milk of a well-kept sow for eight weeks will ordinarily have much the start of those weaned at five or six weeks, no matter how much food and attention the earlier weaned pigs may have had.

At eight or nine weeks old most pigs are, or rather should be, fit to take away from the sow; some litters are individually older and seven weeks than others at ten, and better fitted for weaning. Sometimes it is necessary to wean when the pigs are five or six weeks old, and in other cases it may be advisable to wait until the pigs are ten weeks or even older. In the corn belt the period will generally average longer than in New England. Breeders who wean at early ages generally do so in order to more profitably raise two litters a year.

Provided with and taught to eat suitable feed some weeks beforehand pigs are not noticeably checked in their growth by weaning, but those that have been dependent mainly upon the mother's milk, when abruptly taken away from it, frequently seem to have their growth usually suspended for weeks. Many breeders successfully let the sow wean her pigs, as she will in time, and the change is so gradual that no pause in growth indicates when the milk has ceased. A modified application of this, to which the pigs are separated from the sow at an age suiting their feeding and the convenience of the breeder, will not infrequently be found advisable, but by no means should the pigs be allowed to remain with a sow until she is virtually devoured by them as is sometimes done.

It is not a good plan to take all the pigs from the sow, unless one or two of them can be turned with her some hours after to draw the milk she will have at that time, and again, say, after

delays and a number of losses I resorted to cheap boxes. For the most part I use two-quart glass can boxes, which may be obtained at any grocery store in the fall for the asking. A one-quart can box will hold a dozen one-pound chicks, while a two-quart box will hold the same number of two-pound size. I see that sides and bottoms are securely nailed, and cover with lath as far apart as is safe. Sometimes I use cracker boxes. These hold about a dozen and a half, which are as many as can be safely shipped in one apartment. In hot weather I remove the sides and replace with lath. I have never had any losses from poor crates, nor any complaints.

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ANSWERS TO CORRESPONDENTS

NOTE—Not more than one question from one correspondent can be considered at one time. Questions should be specific, clear and concise, and should be addressed to the Editor of the Agricultural Department of this paper. Any person requiring answer by mail must enclose stamped envelope.—Editor.

Rheumatism.—A. P. R. has several pigs that have been lame all winter. Rub the joints of the lame legs every third day with a little compound soap liniment and continue until the lameness disappears.

Partial Paralysis.—C. R. has a cat that has not power enough in its jaws to chew food. Give one desiccated cod liver oil and five drops tincture chloride of iron at a dose three times a day. Continue for several weeks if needed.

Sore Foot.—W. C. has a horse that has a sore on its foot from which matter discharges. Mix 1 dram chloride of zinc with 1-2 pint water and inject a little into the sore twice a day until it heals.

Lump on Cow's Knee.—W. C. B. has a cow two weeks old that has a soft lump on its knee. Mix 1 dram iodine with 100 parts vasoline. Rub a little on the lump with the fingers every third day until the lump disappears.

Partial Paralysis.—G. E. W. has a cow that for the last three years has lost the use of her hind leg twenty-four hours after calving. To prevent this, give the cow 1-2 lbs. opium salts dissolved in water at one dose two weeks before calving. Feed her on hay and ground oats mixed with equal parts bran.

Grubs in Back.—L. E. wishes to know what is the cause of grubs in the cow's back and what is the remedy? Grubs are the larvae of the gadfly and can be squeezed out by placing a thumb at each side of the lump. The grub should be killed with a 40 per cent. carbolic acid solution. If not killed, they will develop into scabies.

Wind Gallop.—L. W. A. has a horse that has wind gallop. Also a horse that is keeprung. 1. Mix 1 dram biniodide of mercury with 1 oz. iodine and rub a little on the puffs with the fingers once every third week. Continue until the puffs disappear. 2. The best remedy for keeprung horses is to take out the shoes and give three months' run in pasture.

Difficult Breathing.—J. C. has a fat mare that has difficulty in breathing when she trots. There are several things which will cause difficulty in breathing, thickening of the mucous membrane of the larynx, dilatation of the heart and haemorrhage. Fat animals should not be driven fast. Have the animal examined by a qualified veterinarian to find the cause.

Ecema.—D. M. M. has a cow that breaks out in pimples over her body. The pimples break out in a few days, and the fluid and the hair comes off in patches. Mix 1 oz. each of acetate of lead and sulphate of zinc with 1 qt. water. Shake up and apply a little to the affected parts twice a day. Also divide 4 ozs. sulphate of iron into twenty-four doses and give one twice a day in bran mash until all are taken.

Chronic Lymphangitis.—J. A. C. has a horse that has had a swollen leg for a year. It is itchy. Mix 1 oz. acetate of lead and 2 ozs. tincture of arnica with 1 quart water and bathe the leg twice a day with a little of it. Also mix 4 ozs. sulphate of iron and nitrate of potassium. Divide into twenty-four doses and give one a day in bran mash until all are taken.

Lymphatic Derangement.—F. M. M. has a heifer that is attacked in the following manner: The hips, rectum and back part of the udder swell and remain swollen for six hours, then the swelling disappears. The heifer acts as if she was in pain as long as the swelling remains. Give 1-2 lbs. opium salt dissolved in water at a dose. After the physic operates give 1 oz. nitrate of potassium at a dose twice a day and continue for one week.

Indigestion.—E. M. B. has a horse that eats well, but keeps thin. Also a dog with sore eyes. 1. Boil one teaspoonful of flaxseed in a pulp with water and while hot pour it on half a pail of bran and make a mash of it. Give a mash of this kind, when cool, once a day with one of the following powders in it: Mix 4 ozs. sulphate of iron and 4 ozs. nitrate of potassium. Divide into twenty-four doses and give one a day in bran mash until all are taken.

Improving the Dairy Herd.—Grade cows bred to a grade bull will usually produce scrub calves, and it seems that the calf, instead of taking the good that is in the mother, harks back to some poor ancestor on either side or both sides of the family and digs up all that is bad and disreputable as a dairy performer and comes into dairy usefulness as a booby.

The secret of good breeding is to use a sire that is pure bred and a good one individually. It is the length of time that pure bred dairy animals have been held to that line that makes them prepotent or more apt to produce their like.

space about one rod wide and two or three rods long, fenced off for this purpose. This is divided into two parts, one division being used for the sows, the other for small pigs. Each is fitted with a gate, which should swing easily and be large in order that the