ATTIME THE FARMERS. The Agricultural Experiment Station at Raleigh, N. C. Describes Same of Its Work-Read the

Questions and Replies. . Екрекивки 16, 1593. Publications of the Experiment Station.

by are free to residents of North Caronna. Apply to Dr. H. B. Battie, Director, Raleigh, N. C. Some late interesting bulletins are: No. 89. Co-operative Field Tests during 1891 and (892. A bulletin of 47 pages, containing the results of field experiments by practical farmers under the direction of the Station. These tests embrace fertilizer tests with cotton, corn and tobacco, together with variety

tests of cotton and corn. No. 81. Feeding Cotton-seed Hulls and Meal for the Production of Beef 28 pages devoted to the profit and loss of this feeding, and final encouraging results. All feeders for beef who use cotton seed products should have this bulletin. In this connection technical bulletin No. 4. on digestion experiments, will be found interesting.

No. 83. Growing Celery and the Cultivation of Onlons. A practical treatise of 20 pages giving details of treatment. No. 84. Some Enemies of Truck and Garden Crops. A bulletia of 26 pages giving the insects and diseases affecting beans, cubbage, belery, strawberries, and tomatoes. Also remedies for

exterminating them. No. 86. Tobacco Curing by the Leaf Cure and the Stalk Processes. Gives a description in 32 pages of the test to show the comparative results of the two methods of curing yellow tobacco. The leaf cure gave tobacco which sold at \$63.14 for the half acre tested, while the stalk cure gave \$68.29. Extracting the cost of curing, &c., not common to each, there was a net value of \$20.66 for the half-acre in favor of the leaf cure. The bulletin describes all details from beginning to end.

Facts For Farmers. A bulletin was written to be read by farmers. The subject was one which all farmers wish to learn more about, and was chosen for that purpose. It was written from the farmers' standpoint and will be supplied free to all farmers who write for it. If you do not want it, don't send for it.

The bulletin is No. 79, of 24 pages, recently issued by the N. C. Agricultural Experiment Station at Raleigh. Every man who farms should become acquainted with the structure of plants and the forces exerted by them in growing: how they take up food from the soil and air, and how they store it away, and the best plans for their cultivation and care: how stable manure may be preserved and utilized; how lime acts upon the soil, and what soils are most benefitted by its application. 'All these are treated in a plain. practical way in this bulletin. Green manuring is also fully described, as well as the value of recuperative crops and the proper rotation of crops. Some may say that a discussion of these matters is not truly experimental in their character, and does not belong in the bulle-'tins of an experiment station. It is pretty well settled, however, from the favor with which the farmers have received this bulletin, that they appreciate its pages.

Farmers Who Read.

There are now on the mailing lists of the N. C. Agricultural-Experiment Station, which have just been revised. 13,000 names of farmers from North Carolina. The bulletins are mailed free to those who request them and show their appreciation by reading them. All the newspapers in the state receive each publication of the Station as it is issued, as well as various news notes which interest the general read-The bulletins contain matters which are of immediate interest and value to the agriculturists of the State and are written in plain language for unscientific readers. Agriculture is based on science, and accordingly scientific matters nesessarily receive attention at the Station. The result of these scientific experiments are not included in the general bulletin issue, but are printed in technical bulletins, sent only to scientists, and those who especially request them. Summaries of the technical work appear in the general bulletins of the Station. Publications are sent free to all within the limits of North Carolina upon application; to others a small fee is charged. Lice on Chicks.

Lice and mites are cruelly tormenting to sitting hens, and destructive to the young chicks upon which they come from the mother hen. A good remedy is the kerosene oint-

ment. Formula No. 4 Bulletin No. 78 of the N. C. Experiment Station. This should be rubbed on the heads of chicks a week old, and sitting hens should be well rubbed with it under the wings and tail, when placed on the nest, and again as soon as the eggs are hatched. This ointment may be used to rid dogs and other animals of parasitic pests. The cintment is made as fol-

Flour of sulphur, - 2 ounces. Kerosene, - 1-4 pint-Directions: Mix the lard and sulphur, then add the oil and thoroughly mix. Keep in a tight can or jar. Apply by rubbing-not for internal use. - Gerald McCarthy, N. C. Experiment Station.

Harvesting the Corn Crop. There is a serious loss in harvesting corn in the usual way of pulling Yodder and plucking the ears, Some recent Experiment Station work serves to bring this out in relief. Mr. J. II. Patterson, of the Marvland Station. publishes some rtter showing the location of the dry matter of the corn plant in three crops examined. Coeflicients of digestibility are given, with composition and total digestible produet of ears, topped fodder, blades, husks and stubble. The results show the ears and blades to have been only 50.59 per cent of the dry matter of the crop. The other parts usually neg-lected by our farmers consequently amount to 49.41 per cent, or at least

Of the digestible matter 55.08 per cent only was contained in ears and blades. Thus hearly 45 percent of the digestible matter of the crop would be lost by taking only ears and blades

The digestibility of coarse fodder, rich in carbohydrates, is greatly increased by feeding with highly nitrogenous materials, such as cotton seed meal. So it would be possible for one to get almost as much digestible food out of the corn stalk left to rot in the field as is saved from the crop in ears and pulled fodder.

The simplest way to get the most food out of the corn crop is to cut close to the ground with short-handled hoes at about the time the fodger would be

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E. T. Bosr, President, R. A. BROWN, Treas., H. L. J. Ludwig, Sec.

rulled, and cure in a sile. Lacking the sild out the corn in the same way a few days later, or about the time feel-der is generally pulled, and shock in the field. Put 400 to 600 pounds in a shock and stand the buts out open conough to make the shock stand firm and let in the air to dry the corn. Bind the tops tight to hold together and

keep out rain. When cured, shock out the ears, and cut what is left, known as stovers (the stalks, blades and shucks), into inch lengths. Feed to cows or work teams with cotton seed meal, wheat bran, or such other nitrogenous materials as can be most readily obtained. For nearly balanced ration, feed one pound of-meal to four of stover and two of oat straw. The stover alone, fed freely, will support an animal at rest and not giving milk. F. E. EMERY,

Agriculturist, N. C. Exp. Station. The Horn Fly. The horn-fly (hæmatobia serrata), an insect pest of cattle, has spread all over the Atlantic States from a single center near Philadelphia, in 1887. is a well known pest of Southern Europe, and will probably prove more

hurtful to the Southern States than to those having a colder climate. The fly is about one-half the size of the ordinary house-fly, which it otherwise much resembles, but is more



(The short line snows exact size ) These pests settle on the coat of the animal, in some place where they cannot be reached by the tail or tongue, and then they bite and suck the blood. They often swarm in such vast numbers that the annuals are rapidly depleted in flesh. Milk cows, especially thin-skinned Jerseys, suffer cruelly, and often fall off one-half or more in milk. The insect does not seem to

trouble horses or other animals. This fly lays its eggs in the fresh droppings of eows, and these hatch in-to tiny whitish maggets, which live in the dung three or four days. They then burrow a half inch or so into the ground beneath the manure, and remain quiet for about five days, at the end of which they emerge as winged flies. The number of generations in a season will depend upon its length. In the South there may be twelve or fifteen.

This fly has a habit of settling around the base of the cow's horns, which has led to many absurd stories about its eating the horn. The fly has no jaws. It can pierce with its lance, and suck with its proboscis, but never injures parts except where blood may be found. It settles upon the horns to rest, as the cow cannot easily dislodge them from this place. When after food it settles. by preference, between the shoulders, along the belly and udder. Also, along the "escutcheon," and at base of tail.

Remedies: Remove all fresh droppings as soon as possible from stable. In pastures it will pay to send a man through every two or three days, and sprinkle kerosene oil or emulsion on all fresh droppings. Fresh powdered lime will do as well, but lime decomposes the nitrates, and causes the loss of the most valuable part of the ma-

As preventive measures, rub the parts where the flies most congregate with axle grease, or tallow, to which has been added a little crude carbolic acid, or use fish oil. This will drive the flies away, but the application must be renewed once a week.

GERALD MCCARTRY, Entomologist N. C. Exp. Station.

QUESTIONS AND REPLIES. The Station will be glad to receive any question on agricultural topics any one may desire to send. Address all questions to the "N. C. Agricultural Experiment Station, Raleigh, N. C." Replies will be written as early as possible by the member of the Station staff most competent to do so, and, when of general interest, they will also appear in these columns. The Station expects, in this way, to enlarge its sphere of usefulness and render great assistance to practical farmers.

The Corn Bill-bug. Enclosed find a little insect that is very destructive to corn on bottom lands and lands adjacent to lowkands. I wish to know their name and the best way of dealing with them.—D. C. M., Ashpole N. C. (Answered by Gerald McCarthy, Entemologist

The insects are the corn bill-bug, (sphenophorous sculptilis.) This is a semi-aquatic insect, which broads inrotten, wet wood. It is never troublesome on high or dry ground. The remedy is drainage where possible, keeping low fields free from rotten wool, and planting corn only on uplands in localities where this insect is known to be troublesome. To save the present crop a small handful of the kerosene-lime powder, made according to formula No. 10 in bulletin 84 of this Station, may be dusted on each hill of corn, or along the drill. Paris green will do very little good in this case, and its use is not recommended.

What Season of the Year Is Best for Pruning Fruit Trees Is It Adv sab e to Muich Strawperries?

Please inform me what senson of the year you regard test for pruning froit trees opench, therry and apples. I have some trees which need pruning, but do not know when to have them primed with least danger to trees and fruit, also what kind of manage or mulching you would advise for the trees.

I have recently set out two beds of straw-

have recently set out two beds of strawberries, of the Sharpless and Jum's varieties;
would you advise mulching them it at is, covering them with leaves or straw, and if so, when?

-F. H. C., Shelby, N. C.

(Answered by W. F. Massey, Horticulturist,

Experiment Station.

In this latitude any fruit trees can
be present as score as a few sets. be pruned as soon as you choose after the fall of the leaf, but in the case of the peach I usually prefer to do the pruning in February, as then the character of the buds is more apparent. If fruit trees are properly pruned and attended to from the start, there will seldom be any need for heavy cutting. Pruning in the dormant season pro-motes more rapid growth. Too rapid

Then Baby was sick, we gave her Castoria. When she was a Child, she cried for Castoria, When she became Miss, she clung to Castoria,

When she had Children, she gave them Castoria.

eured at home with out pain. Book of par-ticular sent FREE

growth is checked and directed by pinching the ends of growing shoots a snamer. Cur Station will soon have a Balletin out on the subject of fruit cuiture, in which this subject will be more fully treated. Potassic manures are best for fruit trees in general. Bone dust and wood ashes are a good mixture. Mulching your straw berries will do no harm if not put on toe thickly, and pine leaves or straw will be found useful in Spring to pull over the vines as a protection from threatened frost when in bloom, and will keep the fruit clean. But the mulch is not absolutely necessary as a win-ter protection here, as it is at the

Compost for Wheat. I have a quantity of tobacco stems retted and well pulverized by the aid of time that I wish to mix with chemi als and drill with my wheat next fall. Please give me formula for making compost, using tobacco and lime. I want to drill all my trop of small artin and will follow clover sod. In rotting my stems, I used lime in limited quantity, and gave the heat my personal attention. It was not exposed to sun her rain, neither did it suffer by over-heating nor drying.

-W. H. S., Culler, N. C. (Answered by H. B. Battle, Director Experiment Station.)

I would suggest adding-200 lbs. - acid phosphate, 200 lbs. - decomposed tobacco stems to the acre for your wheat. As it follows clover sod, the latter ought to give sufficient quantity of organic matter, including nitrogen, for the use of the wheat. I send Bulletin No. of, which describes some wheat experiments which might be worth your

while to try. Bisulphide of Enrion for Stored Pess. When idealphian of carbon has been used for peas be afterward felt to does with safety?
Also, bow min of the bis spaids should one
upoly to a die of 1-9 business of peas —G. B.,
Lexington N. C. (Answered by threatd McCarthy, Extomoligist E. p. smert Station.

The use of earl on bisulphide in grain. peas, or any other food substance, has no effect whatever upon the wholesomeness of the substance, provided that the carbon bisulphide is allowed to thoroughly evaporate before the substance is used for food. Usually two or three hours' exposure to the air is all that is needed.

The quantity of the chemical to use on 100 bushels of peas will depend somewhat upon the tightness of the vessel or bin in which the treatment is made. If you use a hogshead, or equally tight box, and cover with a heavy cloth (do not use rulber or oilcloth), you will find three to four tablespoonfuls sufficient. Let the seeds stand covered for 24 hours, then expose freely to the air until no odor of the bisulphide is apparent. Beware of exposing this chemical to the fireit is extremely explosive.

Clover For Hors: s-Grasses. I have a patch of red clover, a half acre sown last October, which I have pastured all this year (Sept. in It is green now and affords a good bite. Two tows have grazed on it most of horses eat it at all?

the clover have not kept pace with it. Isit best to keep stock of now till later in the season? The land is good and convenient for winter grazing and I want to keep it in best condition for that purpose.—D. L., Beilair, Craven Co., (Answered by F. E Emery Agriculturist Ex-

Ferlinent Station.)
Keep horses off from wank, green clover or grass, or allow to graze sparingly, and feed dry hay once per day. Aim to top-dress with four or five cords of stable manure, evenly spread, and hold off stock only during dry weather, if it has been grazed short, so the sun will not kill the crowns. Topdressing will bring out your grass, if it is alive, and you will be likely to find it holding its own with the clover for the year following the top-dress-

Fertilizer for Wheat. I have a five-acre field: pine growth; busbeen

year. What mixture must I have to make a good fertilizer on my wheat? I have stable manuere and as a s. What fertiller must I have to make a dry mixt refer the old held?—W. M. A., Greensboro, N. C. (Answered by H. B. Batt's, Director Experi-ment Station.)

I would suggest your using for wheat on the five-acre field a mixture com-

Stable manure, - - 800 lbs. Acid phosphate, - - - 500 lbs. Ashes, - - - - 400 lbs. The ashes should be unleached and best of hard wood; the stable manure ought to be thoroughly rotted. In mixing, scatter a layer of stable manure, then a layer of acid phosphate, then ashes, and repeat in same order. When ready to apply, mix the heap thoroughly as you haul it to the field It will be best not to let the heap stand long, because the ashes will have a tendency to decompose the manure. Application should be made at the rate of four or tive hundred pounds per

Have you ever tried the effect of a previous crop of cow-pea vines, to be plowed under when ripe? I think you will find this very advantageous to your wheat cultivation. Cow-peas. sowed broadcast in June, are ripe in October, or earlier. Such peas as you desire may be picked, and the vines plowed under, after which time the field is prepared for wheat. Bulleting No. 91 is sent herewith, which de scribes the detail of experiments conducted by the Station for several year-

Best Method of Keeping Irish Potators. Will you please give me the lest method it keep Irish potatoes from rotting after they are dug, if you have such information at your command. I want to put them up so as to keep kee winter use. This is why I want the lest method to do it.—P. A. B., Durham. N. C. (Answered by W. F. Massey, Horticulturist Ex-

periment Station.) Early potatoes grown in this climat. cannot well be kept later than thrist mas. You should raise a fall crop fo winter keeping, which keep with easwhen put in a dark place and kept only a few degrees above the freezing point One great reason for failure to keep potatoes is that they are kept too warm. A cold that will make ice or water will not hurt a potato in a barrel. If they could be kept in a oni form atmosphere of 33 to 35 degrees. they would be all the better. Another reason for failure is keeping them in too light a place. Potatoes should be kept in total darkness, and should be at into total darkness as soon as possible after digging. Not a ray of sunlight should be allowed to reach them at any time. A few hours sunning in the patch, while digging, will spoil the best Irish potato. The early crop may be kept until the late crop is ready, by careful management. Dig them when the soil is dry, and at once spread in a cool dark cellar. In a few days overhaul them, and pick out the rotten ones, and then sprinkle air slacked lime all through the heap, and do not pile too deeply. If kept cool and dark, they will do until Christmas. when they will soon get worthless from



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A VANISHED PEOPLE.

The Mystery of a Cavern Which Was Built by Them. On the shores of Brittany there is a mysterious relie of forgotten ages which escapes the attention of most travelers, says the Million.

Far out in the Morbihan sea-across which legend tells us Arthur sailed with his knights in pursuit of the dragon-rises a little island. It can be reached in a boat from the coast only in a calm sea. A Breton shepherd has a solitary hut upon it and feeds a few

Crossing the grassy slope off which they browse the traveler finds himself at the foot of a hill, in the face of which has been excavated a great tunnel or cave, floored, walled and roofed by huge flat rocks.

Some archeologists say that this cavern was the work of the worshipers of the serpent god Hoa-a race that has passed into oblivion. The unlearned traveler knows only

that the mysterious cavern antedates all history; that the rocks of which it is built came from the mainland, a distance of more than one hundred miles inland. No rocks like them make any part of the geological formation of the island. Even with our modern engineering

knowledge and machinery it would require vast labor and skill to bring these gnormous blocks of stone and place them so securely as to defy the wear and friction of ages. How were they brought here by men

who had, perhaps, few mechanical appliances-nothing but the strength of their bodies and their faith in a strange The race who built the temple are dust. Even their names ages ago per-

ished from the earth. Their religion is vanished. These stones are the monuments of their indomitable resolution. That defies the flight of years. ALTERNATION OF THE PROPERTY OF THE PROPERTY AND ADDRESS OF THE PROPERTY OF THE

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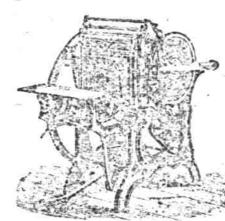
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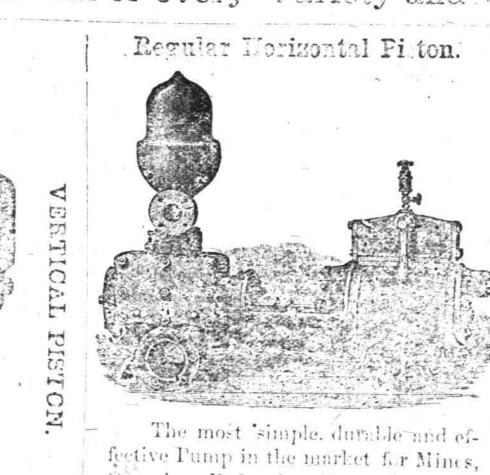
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