

Value of Cotton Seed to the Farmer.

(From Farmers Bulletin, No. 124, U. S. Dept. of Ag.)

The results of two years' feeding experiments with milk cows to determine the value of cotton seed to the farmer are reported in a bulletin of the Mississippi Station, of which the following is a summary:

The facts as demonstrated are: (1) A pound of cotton seed has a greater value for feeding cattle than a pound of corn; (2) a pound of cotton-seed meal has a feeding value about equal to 2 pounds of corn; (3) that at least 85 per cent. of the fertilizing ingredients in the feeds is excreted by the animals fed, and may be recovered in the manure; (4) that nearly half of the fertilizing ingredients excreted is found in the urine; (5) that both cotton seed and cotton-seed meal may constitute a very important part of the grain feed of cattle without injury to their health; (6) that cotton seed and cotton-seed meal, when fed to dairy cows in proper quantity and properly combined with other feeds, do not injure the quality of either milk or butter.

With corn at 40 cents per bushel (about the average price in this State) a ton of cotton seed is worth \$16.70 as a feed, for either beef cattle or dairy cattle. At present prices for commercial fertilizers nitrogen costs about 12 cents per pound and phosphoric acid and potash each 5 cents per pound. Allowing these prices for the same ingredients in manure, we have \$9.09 as the fertilizing value of the manure for each ton of seed fed, making for a farmer a total value per ton of \$25.79. Farmers sell their seed for \$4 to \$6 per ton. Some of them sell for \$2 per ton.

In a similar way we find the feeding value of a ton of cotton-seed meal to be \$28.56, and the manure to be worth \$19.13 for every ton of meal consumed, making a total value of \$47.69 that a farmer might derive per ton by first feeding the meal to cattle and applying the manure to his land.

The cotton crop for the South [in 1897-98] was 11,200,000 bales and 5,600,000 tons of seed, having a combined feeding and fertilizing value of \$144,424,000. At \$5 per ton the seed would have brought \$28,000,000. * * * The farmers of the cotton belt lost \$116,424,000 [on this one crop].

The present disposition of the cotton-seed crop secures to the farmer a very small part of its real value, and must of necessity give place to a practice that will secure to the farmer the maximum benefit which he may derive from this product.

The time will come when the Southern farmer will realize that the fertilizing value in cotton seed must stay on the farm to maintain its fertility and productiveness.

He will not always regard the matter of hauling as of no consequence—as something which he can do without cost. If the best disposition of cotton seed is finally demonstrated to be to extract the oil for human food and other commercial purposes, and let the meal and hulls go back to the farms to serve both as feed and fertilizer, then most likely there will be a small oil mill at each ginney and oil and lint will be the only products of the cotton crop sent to the market.

The Southern farmer, however, need not wait for oil mills. He may get the full value of his cotton seed by a judicious system of feeding, accompanied by the most careful saving and proper use of the manure.

—THE EDITOR.

Legume Manuring.

To the farmer or planter the word legume means simply any plant belonging to the clover family, such as the various clovers, cow peas, Canadian field peas, beans, lucerne or alfalfa, etc. All these plants possess the power of taking nitrogen from the air and changing it into such a form or condition that it becomes available as plant food. Legumes store this nitrogen in their substance only. They enrich the soil simply by making a growth of substance fairly rich in nitrogen as plants go, and directly or indirectly this substance finds its way back to the soil as manure.

Legumes or clovers enrich the soil only in fertilizer nitrogen, as this class of plants, or any other class for that matter, cannot add to the soil a single pound of potash or phosphoric acid not already taken from the soil in the shape of the crop itself. There is no potash in the air in the form of gas, nor any phosphoric acid. The nitrogen which legumes convert into plant food exists in the air, in inert forms—that is, in such form that it is useless as plant food. The clover plants, through the aid of certain lower organisms, take this nitrogen from the air and combine it with oxygen making thereby a substance which is suitable as plant food. So far as it is now known, only the legume family of plants possess this property.

From the above, it follows that nitrogen may exist in such a state or condition that though it may be present in abundant quantities, plants cannot make use of it. In effect, much the same may be said of potash and phosphoric acid. As these two plant food elements exist in the soil naturally, they are of little use to growing plants. Plant food must be soluble in the water of the soil, in order to be available as the plant food. Now the natural soil may contain enough potash and phosphoric acid to grow a hundred crops, as shown by chemical analysis, yet fail to grow one. This is because this potash and phosphoric acid is locked up in the soil in rock particles which are insoluble in water, hence the fertilizer cannot take such form as to be useful as plant food.

The importance of this latter point is that legumes or clovers cannot assimilate nitrogen gas unless certain quantities of potash and phosphoric acid are present in the soil in available form. As legumes store up nitrogen, they form vegetable growth—the nitrogen is a part of this growth and the quantity of nitrogen stored depends directly upon the quantity of this growth. But this vegetable growth cannot be made without the proper amount of potash and phosphoric acid needed. The following table shows the pounds of potash and phosphoric acid required for every 100 pounds of nitrogen stored up by the legumes.

Every 100 pounds of nitrogen requires:

Table with 3 columns: Plant Name, Potash (pounds), Phosphoric Acid (pounds). Rows include Clover, Scarlet clover, Cow peas, Alfalfa, Canadian peas.

It will be observed at once that the potash greatly exceeds the phosphoric acid, whereas as a matter of fact commercial fertilizers commonly show quite the opposite proportions. It is true that phosphoric acid tends to take forms in the soil which place it beyond the reach of growing plants. At the same time, equal parts of phosphoric acid and potash certainly restore the balance between the two elements, and even more than restore it.

There is another point to touch upon here. It is quite impossible for plants to take up all the plant food applied to the soil; indeed, the best authorities practically agree that 50 per cent. of efficiency is fairly good work. This means that to obtain 100 pounds of fertilizer nitrogen from the air, the following quantities of potash and phosphoric acid must be used:

Table with 3 columns: Plant Name, Potash (pounds), Phosphoric Acid (pounds). Rows include Clover, Scarlet clover, Cow peas, Alfalfa, Canadian peas.

The point arises will it pay to use such quantities of plant food merely to grow fertilizer nitrogen—considering also that the phosphoric acid is made equal to the potash. The following table explains that potash and phosphoric acid cost the farmer about five cents per pound, nitrogen, fourteen cents. The first column shows what plant foods costs at most, while column two shows what the nitrogen gained, to which must also be added the value of the potash and phosphoric acid contained in the crop:

Table with 3 columns: Plant Name, Cost, Gain. Rows include Clover, Scarlet clover, Cow peas, Alfalfa, Canadian peas.

The table shows that under the most unfavorable conditions legume nitrogen pays merely as a fertilizer problem. Of course the value of the crop as forage or for other purposes is an additional value gained. Cer-

tainly it is important to note that this legume nitrogen is not all gain. It costs something and if the potash and phosphoric acid are lacking or improperly proportioned, growing legume fertilizer very easily becomes unprofitable. The farmer or planter must do his own thinking on this subject and mix it with a good grade of common sense.—R. Garwood in American Cultivator.

CHAPTER 4975—[No. 91.]

An Act to Establish a Standard of Weights and Measures of the State of Florida.

Be it Enacted by the Legislature of the State of Florida:

Section 1. The following standard of weights and measures shall be the standard of weights and measures throughout the State:

One standard bushel shall contain 2,150 2-5 solid inches. One liquid gallon shall contain 231 solid inches. The weights and measures shall be as follows:

- Wheat, per bushel, 60 pounds avoirdupois.
Corn, shelled, per bushel, 56 pounds avoirdupois.
Corn on cob with shuck, 70 pounds avoirdupois.
Sorghum seed, per bushel, 56 pounds avoirdupois.
Barley seed, per bushel, 48 pounds avoirdupois.
Oats, per bushel, 32 pounds avoirdupois.
Bran, per bushel, 20 pounds avoirdupois.
Corn meal, per bushel, 48 pounds avoirdupois.
Beans, shelled, per bushel, 60 pounds avoirdupois.
Beans, velvet, in hull, per bushel, 73 pounds avoirdupois.
Beans, castor, shelled, per bushel, 48 pounds avoirdupois.
Millet seed, per bushel, 50 pounds avoirdupois.
Beggard weed seed, per bushel, 62 pounds avoirdupois.
Irish potatoes, per bushel, 60 pounds avoirdupois.
Sweet potatoes, per bushel, 60 pounds avoirdupois.
Turnips, per bushel, 54 pounds avoirdupois.
Onions, per bushel, 56 pounds avoirdupois.
Salt per bushel, 60 pounds avoirdupois.
Peanuts, per bushel, 22 pounds avoirdupois.
Chufas, per bushel, 54 pounds avoirdupois.
Rye, per bushel, 56 pounds avoirdupois.
Apples, dried, per bushel, 24 pounds avoirdupois.
Apples, green, per bushel, 48 pounds avoirdupois.
Quinces, per bushel, 48 pounds avoirdupois.
Peaches, dried, per bushel, 33 pounds avoirdupois.
Peaches, green, per bushel, 54 pounds avoirdupois.
Cotton seed, per bushel, 32 pounds avoirdupois.
Cotton seed, Sea Island, per bushel, 46 pounds avoirdupois.
Plums, per bushel, 40 pounds avoirdupois.
Pears, per bushel, 60 pounds avoirdupois.
Guavas, per bushel, 54 pounds avoirdupois.

Sec. 2. All contracts hereafter made within this State for work to be done or anything to be sold or delivered by weight or measure shall be taken and construed according to the standard of weights and measures hereby adopted as the standard of this State.

Sec. 3. All laws and parts of laws in conflict with this act are hereby repealed.

Approved May 30, 1901.

CHAPTER 4976—[No. 92.]

An Act to Require all Merchants, Commission Merchants, Provision Dealers and Storekeepers and all other Persons Selling or Offering to Sell Flour, Meal, Grits, Oats, Corn, Wheat, Rye, Bran, Beans, Potatoes and Peanuts, Already Put up, Placed and Packed in Sacks, Bags or Barrels, in Original Packages, to have Marked, Stamped or Stencilled on the Sacks, Bags or Barrels the Exact Weight Thereof in Pounds Avoirdupois; and to Prescribe Penalties for Failure to do so; and to Prescribe Penalties for Marking, Stamping and Stencilling False Weights.

Be it Enacted by the Legislature of the State of Florida:

Section 1. All merchants, commission merchants, grocers, provision dealers, storekeepers and other persons, before selling or offering for sale, any grain, flour, meal, grits, oats, corn, wheat, rye, bran, beans, Irish potatoes, sweet potatoes or peanuts, already put up, packed or placed in any sack, bag or barrel, in original packages, shall have marked or stamped or stencilled upon such sack, bag or barrel so sold or offered for sale, with its contents, in figures, at least one inch in length, the exact weight in pounds avoirdupois of such bag, sack or barrel with its contents. If the bag, sack or barrel is of a black or dark color such figures shall be marked, stamped or stencilled in light colored ink or pencil; if the bag, sack or barrel is of a light color then the marking, stamping or stencilling shall be in black or dark ink or pencil, but in all cases the stamping, marking or stencilling shall be plain, legible, and placed conspicuously on such bag, sack or barrel.

Sec. 2. Any merchant, commission merchant, grocer, provision dealer, storekeeper or other person, or any officer, agent, clerk or employe of any merchant, commission merchant, grocer, provision dealer or storekeeper who shall offer for sale, attempt to sell or sell any of the articles mentioned in the preceding section already put up, placed or packed in any sack, bag or barrel, in original packages, without having such sack, bag or barrel marked, stamped or stencilled as in the manner prescribed in the preceding section before offering for sale, attempting to sell or selling the same, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by fine not exceeding two hundred dollars for each offense.

Sec. 3. Any merchant, commission merchant, grocer, provision dealer storekeeper, or other person or any officer, agent, clerk or employe of any merchant, commission merchant, grocer, provision dealer or storekeeper who shall sell or dispose of any sack, bag or barrel with its contents, containing any of the articles mentioned in the first section of this act upon which the weight in avoirdupois of such sack, bag or barrel with its contents has been marked, stamped or stencilled as herein provided, and the weights so stamped, marked or stencilled shall not be the true and correct weight of such sack, bag or barrel with its contents, but the weight so marked, stamped or stencilled shall be a greater weight than the true and correct weight of such sack, bag or barrel with its contents, shall be deemed guilty of a misdemeanor and upon conviction shall be punished for each offense by a fine not exceeding two hundred dollars or by imprisonment in the county jail not exceeding three months, or by both fine and imprisonment.

Became a law without the signature of the Governor.

Valuable to Women.

Especially valuable to women is Brown's Iron Bitters. Backache vanishes, headache disappears, strength takes the place of weakness, and the glow of health readily comes to the pallid cheek when this wonderful remedy is taken. For sickly children or overworked men it has no equal. No home should be without this famous remedy. Brown's Iron Bitters is sold by all dealers.

May Know Too Much.

"Do women who have had the advantage of advanced education make good wives?" asked the bachelor thoughtfully.

At this the benedict took him to one side, where he could speak confidentially.

"If you ever marry," he said, "and find occasion to frame up a real good excuse for a protracted session at the club, you will discover that it is possible for a woman to know too much." —Chicago Post.

Pyny-Pectoral

A QUICK CURE FOR COUGHS AND COLDS

Very effective Remedy in all affections of the

THROAT or LUNGS

Large Bottles, 25c. DAVIS & LAWRENCE CO. Limited, Prop's of Perry Davis' Pain-Killer.



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"I am so thankful for what Dr. Pierce's Favorite Prescription has done for me," writes Mrs. John T. Smith, of Slovan, B. C. Box 50. "It cured me of a disease which was taking away all my strength, helped me through the long months before baby came and I have a big strong baby girl, the most healthy and happy of all my three."

MAKES THE DIFFERENCE



He Got the Business.

"There are tricks even in our trade," said the old life insurance man. "About ten years ago a couple of respectable old parties, man and wife, came to town with \$100,000 or so that they wanted to put into an annuity. They had neither child nor child, kith nor kin, and they wanted to finish their lives in as much ease and luxury as could be bought. So they made the rounds of the life insurance companies, getting their annuity figures and had all the actuaries in town making calculations in the case.

"The head mathematician of the Blank Dash company was a little better than a mere figurer. He happened to hear what town the old parties came from, and he suddenly remembered that he had an old friend, a doctor, who lived there, whom he hadn't seen for years. He invited the medicine man down at once, took him out and

showed him a real good, decent time. Then he edged around to the annuity hunters, and lo and behold, the doctor was their family physician! Without appearing to pump him, the actuary learned enough about the old couple to enable him to make a most glittering inducement to the pair, and they bought their annuity of his concern. They were both dead inside of two years. I forgot just how much the company netted. I think it had paid out about one-tenth of what the old folks had paid in. The company was a gainer, and there were no losers except the other companies as a result of the actuary's shrewd move." —New York Sun.

"Spellbinders" is Waxy.

"Spellbinders" is the happy name given to the platform speaking which plays such an important part in every campaign. The national chairman determines who shall be the stars in this department. An ex-president is most in demand, a speaker or an ex-speaker comes next as a rule, and senators and representatives are invited to speak in the order of their usefulness. One speech by an ex-president is worth half a dozen efforts by other men, though they may be more logical and eloquent.

The candidate himself, when an orator, will draw greater crowds than anybody else, but if he is wise he will let the national committee arrange his itinerary and schedule. Headquarters are always overrun with volunteers for the stump; the star, or man with a reputation, waits to be invited or urged. Most of the lesser men are laborers for hire, but others are ambitious to make a reputation as a stepping stone to political office, and some are intensely in earnest and eager to be useful to their party.

The national committee settles for the expenses of spellbinders, unless they insist on paying their own way, which is unusual. Some of the great orators receive handsome sums for their services and travel in state.—Home Magazine.

A Thoroughbred.

Don't be a thoroughbred. A thoroughbred is well enough in cattle and hogs, but very disgusting among men, for the reason that among men a thoroughbred means a man who devotes too much time to having fun, to being a good fellow. Make a specialty of reliability, industry, fairness. Make your specialty a worthy one. Instead of seeing how late you can stay out at night go to bed at regular hours. Sleep will do you more good than a good time. There is no better man than the good citizen, the good husband, the good father, the good son. A thoroughbred is never noted in these directions.—Archives Globe.

THERE ARE IMITATIONS

Of John R. Dickey's Old Reliable Eye-Water. They are dangerous and painful and should be avoided. The genuine is put up in red cartons and has the name blown in the bottle. It cures no pain whatever and cures all inflammation. Children do not dread its application. The genuine is always enclosed in a red carton. It makes the eyes feel good. 25 cts. at Wight & Bro's drug store.

ESTERBROOK'S PENS

THE BEST MADE. ALL STATIONERS SELL THEM. THE ESTERBROOK STEEL PEN CO. 25 John St., New York.

TIME TABLE Louisville & Nashville Railroad.

Table with columns for train numbers, departure times, and destinations. Includes routes to Pensacola, Mobile, and various points in the North.

PURINA FEED advertisement featuring an image of a pig and text: 'KEEPS MULES UP FEED BILLS DOWN', 'CAPACITY: 25 CARS PER DAY.', 'PURINA MILLS ST. LOUIS, MO.'