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xtension Division Notes.

By A. D. Wilson, Supt.

o not wait until spring to clean grade your seed grain. Do it now, ile you have plenty of grain at hand m which to select. The best 25 shels of grain out of 100 bushels is rth much more for seed than is the in that can be cleaned from a much aller amount in the spring. The t of thus cleaning and grading the in is very slight, and it enables one have heavy, plump seed grain at y little outlay.

The most desirable communities in ich to live are the communities in ich people work nicely together d co-operate in the various enter- ses common to the community. We ve a letter from one of the Farmers' ubs in the state, stating that they ve recently purchased 80½ tons of an, through their club, at a saving their members of from $2 to $3 per n. Such things are possible only by rking together.

One of the problems that should re- ive the attention of every rural com- unity this winter is the matter of ral school consolidation. While it is t practical for every community to nsolidate at this time, the advan- ges and possibilities of consolidation ould be known and considered by eryone. Consolidation is one of the eat modern movements that will id to interest boys and girls in coun- life, increase the value of farm operty, and better the conditions of e in the country.

Organize a Farmers' Club in your mmunity, and by so doing improve e social advantages of your own nily and of your neighbors. Dur- the busy season, when one seldom es his neighbors, a feeling of indif- rence is likely to grow up in a com- unity; which is, to say the least, desirable. Calling a meeting by meone will give many people in the mmunity pleasure, add to their in- rest in other people, and create a eling of friendliness and helpfulness nong all; and, if the meeting results a permanent organization that will ll the members together at least ce a month, it will result in great od to the community.

There are three important reasons hy the small independent farmer can t get the best prices for his prod- ts. In the first place, he has but a nall amount of any one thing to sell, id it maks very little difference to e dealer whether he gets his small siness or not. In the second place, e dealer who buys his products must so buy from a number of other small rmers, with the result that what he ts in any community is, as a rule, t uniform and must sell as mixed uff and at a low price; consequently, e cannot pay as much as in many stances the product of the individual rmer is worth. The third condition that, as a rule, the small farmer has s product at a town or terminal mar- et where, if he does not sell, he is nder considerable expense to hold his roduct or to get it back to the farm. y co-operation farmers can produce niform products. By co-operation in elling, they can offer for sale large uantities which will attract buyers; nd by bringing the buyer to them, hey can either sell their product for hat is offered, or hold it on their arms until a better price can be ob- ained. What co-operation has done or the butter trade it can do for other roducts.

Have the cows come fresh in the all. If this practice were followed eneraly, there is little question but hat at least 50 pounds of butter-fat er year would be added to the aver- ge product per cow in the State. Having cows freshen at this time rings the heaviest milking during the inter, when one has the most time. t brings the care of the calves in the inter; it allows the feeding of the kim-milk to the calves in the winter, hile they need it; and to the young igs during the early summer, when means so much to them. Calves ropped in the fall are ready for grass s soon as it comes in the spring. ows freshening in the fall will, if ell cared for, give a good flow of ilk in the winter; and when the rass comes, a good flow during the arly summer; and most of them will e dry during harvest and fall work, hen there is plenty to do without a ot of milking. The average price of utter-fat will also be higher, because f a larger portion of it being pro- uced during the winter, when prices re invariably higher than in summer.

Short Course in Horticulture.

The Extension Division of the Minnesota College of Agriculture—having mainly in view the need of our fruit-growers for instruction in the improved methods of cultivation and marketing, the use of which is necessary if they are to make the most of the rich opportunities lying before them—proposes this winter to hold "Short Courses in Horticulture," in such communities as desire them, and which will comply with certain easy conditions. Each Course is to cover a period of six weeks, one day in each week; the intervening days to be occupied by the students in home study of the subject discussed on the lecture-day preceding. The information sought to be conveyed through these Courses will be of great value, not only to fruit-growers, but to those interested in market-gardening and in the beautification of country homes and villages.

Circulars giving full particulars will be sent on application to the Secretary of the Extension Division, University Farm, St. Paul; with whom, also, a date may be arranged for a Course at any eligible point.

Live Stock Notes.

By A. D. Wilson, Supt. Extension Division.

The successful stockman must know what each of his animals is doing each day. With the dairy herd, it is comparatively easy to keep track of each day's record, simply by weighing the milk each time the cows are milked. It requires but a fraction of a minute's time each milking, and enables one to know at once if for any reason one or more cows are falling off in their milk; and to remedy the cause before a serious loss has been sustained. Testing for butter-fat need not be done oftener than once or twice a month; but the milk should be weighed at each milking.

It is not always the heaviest feeders who get the best results. Every animal requires certain nutrients, that enable it to perform its best work. If these nutrients are not supplied in the proper proportion, it means that the animal must consume and adjust larger amounts of some of the elements that it can use, in order to get enough of the others. Economical feeding requires that nutrients be supplied to animals in the proportion needed. As a rule, farm feeds are lacking in protein. This is especially true this year, when there is a scarcity of clover hay. If one is feeding cornstalks, or wild hay, the farm grains will supply enough protein to meet the animals' needs for best work. This is especially true of dairy cows and young stock. When this form of roughage must be fed, some such feed as bran, middlings or oil-meal must form a reasonable proportion of the grain ration, in order that the protein supply may be maintained.

Just as one enjoys eating an apple occasionally — especially during the winter, when less fruit and vegetables are used than during the summer—just so the live stock in the winter, when their rations consist largely of dry feed, need and appreciate some form of succulent food. There is very little added expense in supplying animals with a reasonable amount of succulent food, either in the form of roots or silage. For a herd of 12 or more cows, this succulent food is most cheaply supplied by the use of silage; but for the smaller herd, or for a man without a silo, roots afford an excellent substitute for silage.

By care in preparing the soil and growing the crop, from 15 to 25 tons of roots, like mangels, rutabagas or stock carrots, can be grown per acre. They can be stored under the feeding-alley, or in a pit outside of the barn, at very little expense. Twenty tons of roots will supply 10 cows 20 pounds per days each for 200 days, and can be grown and harvested at a cost of less than $40. The nutrients contained in 20 tons of roots are worth $30 when bran is worth $20 per ton; so the feeding value of the roots is sufficient to pay for the cost of production, beside the additional advantage of their supplying the succulence needed by the animal.

Based on the average farm price of feeds for the last ten years, oats are worth on the farm $19.37 per ton, and have a feeding value of $21.10; barley is worth $17.50 per ton, and has a feeding value of $21.98; corn is worth $13.63 per ton, and has a feeding value of $22.66. In other words, at the average farm price, a dollar's worth of feed in oats costs 92 cents; in barley, 80 cents; and in corn, 65 cents. The feeding value is figured on the basis of bran at $20 per ton. On this same basis, a dollar's worth of food nutrients could be supplied in clover hay for 40 cents; in fodder corn 57 cents; and in timothy hay for 60 cents; in ensilage for 78 cents.

In view of the above facts, it is plain that a combination of corn and clover will make a most economical feed.

Orchard Protection in Winter.

There is yet time to protect the orchard trees from mice. Clean away weeds and trash about the trees, and bank each one with a nice eight or ten-inch cone of soil, free from trash. The work may be done with a spade or shovel. Take the soil from near the tree, and in the spring it should all be worked back into the hole thus made.

To protect from rabbits, get a good shotgun, a good dog, and put a keen, small boy with a box-trap, at work just now. Catch and kill all the animals possible, before winter closes in. Also wrap the trunks and larger branches with veneer wrappers, swale hay, cornstalks, burlap or paper. Avoid tar paper. This wrapping will have the added usefulness, at the same time, of protecting the vital parts of the tree from sunscald.

If snow has been customarily drifting in so that rabbits have eaten the tops of the trees, go back some two hundred feet to the windward of the orchard, and construct a temporary snow-shed. This can be nicely done by driving stakes, putting on two wires, and hanging brush, cut from the timber, on them. Or a loose board fence, made from old lumber about the place, will serve efficiently.

If these suggestions are impracticable, as they will be in some locations, and if rabbits are numerous in spite of trapping and killing, it will be a good plan to keep the tops above the snow covered with fresh, concentrated lime-sulphur wash. Poisoned corn may be used for the rabbits with perfect safety. Soak the kernels in a strychnine solution, and place them out about the trees, taking them up in the morning before stock or poultry can get to them. The rabbits will die nearby, and the bodies can be collected and burned.—K. A. Kirkpatrick, Extension Division Minn. College of Agriculture.

On The Lawn.

When the ground freezes, the lawn should be mulched with several inches of barnyard manure. Avoid that which is largely trash or bedding, if possible. The leachings during the winter and spring will stimulate a rapid and luxuriant growth, and this is one of the best features of the manure-mulch in the fall.

The manure-mulch should also be applied to the hardy perennial borders; and about the shrubbery. The tops of the herbaceous plants should be cut to within two or three inches of the ground, and the mulch applied right over the crowns.

With tender shrubs and roses, that must be protected, avoid swathing them in burlap, paper, or cornstalks, to stand like mute Egyptian mummies, marring the view all winter long. Just as good a plan, as far as protection is concerned, and a far more pleasing one, is to drive some stakes, bend the tops down when no frost is in them, and tie them down with wires or small ropes. They may then be covered with leaves raked fromt he lawn, forest leaves or trashy manure. If the location is exposed, a twelve-inch board may be staked on edge about the group, to prevent the mulch being blown off. The covering should be several inches deep. If the lawn has been kept clean from weeds and trash, and there are no seeds or grains in the mulch, mice will not bother. In the spring, at the proper time, the covering can be removed and the tops pulled back into position.—K. A. Kirkpatrick, Extension Division Minn. College of Agriculture.

Household Suggestions.

Cold weather is upon us, and with it the time for putting on storm-windows and doors.

Remember to have at least one storm-window, in each room, hung on hinges so that it may be opened to admit fresh air.

Beds, bedding, and sleeping room should be aired each day during the winter months, as well as during the warmer weather.

Opening opposite windows in the living room occasionally, during the day, will change the air of the room, and be a benefit especially to those who must remain indoors most of the time.

Don't forget to have the windows in the kitchen easily adjustable. A goodly supply of fresh air is necessary to the comfort and efficiency of the persons working in the "laboratory," so closely connected with the welfare of the home.

When washing the outside of windows in cold weather, use kerosene, and avoid putting the hands in water.

Sprinkle a soft cloth with the oil and rub the window-glass with this. Allow it to remain on a short time; then wipe the glass with another cloth, and finally polish with either another cloth or a piece of soft paper. —Mary L. Bull, Extension Div. Minn. College of Agriculture.

Dressing and Shipping Veal.

The best age to market veal calves is when they are about six weeks old and weigh from 90 to 125 pounds, dressed. Young calves weighing less than 60 pounds—or, in Minnesota, when less than 4 weeks old—are condemned as unfit for food. Veal must be well fattened to bring the top market price. Skim-milk calves never sell as well as whole milk-fed calves.

In dressing veal calves, select a dry, clean place, where the calf can be suspended by means of a pulley and rope attached to its hind legs. Stun it with a hammer, and then stick with a skinning knife, just in front of the brisket, opening up the throat along the midline. If the calf is hung up for bleeding, there is no danger of blood going back into the chest-cavity and soiling the carcass on the inside.

Remove the head by skinning on each side down to the throat. Remove it from the body at the "atlas joint," where it can be easily taken off. Skin out the front and hind legs, up to the knee and hock-joint, where the legs should be cut off. Remove the internal organs by opening the midline the full length, from top to bottom. Remove everything except the liver and kidneys. Veal with the liver removed often sells one-half cent below market quotation. Do not wash the inside of the carcass, but take a warm, damp cloth and wipe out all particles of blood.

Spread the opening in the carcass, and hang in some place where it will cool. Every shipper of veal should be careful about this point, as much veal is spoiled because it is not properly cooled before it is shipped. A cold cellar, or the top of the opening in a well, is a good place. After it has been thoroughly cooled, prepare for shipment.

Either wrap the carcass in burlap, or sew up tightly the opening in the midline with some stout cord. The hide, which has been removed from the head and legs, should be tied securely to the throat and shanks, so as to keep the carcass from gathering dirt. The Minnesota law requires that all veal transported from one place to another must be protected from dust, flies, or other vermin if it is to be offered for sale.

Fasten the shipping-tag, with the name and address of the one to whom it is to be shipped, plainly written, securely on the carcass. Also, be sure to put the name and address of shipper on the tag.

Veal should always be shipped by express, unless fast refrigerator freight-service can be had. Manage to get the veal to market about the middle of the week, because on the last day and first two days of the week there is not much demand for veal. Most retail dealers buy their supply of veal for Saturday's trade before Friday noon.—W. H. Tomhave, Extension Division Minn. College of Agriculture.

Corn Clubs.

The adaptability of corn as a grain and forage crop is fast gaining wider appreciation among our farmers. Each succeeding year proves more conclusively that corn is a safe crop for a large part of this State. Wherever failures have been met, they can be attributed to one or more of three causes! namely, growing too large a variety, using seed of poor vitality, and improper care during the growing season. Each of these is a condition that can easily be remedied if farmers of every community will get together and exchange ideas relative to their failures and successes.

To afford a means of accomplishing these ends, and of making possible still greater things, the organization of a local Corn Club is recommended. An organization of this kind, whether it be among the boys and girls engaged in Industrial Contest work, or among adult corn-growers, can be made to bring about a great many improvements in corn-growing. With every club member supporting it in the right spirit, the club meetings should afford not only ample opportunity for an exchange of ideas and experiences, but also for framing definite plans for a broader study of corn-growing. It should stimulate a friendly rivalry that is bound to bring benefits to all participating.

Without question, a good, active Corn Club will arouse interest in every phase of corn-culture, which should bring more and better corn per acre. To this end let us have a good Corn Club in at least every county in the corn-growing section of our State.—O. M. Olson, Extension Division Min. College of Agriculture.

Every feeder of live stock in the state should have a copy of Extension Bulletin No. 12. This bulletin deals especially with the feeding of dairy cows; but the principle of supplying the needs of animals is so plainly stated, and the comparative value of feeds so forcefully shown, that it is of value for a feeder of any class of stock.

Co-operation in Marketing Fruit.

The appetite for fruit is universal. It characterizes all races and conditions of men. Of all foods, fruit is the most natural, wholesome and refined. The appeal it makes is not alone to appetite, but to taste, smell, and the sense of beauty as well. One would imagine, then, that fruit should be of all things the easiest to market, and therefore the most profitable to cultivate.

That the real conditions should anywhere be the reverse of this, affords one of the most striking illustrations of the fact that present methods of collecting and distributing the products of the soil are—except in a few instances of recent improvement—altogether askew and out of harmony with common sense. No doubt the abnormal spread of our population, over an area six or eight times as large as that needed for the best development of social economies—thus vastly enhancing the difficulties of co-operation, transportation and distribution—is accountable in a great measure for the fact that, while in the centers of population fruit of all kinds commands enormous prices, millions of dollar's worth yearly perish on the farms where grown.

But that, by co-operative endeavor, all difficulties may be overcome, and fruit brought within the reach of consumers at prices which the multitude can afford, and yet high enough to yield good returns to the grower, is being demonstrated by the successes attending the operations of fruit-growers' asosciations already organized.

Conspicuous among these is the California Fruit-Growers' Enchange, whose growth and methods of operation are described at length in the Yearbook of the Department of Agriculture for 1910. From a small beginning twenty-three years ago, and through many educative experiences, it has grown to a mighty organization, representing 6,000 growers, divided among 100 or more local associations. It now handles 60 per cent of the citrus fruits grown in California; and handles it in such a way that both waste at home and overstocked markets at the points of distribution are alike practically eliminated; assuring a handsome return for his crop to each one of the associated growers. Similar but smaller associations, not connected with the Exchange, handle along kindred lines about 25 per cent more of the California crop; leaving only 15 per cent to be marketed by individuals.

The success of these California organizations, in the face of transportation problems more difficult far than any to be faced in the Middle West or East—since the fruit grown on one side of the continent had mostly to be marketed on the other side or in Europe, and must face the climatic risks of all latitudes,—should make it apparent that if similar organizing ability should be applied to the marketing of Minnesota fruits, none of the waste and loss, of which so much has been heard this season, would much longer occur.—C. R. Barns, Extension Division, Minn. College of Agriculture.

The Draft Horse.

The breeding of draft horses has come to be a very porfitable adjunct to diversified farming, and at no time during the last fifteen or twenty years has the price been higher for good draft and heavy farm horses. While the automobile may, to a certain extent, have replaced the horse for city delivery, still the bulk of the farm work is done with horses; and prices for good stock are as high or higher than ever. There is not the demand for medium-quality and light-weight horses that there used to be, but good, smooth draft and heavy farm horses are bringing good prices. There is little reason why the farmer should not continue to raise horses of this kind, since brood-mares—and stallions, too, for that matter—will produce stronger and better colts for having been kept steadily at work on the farm.

On the home farm we have raised some of the cleanest, best colts, and worked the mares right along. There are certain conditions under which it does not seem to be practical to put the breeding stock into harness, but on many farms these conditions are not met. Where a farmer must rely almost wholly on hired help to drive his teams, it may not be practicable to put pure-bred stock into harness. If the farm boy shows an interest in horses, raise some good drafters. Put a good harness on them, and tell the boy this is his team to work, and there will be no question about the care they will get. You will find the boy, after a day's work, out currying off the horses, making sure they are comfortable. I speak from experience, and know that when these horses are offered for sale they will bring a good price.—Geo. P. Grout.