[CONCLUDED FROM PAGE 1.]

require a large loft. From five to seven tons of hay may be put in a loft measuring 30x15x6 feet in the square up to the rafters. The ground floor of such a building 30x15 feet-450 square feet. Allowing 9 square feet for each sheep, including each room, gives us room for 50 ewes.

In a room of such size the racks for feed should be built permanent to each side wall. With doors in each end of the building a cart may be driven through to remove the manure. Both sides give us 60 feet, and allowing 14 inches for each sheep standing to the rack we have it thus, 60 feet by 12 inches-720 inches by 14 inches-51 spaces, or each room enough for 50 ewes to all stand at the rack at the same time as it should be; in fact there should be two or three empty spaces.

There are many styles of racks used, but I will give this, which seems to suit my sheep best, and which I partly planned and built SAMUEL ARCHER. myself. Marion, McDowell Co., N. C.

HANDLING DAIRY PRODUCTS IN HOT WEATHER

Correspondence of The Progressive Farmer. A good deal of the success of dairying in hot weather is knowing how to handle the milk, cream, butter and cheese so that there will be no waste through spoiling. A successful dairy should have its liberal supply of ice, and the dairyman who fails to make provisions for this is pretty sure to lose in the end. Very few dairies are so situated that they cannot lay in a stock of ice in winter which will meet all their requirements in summer. When milk is first obtained it needs chilling as of tillage is concerned; but respond and shredding one and a half to two soon as possible and a low tempera- wonderfully to deep and thorough tons of forage per hour. From this ture maintained continually. Now, if we can check the growth of bacteria sufficiently the milk and cream can be kept indefinitely. Yet some will have their cream spoiling within ten hours after milking, and they will attribute their loss to bad luck.

But absolute reliance cannot be placed on ice. This is not the only way of saving the milk and cream that the farmer has placed at his disposal. Ice is necessary, but there is something else more necessary, and without which even ice is of little use. That other thing is cleanliness. Now, to some the idea of cleanliness acting as a preserver of milk and cream may seem a little absurd, but nevertheless there is nothing so important in the dairy as this. When the cans and milk pails are not thoroughly cleaned and sterlized from the last milking tens of thousands of bacteria will lurk in the cracks and corners, and when the new milk is poured in they will swarm throughout the mass. The bacteria are the direct cause of the milk and cream souring. We chill the milk right after milking in order to stop their multiplication. Heat nourishes them and makes their growth rapid. When the bacteria are left in the unclean milk utensils thousands of them are immediately mixed with the new milk, and they begin to cause the fluid to sour, no matter how soon the chilling process may begin.

There are only two absolute methods of handling the dairy products successfully in hot weather, and by observing them one is almost assured of no loss. The milk should when first obtained be aerated and chilled. This should be done as quickly as possible, and in the most cleanly manner imaginable. After aerating and chilling, the milk and cream should be stored in the dairy where the temperature is kept at a uniformly low figure. Beware of opening the door to this storage room more than necessary. Outside draughts of air will cause a warmer current to pass over the milk and injure it. The next requirement is to see that absolute cleanliness is observed in the dairy, and that every pan, pail and kettle is washed thoroughly in hot water after each milking, and just before using any one of them for the new milk sterilize it. This is simple enough. Put all of them dairy room or old milk will be destroyed, making the utensils absolutely fresh and clean.

C. S. WALTERS.

As long as mankind shall continue to bestow more liberal applause on their destroyers than on their benefactors, the thirst for military glory will ever be the vice of the most exalted character.—Gibbon.

GIVEN BEST OF SATISFACTION.

Keyser, W. Va., Oct. 10, 1899. Please send some advertising matter for your CAUSTIC BALSAM. I have sold several bottles and it has given the best of satisfaction. was the first one around here to carry it in stock. Please send some cards, banners, etc. L. L. KINES.

# Farm Miscellany.

IMPROVED IMPLEMENTS.

Prof. F. J. Merriam, an occasional Progressive Farmer correspondent, has the following thoughtful letter in a recent issue of the Tri-State Farmer and Gardener

The man who tries to farm nowadays, with a scooter plow is away behind the times, and laboring under terrible disadvantages. He can neither prepare land, nor cultivate it properly, and the result is that his soil will not begin to yield with his neighbor's, who has improved implements wish which to cultivate it, and with whom he most come into competition.

spends a portion of his time with a too much. You cannot pull fodder pencil and paper figuring out the cost by hand and feed it profitably to catof the crops he raises and seeing wherein this cost may be reduced. If | horses, and is unquestionably a splenhe figures correctly, it will not take did food, and the horses relish it; him long to find that labor is his but for mules and cattle we must dechief bill of expense and that a tool which will save the labor of a man will very soon pay for itself and bring a handsome return to the in, saving untold hundreds of dollars owner, to say nothing of the superior quality of work which can be done.

When preparing a piece of land we

would hardly know what to do without our big plow with which to break the soil deeply, and our cutaway, smoothing harrow and roller, however, be obviated to a certain exto work it down fine. It is a matter of impossibility to fit land properly community clubbing together when without these tools, or others of a they can all reap the benefit with similar character, including the Acme harrow, especially on old, or so- McCormick people whose advertisecalled worn-out land. These lands ment appears in this paper, make a are worn out so far as producing fine machine with a capacity of crops with the scooter plow method shucking 25 to 30 bushels of corn, cultivation. There is an old red hill you can see that one machine in a on our place which has been in cultivation since away before the war. We did not try to do anything with work cheaply and well, but we must the place, it looked so poor and the friends who have followed me thus weeds and broomsedge were so thin far in these articles, will admit the on it; but last fall when we had time | necessity of new and improved tools we went in there with a big two- to put into successful practice the horse plow followed by a two horse new methods of farming. They will subsoiler, then worked the land also admit, I think, that it is next to down and planted to oats, using impossible to succeed and become the acre, as a fertilizer. The oats and also that the farmers who read were sown rather late and the cold and adopt these new methods are the killed them out so badly they did ones who are getting ahead. You pay to cut. I would have re-sown admit all this and then you straightin the spring, but annual spring way begin to make excuses and say drouth usually cuts this crop short, that you cannot afford to buy these and I did not not like to risk it, so things, that they are all right for the we waited until May and sowed the man who has plenty of money with land down in cow peas, using about which to pay for them, but as for a bushel of peas to the acre. At the you, it is more than you can do to present writing, June 28th, the vines meet your daily expenses, to say stand knee high and are growing nothing of paying out money for vigorously, while the hill looks like anything but a poor piece of land.

the improved implements cut even a where, and the sooner you begin, the larger figure than in preparation, the one-horse cultivator doing double the work of a scooter and scrape, and leaving the land level instead of in ridges. With this tool properly tain them quicker than you will adjusted we can often take a cotton think. It is not necessary that you row at one passage, while twice to the middle will clean most corn rows. I have seen men plowing corn with a shovel plow, going five and even seven times to the row, and in corn that would not make over ten bushels to the acre. What such corn costs the producer if his time is worth anything at all, I should hate to say.

We have done a great deal of work among small stuff this season with a cultivator containing fourteen small teeth. This cultivator takes the ground better than a harrow, and with a dust board or block attached farm was continually buying some behind, leaves everything perfectly smooth and gives little opportunity to ruin. They told me he was heavfor evaporation during dry weather. | ily in debt, and I did not wonder at The horse weeder is also an import- it after one look at his place. ant implement among young crops if your hand is smooth and free from

very wet and grass has obtained constantly keeping in touch with quite a start, we are now using the each other and movements are now small ten-inch sweep on the Planet Jr. cultivator to clean our corn. The in boiling water, and then any Planet Jr. hand wheel hoe is an in- Europe this summer will be imported valuable tool among small garden living specimens of a tree-inhabitanttruck, especially where the rows are ing beetle that eats the caterpillar of close together, and it will easily do the gipsy moth, and which will very

> It has always been a mystery to East. me why more people do not own planters and seed sowers. Especially the latter, if they have any quantity of small seed to sow. This tool puts the seed in evenly, any desired depth, and in a perfectly straight row, making them much easier to work out and cultivate afterwards. The first cost of these tools amounts to noth-

ing when we take into consideration the enormous amount of labor they

When we come to harvesting machinery, the saving in labor is greatest of all. Here, inventive genius has been given its widest scope and the results while costly to the purchaser at first, are wonderful in their efficiency and final economy.

One of my neighbors when asked which improved farm tool had paid him best as an investment unhesitatingly replied,"My McCormick mower and hay rake." These machines are a necessity on any well-equipped farm, for only by their use can we gather the large forage crops which are beginning to assume so much importance on the Southern farm. The successful farmer to-day Heretofore our forage has cost us tle. It may do very well for driving pend on pea vines, wheat or oats cut green for hay, and corn cut stalk and all. Here the "shredder" comes to the farmer. It has been estimated that there are enough corn stalks wasted annually in Georgia, to feed all the mules and horses in the State. The only trouble with these machines is their first cost-\$225. This can, tent by a number of farmers in a only a small individual outlay. The community is all that is necessary.

We must not only learn to do our machinery. I know it is, friends, and just how you feel about it; but When we come to the cultivation, you have got to make a start somesooner you will get ahead. All that is necessary is to make up your mind that you must have these improved tools to work with, and you will obshould do it all at once. But commence with the tool you need most, a cutaway harrow, perhaps, or a mowing machine, and when you have secured it see that it is taken care of and kept under a shed out of the weather, then it will pay and help you to get the next most important implement; but don't buy at all unless you mean to take care of There are many books upon the it. I visited a farm some time ago on which I saw wagons, plows, harrows and other tools laying about in fence corners and under trees, in all stages of decay. The owner of this new tool and letting those he had go

The entomologists of Europe and America are working together to As the month of June has been their mutual advantage. They are on foot in the direction of interchanging beneficial insects. From the work of ten men with ordinary likely also eat the caterpillars so common on the shade trees of the

# THE DIFFERENCE.

"When the other fellow gets rich, it's luck, Just blundering luck that brings

him gains; But when we win it's a case of With intelligent effort and lots of

### Horticulture.

SPRAYING AND FERTILIZING ORCHARDS

Correspondence of The Progressive Farmer. In order to get the most from the orchards there is nothing like thorough spraying every season and liberal fertilizing with ashes and commercial and barnyard manures. No surer protection against blights, droughts and other injuries can be conceived. The force of this is not always appreciated. Some times it is necessary to have a lesson brought straight home. Well, if one wishes to learn by experience, take two orchards or two parts of the same orchard, and spray and fertilize one and neglect the other. Keep at it for two or three seasons, in order to make sure of the results. If this does not convince one of the value of spraying and fertilizing, then you are justified in giving up both practices. Some times exceptionally good seasons will not make the difference between care and neglect of an orchard very apparent. When the blights and insects are not around in the orchards much, and the season is well adapted to produce good crops of fruits, even the neglected orchards will show a fair yield; but, then, every orchard in the country is full, and it is no sign of farming that one has raised a good crop. It is the off season that tells.

When all other fruit trees are injured by the blight, insects or dry weather, then is the time that your trees will pay the most if full. It is in the off season that the experienced horticulturist makes his greatest profits. He has fruit to sell when nobody else has, and the high prices he receives for it make his profits large and satisfactory. It costs to fertilize and spray the trees every season; but the work will pay if done thoroughly and economically The spraying should be so thorough on every tree and on every side and part of the tree that no insect is it for several years after we came on save what we make. I think our missed. Only in this way will the tree be absolutely guarded against attack. The fertilizing with ashes and manures should be conducted in the same thorough and economical way. Not a load of either should be wasted. Only so much as the trees and vines need should be used, and some years the soil may get so full that nothing but a little stirring and about 300 pounds acid phosphate to independent farming in the old way, plowing will be needed. We do not wish to overfeed the soil lest it should get sour. Trees growing on rich soil, supplied with ashes, potash and phosphoric acid, will grow so thriftily that they will not be very susceptible to the attacks of insects and blights. They form their own protection in the strong vigorous growth of root, trunk and leaves.

### VALUABLE FARM BOOKS.

A. B. BARRETT.

Principles of Agriculture. By Prof. L. H. Bailey, of Cornell University. Handsomely illustrated. 300 pages Price, \$1.25.

We really do not believe that the average North Carolina farmer can anywhere invest \$1.25 to better advantage than by sending that amount to us for a copy of Prof. L. H. Bailey's "Principles of Agriculture." This is a work which tells the "whys and wherefores"-the principles—of the "business" of farming. It is written by a man of great ability who knows his subject by long years of actual experience and scientific study. The farmer who secures a copy of this work and studies it during his spare moments this summer will not only find much pleasure thereby, but will find greater interest in his work, a broader view of his profession and the probability of making many more dollars as a result of his study. market, but not for many years, we firmly believe, has one been issued which the average reader of this paper so badly needs. The work is handsomely bound, well illustrated, clearly printed and contains 300 pages. Send us \$1.25 and get a copy. We guarantee satisfaction.

A SPECIAL PRICE.

We have now decided to send a copy of this valuable work and a ear's subscription to The Progress. ive Farmer to any address for only \$2. This offer is made at a sacrifice in the hope of placing the work in the hands of more of the thousands

Fertilizers. By Edward W. Voorhees, Professor of Agriculture in Rutger's College and Director of the New Jersey Experiment Station; 335 pages. Price, \$1.

Thousands of dollars are wasted every year on fertilizers unsuited to the land to which it is applied, which money might be saved to the farm ers by reading this book.

We will also send a copy of "Fertilizers," with The Progressive Farmer one year for \$1.85. Or on the two books we make this-

SPECIAL OFFER: We will send

The Progressive Farmer 1 year \$1.00 Bailey's "Principles of Agriculture"..... Voorhees' "Fertilizers".....

All for \$2.80.

BETMER-BAUMAN DAVIS-CHAMBERS

ARMSTRONG & MCKELVY

PARMESTOCK ANCHOR Cincinnati. ECKSTEIN ATLANTIC BRADLEY BROOKLYN New York. JEWETT

ULSTER

UNION

BOUTHERN Chicago. SHIPMAN COLLIER MISSOURI St. Louis. RED SEAL SOUTHERN JOHN T. LEWIS & BROS CO

MORLEY Cleveland. MALEM Salem, Mass. CORNELL Buffalo KENTUCKY National Lead Co., 100 William Street, Now York.

RE you getting what you pay for Not if you are buying Mixtures Barytes and similar makeweight or adulterants falsely labeled "White Lead;" but you can get honest value for every dollar you expend for paint if you buy any of these brands of Pure "ola Dutch process" White Lead (see margin) With Pure Linseed Oil they make the only

paint that will give permanent satisfaction For any color or shade required, use NATIONAL LEAD COM PANY'S Pure White Lead Tinting Colors. Pamphlet sent by

your Saw Mill, even for a few minutes, because of hot boxes. springing or heating of saws, and perhaps ruining your saw. occasioned by the boxes being out of line?

DOES IT PAY to operate that old mill of yours when

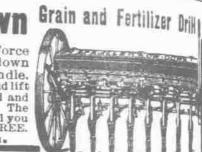
you can make its output from 25% to 331/3% greater, without

increasing your operating expenses? YOU know it don't and WE know it don't. But we have a remedy in our Patent Connected and Pivoted Arbor Boxes and Saw Guide, and the Heacock-King Patent Variable Feed Works. "A dollar saved is a dollar made." You can readily see how much we can save and make for you if you are enough interested to investigate. Our circulars tell much.

SALEM NC.U.S.

is made with EITHER WOOD OR STEEL FRAME. Force feed as to grain, grass seed and fertilizer. Being low-down

feed as to grain, grass seed and fertilizer. Being low-down it is easy to fill, easy on the wheels and easy to handle. Sows all grain perfectly in any quantity desired. Stagger and lift lever. Raising hoes shuts off all feed. Land, grain, grass seed and fertilizer measures all tested and correct. Pin or spring hoes. The easiest draft known. Don't buy a grain drill of any kind until you know more about this one. General farm machinery catalog FREE. Spangler Manfg Co., 509 Queen St., York, Pa.





# **SPECTACLES** Buy Direct from

Perfect Fit and Satisfaction Guaranteed. amination Blanks and particulars, and save ov GLOBE OPTICAL CO., - - - - Baltimore, Mr.



\$5,000 DEPOSIT R. R. FARE PAID 200 FREE

Scholarships offered. %A .- ALA. BUSINESS COLLECE, Macon, Ca.



In Effect May 26th, 1901.

No. 31 12 55 p m 12 10 a m 3 29 p m Baltimore, PRR. Washington, PRR. Ly Richmond, SAL Ry 11 31 p m 205 a m 2 30 a m 3 46 a m 5 37 a m 10 50 pm 630 a m 8 40 a m 12 10 pm 3 50 p m 500 a m No. 31 +7 55 a m

Lv New York, N Y P & N 10 23 a m New York, O DSS Co... +300 pm 630 pm 940 a m Ly Portsmouth, S A L Ry ... 9 30 p m 12 16 am 12 11 pm 245 a m 410 a m 607 a m 7 23 a m 10 50 p m 10 01 a m 10 15 p m 10 20 a m 12 22 pm Macon, C of Ga.. 20 pm Ar Montgomery, A & W 255 a m 640 a m

Daily No. 38 Lv Memphis, N C & St. L...12 45 noon 9 00 p m Nashville New Orleans, L& N Mobile, N&N Montgomery, A & W P., 620 a m AV Macon, Cof Ga. 8 00 a.m Lv Augusta, C& W C 9 40 a m .12 00 noon 8 00 p m Lv Atlanta, † SAL Ry. 2 48 pm 11 23 pm Ar Greenwood 501 pm 2 01 a m 4 10 a m 7 03 a m 7 25 a m .10 35 p m v Southern Pines," 9 03 a m .11 28 p m 250 a m 3 34 a m

4 40 a m 700 a m Ar Washington, N & W S B, .... Ar Baltimore, BSPCo. Ar New York, O DSS Co. Ar Philadelphia, NYP&N, 1546 pm Ar New York, No. 34 Lv Tampa, S. A. L. Ry., 8 00 p m Ly Jacksonville, 10 10 a m Ly Savannah. Ly Columbia, Ly Hamlet. 10 35 p m Ly Southern Pines" 11 28 p m Lv Raleigh, Lv Henderson,

Ar Athens.

1 29 pm 11 30 a m Ar Henderson, 200 pm t6 45 a m +1 30 a m 510 a m 800 a m 800 a m 7 40 p m 2 10 pm 11 45 pm 4 40 a m 800 a m 8 49 a m 1 29 a m 10 42 a m 250 am 1158 am Ly Norlina, 8 35 am 12 43 pm Ly Petersburg, 549 a m Ar Richmond. 6 32 a m Ar Washington, PRR. 3.25 Ar Baltimore, PRR. Ar Philadelphia, PRR. Ar New York, PRR. .10 10 a m 705 pm .11 25 am 11 25 pm ... 1 36 pm ... 4 13 pm

99 Central Street

**Grow Grasses** and Raise Cath

high rank North Carolina takes in yield | pare her advantages for stock-raising will those of other States. Profit by these ich Grow grasses; raise stock. And whether M have few animals or many, you cannot alm

and Forage Plants of the Sull RY J. B. KILLEBREW.

of the University of Tennessee.

It is a complete manual of the ow ture of grasses and forage plants the South. It contains about !

pages, and is written in a style to #

understood by everyone.

The book discusses the character istics of the principal prasses. In maintenance of pastures and mead ows, leguminous forage plants, will pastures, etc. It is fully illustrated with original analytical engraving by Scribner, our greatest grasser pert, and embellished with a large number of half tone cuts of fell operations.

Killebrew's former work on grand is now entirely out of print of brings \$3 a copy. This new books tains all the information in the job mer work, re-written, and embodia the results of twenty years' additions experience of the writer and all the information abtained by the explanation ment stations and the United State Department of Agriculture.

We have 80 copies this valt able work on hand, and, and further notice, will send on copy of "Killebrew's Grasse and Forage Crops" to any ad dress for only 25 cents. Or one copy Free as a pro

mium for \$1 in new subscrip tions to The Progressive For Or one copy with The Pro

gressive Farmer one yest any address for only \$1.15. Address all orders to

The Progressive Farmer,