

# Uses and Abuses of Fertilizers

By Prof. R. J. H. De Loach, Director of Georgia Experiment Station.

## 4. FERTILIZERS AND FIELD CROPS.

The Fourth of a Series of Six Articles

David Dickson, after a life of useful service to his fellow-man and a life of success as a farmer, had the following to say about the use of guano: "I say that farmers can make every acre of their land rich if they will. Providence intended the earth should increase in fertility as rapidly as it does in population. Every man that assists in removing this dormant guano, lying idle and useless on the Chincha Islands, and puts it in circulation, creating therewith food and clothing, is a benefactor to his kind. The country suffers for want of a share of the surplus fertilizing material. Remove the deposit and apply to crops, and it will enrich the land."

"I commenced to use guano in 1846, and gradually increased the use of it until the present time, never having omitted to use it on my crops excepting the last year of the war, when I could not obtain it. With the proper system of rotation of crops, and returning all the crops to the land, except the lint of the cotton, land may be improved with Peruvian guano alone, but not so fast as when you combine with the soil all the elements of the plants to be grown. Ammonia being necessary for all plants, I know of no crop that it would not benefit. It will pay the best upon those crops that bring the most money—cotton being that crop in this section and tobacco in other sections."

It will be seen from the above that Mr. Dickson profited greatly by the use of guano. He knew well the value of ammonia to growing crops, but you will observe that he knew quite as well the value of other plant foods to the crop. He got better yields when he applied all the elements of plant food than when he applied ammonia alone. Also observe that he considered it good business to apply fertilizer. He was a business man as well as a farmer, and knew all the keen points in the business world.

### Views of Another Millionaire Farmer.

The Hon. James M. Smith, another millionaire farmer of Georgia, who died only a few weeks ago, had the following to say with reference to the use of fertilizers on farm crops:

"The use of fertilizers has become one of the most important factors in Southern agriculture. It is a powerful agency in producing an increased yield—a thing we should desire and work for. We certainly believe in the use of commercial fertilizers, but we also believe in the turning under of vegetable matter, the sowing of legumes and the saving of all barnyard manure. The up-to-date farmer will not consider one of these, but all four of them, in trying to increase his farm crops."

Each of these two farmers, who have done much to stimulate farm improvement, learned the value of fertilizers, but learned equally well the value of diversified farming. They would not decrease the use of fertilizer, but diversify more. They would have us use more fertilizers, so that we could grow more plants and vegetable matter, in turn plow this under, and in this way increase the fertility of our lands. The most effective farming of today involves these two great principles. Use fertilizers and diversify the crops. Rotate and feed the plants, and you will increase your yields, be more secure from plant diseases, and bring your farm into a high state of cultivation.

### Put Back Plant Food in the Soil.

If growing crops take plant food out of the soil and we do not plow under an amount equal to this, or get it from some other source and apply it, our land is sure to decrease in fertility and in value. This is a fact beyond dispute. With most of our crops we take from the fields a large amount of nitrogen, phosphoric acid and potash, which never goes back to the place on the farm from whence it came. We should see to it, then, that some kind of plant food takes its place. In the case of cotton, we sell the seed, and with them large amounts of nitrogen and other elements of plant food. Very often we burn the stalks, and in this way take from the field much more valuable plant food. It is suicidal policy for us to remove from the soil more plant food than we restore to the soil.

On a sandy farm in one of the Southern States, which had abandoned by its original owner and sold for fifty cents per acre, a little barnyard manure and heavy applications of fertilizer made another farm rich. The last farmer used \$15 worth of fertilizer per acre and raised 1,400 pounds of seed cotton per acre. This was about a bale per acre on the entire farm. The \$15 investment in fertilizers and good breaking and cultivation netted the thrifty farmer more than \$50 per acre when cotton was bringing a high price.

All the experiment stations and other institutions have found that fertilizers applied to farm crops under good conditions pay a handsome dividend on the investment. It generally means the converting of a nonpaying farm into a profitable farm. This, after all, is what we farm for, for profit as well as some pleasure. The average farmer gets large returns for fertilizers wisely used. If fertilizers do not always pay, it is because farmers waste instead of use them.

## REORGANIZE CAROLINA MILLS.

Unknown Parties Buy in Greenville Manufacturing Plant.

(The Piedmont, 23d.)

A company to be known as the Poinsett Mills, through its representative, A. G. Furman, to-day purchased the Carolina Mills at public auction for \$204,500, which was the highest bid received for the property by E. Inman, Master in Equity. Mr. Goldsmith, of this city, representing other clients, and W. C. Smith, of North Carolina, were the only other bidders. Mr. Goldsmith and Mr. Furman are competing for the last.

Mr. Furman announced no details of the new organization, which he said would be effected prior to April 1st. Application for a State charter will be made to-day, though Mr. Furman preferred not to disclose the names of the petitioners until the proper time. He announced that the mills would be operated continuously pending the perfection of the new organization, and that as soon as the new management is under way improvements will be made to the mill and the houses in the village. A considerable amount of money is to be expended to increase the efficiency of the manufactory. The mill manufactures white goods, and it is understood, enjoys an excellent demand for its products. The entire manufacturing plant of the company, including all the real estate, consisting of about 80 acres, part of which is within the city proper, was sold. In the mill are 26,457 spindles and 457 looms.

As a condition to the sale the purchaser will be required to assume certain outstanding contracts for the manufacture and delivery of goods representing in the aggregate about a 30-day run of the mill.

## CHICHESTER'S PILLS



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Nearly 400 houses were recently wired for electricity in Lancaster, Penna.

## NOT TAKING HASTY ACTION.

Government Officials Keeping Close Watch on Submarine Events.

Washington, March 27.—It was authoritatively stated late to-day that the President would communicate the situation fully to Congress before taking any definite steps which might lead to a rupture of diplomatic relations as a result of the attacks on the steamers Sussex and Englishman.

It was stated authoritatively here to-day that should it be shown that a German submarine attacked the Sussex, Germany would disavow the act, offer reparation, punish the submarine commander and assist the United States that the act was in violation of instructions.

It was also stated authoritatively that the German ambassador, Count von Bernstorff, was mainly responsible for the recent retirement of Grand Admiral von Tirpitz, who is understood to have been eliminated because of his views on submarine warfare after Count von Bernstorff had made certain recommendations to the imperial chancellor, Von Bethmann-Hollweg.

Knowing these facts and the attitude of the German government, Teutonic officials are certain that if a submarine was concerned in the Sussex disaster the imperial government will do everything in its power to satisfy the United States.

It was made clear, however, that the German embassy believes a mine damaged the channel steamer.

### Talking of Breaking Relations.

The possibility of breaking off diplomatic relations with Germany is again being discussed as one of the eventualities which is expected to follow if it is shown that the steamers Sussex and Englishman were victims of submarines.

Officials say they are examining all the facts at hand with open minds, and can come to no conclusion before they have additional information; but there is an undercurrent of uneasiness over the possibility that German submarines have renewed their activities against passenger-carrying ships in violation of the assurances given to the United States.

American consular officers and the embassies in France and England are being urged to gather evidence of a definite and legal sort and when this is at hand President Wilson and Secretary Lansing will determine what the next step will be. Meanwhile the situation can only be described as a waiting one.

## State of Ohio, City of Toledo, Lucas County.

Frank J. Cheney makes oath that he is senior partner of the firm of F. J. Cheney & Co., doing business in the city of Toledo, county and State aforesaid, and that said firm will pay the sum of One Hundred Dollars for each and every case of catarrh that cannot be cured by the use of Hall's Catarrh Cure.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886. (Seal.) A. W. Gleason, Notary Public. Hall's Catarrh Cure is taken internally and acts directly upon the blood and mucous surfaces of the system. Send for testimonials, free. F. J. Cheney & Co., Toledo, Ohio. Sold by all druggists, 75c. Take Hall's Family Pills for constipation.—Adv.

### Items from Bounty Land.

Bounty Land, March 27.—Special: Mrs. Mary Putnam and granddaughter, Miss Gladys Putnam, of Newry, and Misses Minnie and Rosa Lee, of the Blue Ridge section, were recent guests at R. N. Rankin's.

Dr. E. C. Doyle delivered a most interesting and edifying lecture to the Bounty Land School Improvement Association Wednesday afternoon. The lecture was greatly enjoyed by all present. After the lecture the preliminary contest was held to select speakers for Fair and Field Day. A splendid program was nicely carried out, and showed marked elocutionary talent on the part of the contestants. Louis Rankin and Ida Beth Doyle will represent Bounty Land at Walhalla Friday. The judges on this occasion were Supt. Hoyt Miller and Miss Beulah Berry, teachers of the Richard school, and Rev. I. E. Wallace, of Seneca.

Miss Gussie Cunningham, of Abbeville, one of our former teachers, attended the speaking.

Mr. and Mrs. T. M. Keller, of Tamassee, are visiting the latter's father, B. E. Bagwell.

Dean Davis left Wednesday for Long Creek, where he has accepted a government position in the forest reserve department.

Mr. and Mrs. Ben Thompson and Misses Boggs and Harris, of Courtenay, were recent visitors at the home of E. L. Stone.

Rev. W. W. Leathers, of Anderson, spent Saturday and Sunday at the home of J. S. Enteklin.

Mr. and Mrs. I. F. Lee, of the Blue Ridge section, were recent guests of Mr. and Mrs. James Sanders.

W. N. Rankin killed a maddog Saturday after it had bitten his dog. He also shot his own dog.

J. S. Enteklin has been quite unwell for several days. His friends hope for an early improvement in his condition.

### A Good Family Cough Syrup

Can be made by mixing pine-tar, acornite, sugar, hyoscyamus, sassafras, peppermint, licorice, rhabarb, man-drake, capsicum, murrate ammonia, honey and glycerine. It is pleasant, healing and soothing, raises the phlegm and gives almost instant relief. For convenience of those who prefer not to fuss, it is supplied ready made in 25c. bottles under the name of Dr. Bell's Pine-Tar-Honey. Can be had at your druggist. Insist on getting Dr. Bell's Pine-Tar-Honey and see that the formula is on the package.—Adv. 3.

## PEACE PREPAREDNESS SLOGAN.

Country's Industrial Preparedness to Be Card Indexed.

New York, March 26.—With the authority of President Wilson and Secretary of the Navy Daniels, the committee on industrial preparedness of the naval consulting board has accepted an offer of the Associated Advertising Clubs of the World to conduct a free nation-wide advertising campaign to prepare the country's industries for the manufacture of munitions of war. This announcement was made to-night by Howard E. Coffin, chairman of the committee, together with details of the plan, which embraces arrangements for making for the first time in national history a thorough inventory of American industry by an organization of 30,000 engineers.

With "National Defense and International Peace" as the slogan, the advertising campaign will be conducted in all classes of publications, on bill boards, and electric signs, under the leadership of Herbert S. Huston, president of the associated bodies, and a committee of leading publishers and advertising experts. Mr. Houston said to-night that already "without cost to the government" newspaper, magazine and trade paper publishers, poster men and electric sign men had offered space to carry the advertising.

"This is not a war measure," he said, "but a peace measure. The militarist will support it and so will the pacifist."

The industrial inventory, involving the task of building up a card index system, probably will be made in May and will be based upon what it is necessary to know in determining the capacity and facilities of 30,000 plants which in time of war can manufacture munitions. The industrial lessons learned from the European war will be considered in correlation with this inquiry. One of the principal features of the committee's plan is a scheme whereby in time of peace manufacturers shall receive small annual contracts from the government for the manufacture of munitions so that they will be familiar with methods of manufacturing in time of war.

"It is vitally necessary," said Mr. Coffin, "that American industry be made aware of the part it must play

## BLUE RIDGE RAILWAY—BETWEEN BELTON AND WALHALLA.

Time Table No. 18.—Effective 12.01 A. M., February 27, 1916.

EAST-BOUND—		WEST-BOUND—				
First Class Passenger Daily.	First Class Passenger Daily.	First Class Motor Train Daily.	First Class Motor Train Daily.	Second Class Mixed Daily Ex. Sun.	Second Class Mixed Daily Ex. Sun.	
Leave Walhalla	7.20	7.20	7.20	7.20	7.20	
Leave West Union	7.25	7.25	7.25	7.25	7.25	
Leave Seneca	7.45	7.45	7.45	7.45	7.45	
Leave Jordania	7.48	7.48	7.48	7.48	7.48	
Leave Adams's Crossing	8.04	8.04	8.04	8.04	8.04	
Leave Cherry's Crossing	8.07	8.07	8.07	8.07	8.07	
Leave Pendleton	8.19	8.19	8.19	8.19	8.19	
Leave Autun	8.27	8.27	8.27	8.27	8.27	
Leave Sandy Springs	8.30	8.30	8.30	8.30	8.30	
Leave Denver	8.35	8.35	8.35	8.35	8.35	
Leave West Anderson	8.50	8.50	8.50	8.50	8.50	
Leave Anderson (Passenger Depot)	9.00	9.00	9.00	9.00	9.00	
Leave Anderson (Freight Depot)	9.01	9.01	9.01	9.01	9.01	
Leave Erskine's Siding	9.18	9.18	9.18	9.18	9.18	
Arrive Belton	9.30	9.30	9.30	9.30	9.30	
NUMBER OF TRAIN	12	10	24	30	8	
WESTBOUND—		EASTBOUND—				
Leave Belton	5.25	5.25	5.25	5.25	5.25	
Leave Erskine's Siding	5.35	5.35	5.35	5.35	5.35	
Leave Anderson (Freight Depot)	5.50	5.50	5.50	5.50	5.50	
Leave Anderson (Passenger Depot)	5.52	5.52	5.52	5.52	5.52	
Leave West Anderson	5.57	5.57	5.57	5.57	5.57	
Leave Denver	6.10	6.10	6.10	6.10	6.10	
Leave Sandy Springs	6.15	6.15	6.15	6.15	6.15	
Leave Autun	6.17	6.17	6.17	6.17	6.17	
Leave Pendleton	6.24	6.24	6.24	6.24	6.24	
Leave Cherry's Crossing	6.34	6.34	6.34	6.34	6.34	
Leave Adams's Crossing	6.36	6.36	6.36	6.36	6.36	
Leave Jordania	6.51	6.51	6.51	6.51	6.51	
Leave Seneca	6.53	6.53	6.53	6.53	6.53	
Leave West Union	7.11	7.11	7.11	7.11	7.11	
Arrive Walhalla	7.25	7.25	7.25	7.25	7.25	
NUMBER OF TRAIN	11	9	20	25	7	

Flag Stations: Anderson (Freight Depot), West Anderson, Denver, Sandy Springs, Autun, Cherry's Crossing, Adams's Crossing, Jordania. Steam trains will stop at following flag stations to take on and let off passengers: Welch, Toxaway, Phinney's, James.

J. R. ANDERSON, Superintendent.

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