The Chatham Record

THURSDAY, AUGUST 17, 1893.

LOCAL RECORDS.

—2 two-horse second hand Nissen wagons for sale by B. Nooe, Jr.

—W. H. Edwards, dentist, will not fill his engagement, this month, at Pittsboro.

—Mr. J. T. Griffin has two pigs that weighed 30 pounds when only two weeks old.

—For monuments and tombstones of the latest and prettiest designs write to Robt. I. Rogers & Co., proprietors Durham Marble Works Durham, N. C.

—Mr. A. H. Merritt, county superintendent of public instruction, has received a number of copies of the last public school law, which he will deliver to school committeemen upon application to him.

—We would call to the attention of our farmer readers the valuable agricultural reading matter in this issue, that is furnished by the N. C. Agricultural Experiment Station. It contains much important information.

—W. H. Edwards, dentist, of Wake Forest, N. C., can be found in his office at Mrs. Exline's Hotel, on Monday, Tuesday and Wednesday following third Sunday in each month, prepared to do all kind of dental work.

—This county is entitled to send two students to the State Industrial School at Greensboro', and, on next Saturday, the county superintendent of public instruction will hold a competitive examination, at this place, of all applicants in Chatham.

—Mr. J. D. Hatcher, the miller at the Haughton Roller Mill, made a narrow escape yesterday from a very serious accident. By some means his sleeve caught in a small cog wheel, and, before he could extricate himself, his clothing was torn into shreds and his arm badly bruised.

—They are still selling at W. L. London & Son's dress goods at very low prices—a great many even below cost. They would call your especial attention to their white dress goods as they are very cheap; also, to the large stock of Swiss embroidery, torchon laces and other trimmings.

—We would again call your attention to the very large stock of shoes that W. L. London & Son carry. They have as large a stock of the celebrated Zeigler shoe as can be found in any of our cities. Also a full stock of Douglas and other makes, which they are selling extra cheap for the cash.

—The Cape Fear and Yadkin Valley Railway will sell round trip excursion tickets from all stations on its line to Ore Hill, N. C., on account of North Carolina Baptist Sunday School Chautauqua at Mt. Vernon Springs. Tickets on sale August 20th, 21st, 22nd and 23rd; good to return until and including August 30th, 1893. For rates and schedules apply to any agent of the company.

FORMER CHATHAMITES DEAD.—We regret to hear of the death of two former citizens of this county, both of whom have many relatives living in Chatham. One was Mr. James Brown, who died on the 25th of July in Yazoo county, Mississippi, aged about 69 years. He was a son of the late Abner Brown, and removed from this county before the war and became quite a prosperous planter. The other was the Rev. John N. Farrell, who removed to Texas about fifteen years ago, and died last month quite suddenly of apoplexy. For many years prior to his removal he was a minister of the North Carolina and Virginia Christian Conference, and is kindly remembered by all who knew him.

PERSONAL ITEMS.—Our former countyman, Mr. John A. Gilmore, is on a visit to his father, Mr. Nathan A. Gilmore, of Oakland township. For more than a year he has been bookkeeper for one of the leading business houses of Richmond, Virginia, and is a young Chathamite in whose success the RECORD takes pride.

We regret to learn that Dr. W. E. Headen will remove to Chapel Hill by the 1st of September. His removal is regretted not merely because our town will lose so esteemed a citizen, but also because his charming wife will be so much missed.

Although the summer is nearly gone, yet summer visitors are still arriving at this popular resort. Among the last arrivals we are pleased to note the following: Mr. and Mrs. Josh T. James, Mrs. Thomas C. James and children, Mrs. Anerum Lord and children, Miss Thalia Lord and Miss Katie Walker, all of Wilmington; Mrs. Goree Nelson, of Florida; Miss Lida Drane, of Savannah, Georgia; Mr. H. B. Hardy and family, of Raleigh, and Mrs. Mary Haslom, of Georgia.

Miss Addie McClenahan is on a visit to her sister, Mrs. John A. Ware, at Shelby, whose husband died at that place on last Saturday, after a protracted sickness.

Misses Julia Bynum and Mattie Exline have returned from a visit to Mount Vernon Springs.

Dr. John H. London will remove from Raleigh to Chapel Hill in about two weeks.

Misses Annie Peay and Mary Lou Brown and Capt. C. B Denson have returned from a visit to the World's Fair.

Mrs. W. R. Hunter has gone on a visit to Mount Vernon Springs.

For the RECORD.

Growing Wheat.

The sowing of wheat will soon begin in almost all parts of the country and millions of acres of teeming land will receive the seed of the great American cereal crop. There are many methods pursued by farmers in the cultivation of the crop, but after all they are nearly the same, differing only in details which are the result of climate and soils. We find that the main essentials hold true throughout the whole wheat growing world. Some prefer to cling to old primitive methods and they do not succeed quite so well as others. Anything that would make them use more progressive methods would prove a great boon to the country at large and to farming in particular. We must remember that there is no crop so exhausting to the soil as wheat, that it takes from the soil and gives very little in return. There is consequently no crop that needs fertilizers so much as wheat. We must apply this in one way or another. Some apply them directly with farm yard manures, and adding the chemical elements by means of commercial fertilizers. In my opinion this is the most expensive way of fertilizing the wheat fields. We could dispense a good deal with this if we only resorted to a rotation of crops, where grass and cover have a chance to fertilize the soils. We are robbing the soil when we do not rotate our crops. We will, in a rotation, need less barn-yard and commercial manures and our lands will be better off. In using seed wheat it is always better to be sure that the best only is used, and even the finest obtainable in the markets should be sifted. In nearly all soils there is more or less smut, or the spores of smut. To guard against these it is necessary to treat them with sulphuric acid. Use at the rate of three ounces of the acid in one quart of water and use it to sprinkle one bushel of sifted wheat. Shovel the seed over until the acid, or the fumes of it, have had an opportunity to reach all of the heap. This does not make the seed too wet to sow in the drill, but those who sow it broadcast by hand should let it get dry before using.

The best fertilizer to sow is clover seed and let your ground raise clover for two years at least before you change it to wheat again, unless it is already very productive, then you need not raise but one clover crop on the ground before you seed it to wheat again. Aside from the other requirements of wheat culture, the seeding of it in the fall requires an amount of attention that for a time seems to overshadow every other consideration. Of course it is not more important than the selection of the right variety of seed nor the necessity of manuring well. But, nevertheless, without good seeding we cannot make the best of wheat grow well. The land must be prepared well, for a fine, solid bed will make poor seed thrive. To do this we must work. The seed bed must be plowed early in the season in order to get the soil in the proper condition. Late plowing will not answer; no matter if the plow and harrow are used every day thereafter. By early plowing we give the soil a chance to undergo a chemical change which will make it richer in available plant food. The under soil will be brought to the surface, and the air and rain will benefit it greatly. The harrow must be used in preparing the seed bed for wheat. There is no implement better for knocking clods to pieces than a good steel tooth harrow. We also need less seed to the acre when the seed bed is thoroughly prepared and there will be an even growth throughout. By plowing the ground early and then by giving it a thorough cultivation we go a long ways towards the destruction of weeds. Thorough preparation of the soil before seeding is half the battle and more. While the oft repeated saying "tillage is manure", is rejected by some, who say that tillage alone cannot increase the amount of plant food contained in the soil, yet we know it has much the same effect in increasing the crop that manure has and that is the main point. I never knew a farmer to put too much work on his wheat ground in the fall.

It is very poor economy to sell off the best and plumpest grain because it will bring a few cents more on the market and use the poor, shrunken residue for seed. As like begets like, if we continue to sow poor seed, we may expect to reap poor crops. We are too careless as to seed wheat—most of us, and we often sow wheat that is not all wheat. Clean plump even seed gives a clean, plump, even stand. The farmer who grows good crops of chess usually contends that it grew from the wheat he sowed last fall, but that does not make it so. Don't spend time arguing with him. Go and clean good seed wheat. Better a less acreage thoroughly prepared in a fine condition, sown with good seed at the proper time, than a large acreage with the work hurriedly done and seed of an indifferent quality used. To make wheat growing profitable every advantage must be taken to secure as large a yield at as low a cost as possible, and the more fully this is done the better.

P. T. WOLFF.

The financial outlook is improving. Large quantities of gold are being imported.

Peter De Graff has been convicted of the murder of Ellen Smith, near Winston, in July 1892.

On last Friday there was a fight at Fayetteville between E S. Fuller and B. C. Parker, in which the latter was shot and killed by the former.

Mrs. J. V. Burton, who lives in Davidson county, has a speckled hen now in her 16th year, which has laid eight layings of eggs this year and is to all appearances as spry as when one year old.

The Siler City Budget.

SILER CITY, N. C., Aug. 15, 1893.

Business is improving and the prospect is for a good fall trade.

School will open on the 23rd inst., and a large boarding patronage is expected.

Prof. W. S. Snipes, of Chatham Co., will be with us again this fall, and will have charge of the Literary Department.

The Siler City Circuit Sunday School Convention, that was held in the M. E. Church at this place on the 3rd was largely attended, and was a grand success both socially and morally. Mt. Vernon and Providence Sunday Schools were well represented and the singing by the schools, (Siler School included) constituted the main features of the day, as it was excellent, and could hardly have been surpassed by more experienced choirs. Supt. J. F. Loube and Messrs. W. D. McNeill and E. W. Fox were the speakers of the day, and their addresses comprised all that could be said for the promotion of Sunday schools.

Just before noon, the audience was highly entertained with an appropriate recitation by Miss Emma Cook, and in the afternoon Mrs. B. N. Mann read an original essay on the "Model Superintendent" which was instructive, as well as entertaining.

After the discussion of the usual line of subjects, the convention adjourned with prayer by Rev. A. H. Perry, purposing to meet next year at Mt. Vernon Springs.

Rev. Willie Smith will commence a series of meetings in the Baptist Church at this place on the 4th Sunday night.

Rev's J. R. Newlin and I. N. Mann are conducting a series of meetings at Providence this week.

Trade seems to be brisk at the Roller Mill, as it is running both day and night.

Mr. D. G. Fox's cannery is also in operation day and night, in order to utilize the vast quantities of fruit that is brought on the market.

Watermelons and fruit of every description are plentiful this year, and the sellers only realize a mere pittance for same.

The young people of the town were tendered a watermelon feast by Mr. J. D. Mann, at his new house on last Friday night, in honor of Miss Daisy Palmer, of Winston.

Some of our young people are thinking of asking the "Town Fathers" to meet in order that they may name the "Branch" that runs from the academy to the hotel, so as to have same placed upon the town map.

REBUS ADAIR.

The Delineator

for September is announced as the *Early Autumn Number*, and contains the first authentic issue of Autumn styles, which differ materially from those of the current season. Beside the unusually large and varied display of the month's fashions, there is a special article on Notable Costumes of the Season. The two papers on the World's Fair, which have been features of the magazine since the opening in May, are this month supplemented by a third, entitled Our Guests and Ourselves, which gives a very interesting account of many of our foreign visitors. The first article of a series on House Decoration will be of general interest, as will also The Use of Small Means and The Dignity of Labor, which last is among the papers on Child Life. The Lawn Tennis article is on the Game as played, and there is a new and original Drill called the Lawn Tennis Drill. Special Gestures of the Hand are continued in the instruction on Delsarte Physical Culture, and more Figures for the German are given in the article on Dancing. As relaxation there are papers on Street Scenes in the South, Outdoor Theatricals and Flower Culture. In addition there are lessons on Knitting, Netting, Tatting, Lace Making, Crocheting, etc., etc. This number is a good one with which to commence a subscription, which costs One Dollar a Year; Single copies, Fifteen Cents. Address Orders to THE BUTTERICK PUBLISHING Co. (Limited), 49 East Fourteenth Street, New York.

Horner Military School.

The catalogue of the Horner School, Oxford, N. C., shows a patronage extending over ten States. For years this school has been full and to meet the demand the principals two years ago put up a model school building with all the modern improvements—electric lights, scientific ventilating, and heating, a complete gymnasium, and a steam laundry. The patronage was doubled the first session, reaching within ten of the increased limit. It is to be noted that this school still places such a restriction in the number of pupils admitted, that the principals can give due personal care to each pupil. It is probably just here that the reputation of the school for the highest standard of scholarship and morals has been won and maintained. If you send your son to a school to be instructed by a certain teacher, it is desirable that no more pupils shall be admitted than can receive a large part of the personal instruction of that teacher. Secure the very best advantages for your son by engaging a room before it is too late.

Reduced Rates.

FAYETTEVILLE, N. C., Aug. 11, 1893.

The Cape Fear and Yadkin Valley Railway, will sell round trip excursion tickets from all stations on its line to Fayetteville, N. C., on account of centennial celebration Fayetteville Independent Light Infantry Company.

Tickets on sale August 21st, 22nd & 23rd, good to return until and including August 25th, 1893. For rates and schedules apply to any agent of the Company.

W. E. KYLE, G. P. A.

Yellow fever is at Pensacola, Florida and Brunswick, Georgia.

Washington Letter.

(From our Regular Correspondent.)

WASHINGTON, Aug. 11, 1893.

President Cleveland's message to Congress has been as closely studied as any similar document ever was by members of Congress and it is evident that it is going to be a powerful factor in the financial legislation of the session. It apparently opposes the ideas of many democrats in both House and Senate, just as his celebrated tariff message of 1887 did, but honest and conscientious men everywhere [illegible] the opposition to what are known as silver democrats is [illegible] than real, for they all agree with the President's recommendation for the repeal of the silver purchasing clause of the Sherman law, only differing as to what shall be substituted. The message recommends the repeal and leaves the question of a substitute to the wisdom of Congress, and nine-tenths of the democrats are certain that the recommendation for repeal will be followed, and that other financial legislation, which will be equally satisfactory to the silver democrats and to President Cleveland will be agreed upon by the democrats of the House and Senate and that the persistent efforts of the republicans to split the democratic party on the silver question will fail.

Acting on the maxim quoted in the President's message "He gives twice who gives quickly" the democrats in the House, both silver and anti-silver men, are trying to reach an agreement to take up and decide the silver question without waiting for the appointment of committees and the adoption of rules. It will be easy to take the matter up without an agreement, only a majority vote being required, but if an agreement can be reached upon just what is to be voted upon and how much time is to be given to discussion much time will be saved that would necessary be wasted if no agreement was made, to say nothing of the possibility of endless filibustering.

The silver men have in caucus decided to vote for the repeal of the purchasing clause of the Sherman law, if the bill for its repeal provides for the free coinage of silver on such a ratio as will provide and maintain the parity between gold and silver. The fact that no particular ratio is mentioned is significant. It means that the caucus of silver democrats did not believe it possible to succeed in maintaining the present ratio of 16 to 1 and that they are willing to increase the ratio.

It is now claimed that a careful poll of the House, made this week, shows a majority of 35 in favor of the repeal of the purchasing clause of the Sherman law. The Senate is more doubtful, and it is much more difficult to ascertain how Senators whose positions are not clearly defined will vote, but strong efforts are now being made to bring the democratic Senators together, and the indications point to success. A caucus of democratic Senators this week appointed a committee of five—Gorman, Ransom, Gray, Vorhees, and Blackburn—to consider and report a plan with that end in view. The republicans, intentionally, of course, relied largely to the probability of [illegible] democratic action in the Senate by their attempts to make political capital, which were promptly and properly rebuked by Senator Gorman, out of the present financial situation.

The Senate committee on Finance, of which Senator Voorhees is chairman, held its first meeting yesterday. The committee did not take up business either, as more than a score of financial bills which have been introduced in the Senate have been referred to that committee. A majority of this committee are financiers, but some of the most prominent of them, including the chairman, have declared their belief in the [illegible] of the Sherman law and their willingness to vote for its unconditional repeal. The Senate is naturally deliberate in all its actions, so it will not be surprising if the House takes up the silver question before this committee reports a bill to the Senate. The resolution of Senator [illegible] offered [illegible], directing the committee to report a bill for the repeal of the Sherman law and providing that a vote should be taken thereon by the 22d of this month was one of a lot of republican buncombe, and the adoption of the resolution would have surprised no one more than its author.

The bitterest pill in the President's message, for the republicans to swallow, was the plain statement that he expected Congress to stop the wrongs of the people and proceed to relieve the iniquitous tariff as soon as its finances have been looked after. Because the trouble brought upon the country by republican financial legislation have so conspicuously forced themselves upon public attention of late, republicans have allowed themselves to believe that the McKinley law was to be undisturbed by this Congress. They know better now, and the knowledge doesn't please them.

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WITH THE FARMERS.

THE N. C. AGRICULTURAL EXPERIMENT STATION [illegible]

[illegible] Timely Answers to Questions Asked and Timely Advertisements.

AUGUST [illegible], 1893.

Cultivation and Soil Moisture.

Very numerous experiments have been reported to show that moisture is saved by cultivation. During hot, dry weather every foot of planted land should be kept well stirred on the surface with any tool which tends to keep it from baking. A loose, fine surface will hold more water like a wet blanket. A [illegible] thus may give an increase in crop over one not cultivated equal to that produced by a heavy application of fertilizers. Preservation of the soil water thus becomes of great importance. A blanket of fine soil on the surface during a hot, dry week can be of great value to the crop and really become the turning point for profit if present when loss might result from its absence. — Frank E. Emery, N. C. Experiment Station.

The Late Crop of Irish Potatoes in the South.

The above is the title of an interesting bulletin, No. 93, of the N. C. Agricultural Experiment Station, by Prof. W. F. Massey, Horticulturist of the Station. The subject is an important one and the industry based upon it is destined to be one of the most valuable ones to the South. Of the many thousands of barrels of seed potatoes annually brought from the North for seed and food, a few experiments will be reduced to as many hundred. The truckers in the [illegible] Atlantic States, as a [illegible] [illegible] potatoes for the second crop, and it will not be long before the practice will become universal. These potatoes are destined also to supply the food market to the exclusion of Northern grown potatoes.

The important points to observe in planting are: Bed the seed in the soil until planting time, about the second week in August and use only sprouted potatoes. Cut potatoes when bedded sprout better than whole ones. Plant in a deep furrow, but cover very lightly and pack the soil to the seed. Gradually fill in the soil to the plants as they grow, and cultivate the crop perfectly flat.

Suggestions as to keeping the late crop will be found in the above bulletin, as well as experience of many truckers with this new crop.

Beware of Frauds.

It is surprising how people will be swindled by some worthless or inexpensive compound concealed under the guise of some glittering name, and selling for an exorbitant price which does not even bear the name of the manufacturer.

Compound extract of salix is the deceptive and ensnaring name of a compound which is being extensively sold to the people of the State to be used for preserving eggs, fruits, vegetables, etc. A package received at the Experiment Station for examination was labelled as follows:

"Two Ounce Package.
Compound Extract of Salyx.
Prepared expressly for preserving Eggs, Fruits, and Vegetables by the "Cold Process" according to Rose's formula.
Price $1.25."

This material consists of a fine, white and crystalline powder, possessing little or no odor, and the aqueous solution has rather an agreeable sweetish taste. An analysis of this powder shows it to be nothing but commercial Salicylic acid. Salicylic acid is a powerful antiseptic, and owing to its slight taste, it has been much used for preserving commercial articles of food. When taken into the system in medicinal doses it has a powerful effect upon the system, and it is believed that its continued use in food, even in small amounts, must produce none other than injurious effects. The sentiment has been so strong against its use in France and other countries that laws have been enacted prohibiting its use for preserving foods.

The so-called "Compound Extract of Salyx" besides being a very undesirable substance to mix with foods, is sold at an exorbitant price compared with actual market value. [F. B. Carpenter, N. C. Experiment Station.

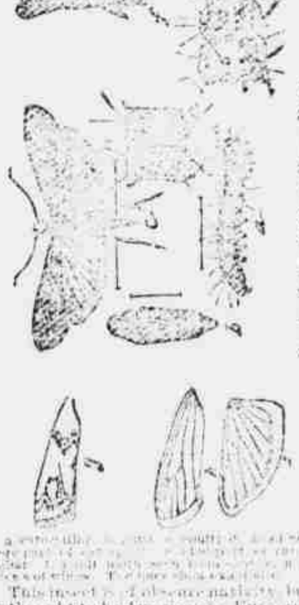
Blight and Root Rot of Cotton.

The Botanist of the N. C. Experiment Station is desirous of [illegible] specimens of cotton showing correct [illegible] symptoms of blight, a [illegible] disease of boll and root rot. Farmers whose cotton may suffer from either of these diseases will confer a favor by sending samples and full particulars to the Station at Raleigh. Wrap samples in moistened paper, and enclose in pasteboard box. Mail to North Carolina Experiment Station, Raleigh, N. C.

Warehouse and Flour-Mill Pests.

By Gerald McCarthy, Botanist, Experiment Station.

One of the most dangerous insects which infest flour mills is the so-called Mediterranean Flour Moth (Ephestia Kuhniella). This insect is known to exist in North Carolina and is likely to become a [illegible] and expensive pest. Figure 1 shows the appearance of this insect in different stages of growth.



[illegible]

This insect is of obscure nativity, but is thought to be American by European entomologists. It first became troublesome on this continent in Canada in 1889, [illegible] Ontario [illegible] [illegible] the mills. [illegible] establishments [illegible] clothes [illegible] and labor [illegible].

The moth [illegible] is [illegible] colored insect about 1 inch long. The wings [illegible] wavy black lines near the tip. The insect is rather sluggish and often remains in one position for a long time. This moth may probably be found active in this state in all months of the year except January. The eggs are white [illegible] and [illegible] [illegible] sacks [illegible] in the crevices of bins. They hatch in about [illegible] days. As soon as hatched the caterpillar makes its way into the flour and [illegible] around about a silken tunnel in which it lives and feeds on the flour. These tunnels cause the flour to become [illegible] into clots [illegible] to pass through the machinery, rendering the material worthless [illegible] clogging the bolts, screens and [illegible].

REMEDY: The only practicable remedy for this pest is to fumigate the entire mill and [illegible] in which flour and meal are kept with carbon bisulphide.

This [illegible] is a [illegible] having a most disagreeable odor. It evaporates readily [illegible] and is [illegible] to all forms of active life. [illegible]

All roaches are enormously fecund, all [illegible] and eat every kind of food used by people. They prefer bread and flour, and meats [illegible]. These pests are nocturnal in their habits and hence escape observation until their numbers increase so much as to render their presence alarmingly patent.

REMEDY. Cleanliness where such is practical is essential to keep free of these insects. In mills and warehouses where flour dust and grain is everywhere, the carbon bisulphide fumigation must be resorted to and must be very thoroughly done, so that the vapor of the substance will find its way into the cracks and crevices where these pests hide. In addition pyrethrum powder should be blown into cracks where they are known to hide, or pure kerosine oil may be blown in with an ordinary oil can. Powdered borax sprinkled on shelves where they can will drive them away. Old rags moistened with molasses water in which Paris green has been suspended will poison them. The cloths should be freshly moistened each evening and removed in the morning.

THE GRAIN AND CORN WEEVIL (Calandra). Two species. In North Carolina we have two species of grain weevils (Calandra) which infest wheat and corn and [illegible] which infest [illegible] warehouses. The first is the more common and injurious. Both species are much alike.

FIG. 3—GRAIN WEEVIL.

Fig. 3 shows a back and side view of a weevil of this family. [illegible] [illegible] [illegible] [illegible] The grain weevil is dark brown, or nearly black, is very slender and about ⅛ inch long. Immense quantities of wheat, corn and rice are annually destroyed by these pests in [illegible] and elsewhere. The only practicable remedy for these pests is carbon bisulphide. The infected grain should be put in an air tight box or bin and a dish of the liquid put on top of the heap. The whole must then be tightly covered and left for 24 to 48 hours. Then expose to the air until all odor is gone. The grain or flour will not be injured by the carbon. Use 1 to 2 pounds for each ton of grain, and cover tightly so as to keep in the fumes until the insects are killed. They are exceedingly tenacious of life.

THE FLAT FLOUR BEETLE—Silvanus [illegible]. This is a narrow brown [illegible] [illegible] inch long, and scarcely thicker than a sheet of paper. It is a native of [illegible], its name betokens. [illegible] a greater pest in the Southern States, and will probably exceed in mischief even the Calandra weevils. The remedy for this is the same as for the others: carbon bisulphide. This insect is fond of greasy substances, and if some paper is soaked in melted lard and Paris green sprinkled upon it while moist and the poisoned sheets distributed on floor and shelves where grain and flour is kept, many of the beetles will be killed; but this flour will not give satisfaction where they are already abundant until the carbon has killed most of them.

As a matter of safety all mills, warehouses and stores where grain, flour, and food-stuffs are kept, should receive a thorough annual cleaning, and fumigation with carbon bisulphide. This, if attended to and thoroughly done, will save many thousands of dollars damage. It will be most efficacious if done about April 1. It may be repeated with benefit in July or August. The best time to fumigate is on Saturday evening, having thoroughly closed all outside doors and ventilators, leave them until Monday morning. The utmost care must be taken that no fire shall be taken into the building while the odor of carbon bisulphide can be smelled. Neglect of this precaution will almost certainly result in an explosion and fire. With care there is no danger. The odor of this substance, though most disgusting, will not injure the most delicate food preparation. The vapor is not poisonous to human beings unless breathed for a long time, but as little as possible should be inhaled.

QUESTIONS AND REPLIES.

The Station will be glad to receive any question on agricultural topics you 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.

Fertilizer for Onions.

I am growing a crop of onions. Am using an [illegible] sixteen hundred (1,600) pounds [illegible] light sand with stiff red [illegible]. Will that be sufficient or will I [illegible] more Ammonia and Potash? Would an [illegible] cotton seed meal and kainit be [illegible], if so to what proportion and how [illegible] Salisbury, N. C.

(Answered by H. B. Battle, Director Experiment Station.)

The [illegible] of the [illegible] fertilizer to [illegible] cultivation of onions is not the [illegible] that could be applied. It gives entirely too [illegible] in proportion to the ammonia [illegible] necessary for this crop. In order to make it of better service and more [illegible] what is needed by onions, I would suggest [illegible]

[illegible] cotton seed meal,
[illegible] kainit,

per acre, [illegible] make the application [illegible] with what [illegible] the quantities [illegible] a mixture giving about

[illegible] per cent. potash,
5 " ammonia,
5 " available phosphoric acid,

and from 1,000 to [illegible] of this mixture is the [illegible] application. The equivalent to 1,500 lbs. of this mixture [illegible] be made by mixing

[illegible] cotton seed meal,
[illegible] kainit,
[illegible] lbs. acid phosphate.

Fertilizer to Sow With Clover For Hay.

I want to plant two or three acres in clover this fall, and write to ask you what kind of fertilizer to use and how much per acre. I shall have to use commercial fertilizer. Please be definite and name what brands to use. If it has to be mixed, please say just how much of each kind. Should you say use a fertilizer containing a certain per cent of one thing and a certain per cent of another, I would be as much in the [illegible]. I want the clover to cut and not to be grazed. [illegible], N. C.

(Answered by F. E. Emery, Agriculturist, Experiment Station.)

The condition of the land should dictate how much fertilizer should be used. If poor, like [illegible] amount of fertilizer, but plowed in [illegible] and stable manure, top-dressed after sowing, on a thoroughly well prepared seed bed, would be required to make a fair [illegible] growth of clover.

You do not need to buy nitrogen for clover on [illegible] soil. What would be needed would be supplied by the organic matter in the soil.

If the soil is in good condition you might use [illegible] bushels of dry hardwood ashes, (or 150 to 200 pounds kainit) and 300 pounds of acid phosphate per acre. Sow both and harrow in, and when harrowed into fine seed bed sow 16 to [illegible] red clover seed and go over once with a light roller or light harrow, or if these are not at hand, a light brush. Sometime in August will probably be suitable to sow, but if a long dry spell follows, you may count on re-sowing [illegible] surface must be re-[illegible].

In the ordinary commercial brands of fertilizers you pay for what is found in a ton, of each of the elements nitrogen, phosphoric acid, and potash. Now, on a fair soil, clover does not need purchased nitrogen, because after it gets started to grow it forms a sort of copartnership with another plant, a little microscopic plant, and "tubercles" are formed on the clover roots, and in some obscure means the two gather nitrogen from the air in the soil. Thus we see clover gathers its own nitrogen and much more of it than most of our other cultivated plants. This gives us little and the animal food-value of the nitrogen compounds in the clover, and the plant food thus stored in the roots, is what makes the growing of clover so valuable to us. It is a nitrogen trap.

If a poor soil is to be used we must get organic matter into it for two reasons: To hold moisture for the plants and to encourage a process called nitrification, also help on the clover and its friend by these favorable conditions. Stable manure plowed in furnishes the plant food and organic matter direct but is expensive. The cow pea belongs to the same general family of plants as clover and, with its minute friend, has the greater advantage of being able to thrive on poorer land than clover can grow on. Then when the pea vines are ripe and plowed in and the clover seed sown on the well prepared surface it vegetates quickly and as the young plants are susceptible to severe changes, a [illegible] may kill them, or a crusted surface may prevent their coming up, or a minute hopper insect may come along in great numbers and eat off the tender leaves faster than they can grow. So a light top-dressing of stable manure which acts as a mulch to protect the plants from the sun and holding the soil prevents crusting, and the drying out of the surface and gives more plant food directly to the plants which may help them to grow away from the insects if they are present.

The second best course is to plow the ground and harrow in the fertilizer as directed. If you are needing nitrogen you can buy acid [illegible] for the phosphoric acid. The brand [illegible] You need now potash. Hard wood ashes contain 7 or 8 per cent of potash if [illegible] and some phosphoric acid which is favorable for clover.

[illegible] wood and may have the ashes at [illegible] for a few cents per bushel can pick [illegible] in the neighborhood, when you will [illegible] combination of chemicals at [illegible] cost. Much now depends on your preparation of the seed bed. Harrow [illegible] as soon as the land is fit to work after a rain of good soaker.

Identification of Grass.

I herewith send you specimen of grass grown [illegible]. Please tell me name of said [illegible]. Any information will be thankfully received and appreciated by me.

[illegible] has completely taken possession [illegible] wheat field. My land is well improved, will produce 25 bushels of wheat per acre. Would like to know method of ridding my fields of this pest without planting in corn. [illegible] Rock Creek, Davidson Co., N. C.

(Answered by Gerald McCarthy, Botanist, Experiment Station.)

This is Poa compressa (English blue grass) a perennial grass of unsurpassed excellence for pasturage. It does far better than its sister species Kentucky Blue Grass, on soils poor in lime [illegible] in this State are. While wheat is selling at present prices, you will probably find it most profitable to leave the field in possession of this grass and pasture it. For a fuller account of this grass see Bulletin No. [illegible] of this Station.

MORTGAGE SALE.—BY VIRTUE [illegible] [illegible]

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August 10, 1893.

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