

case, than were those grown under field conditions, yet the amount of water used in each case was also very much greater than when expressed in inches of rain. This year the differences are as strongly marked as they were last, and in the same direction, and this makes it desirable to bring them together for comparison as given below :

	In the Field.		In Cylinders.	
	Dry matter per acre.	Water in inches.	Dry matter in acre.	Water in inches.
Oats, 1891, lbs.	6083	13.93	8861	19.6
" 1892,			8889	19.0
Barley, 1891,	4157	11.27	7441	13.19
" 1892,			14196	23.52
Corn, 1891,	8190.5	12.34	19845	26.30
" 1892,	7045.3	11.34	19184	25.00

With this grouping it becomes very apparent that the yield of dry matter per acre for the three crops is measurable proportional to the number of inches of water consumed during their growth. Taking the cases of the crops grown in the cylinders, the nearly equal yields of corn, and of oats in 1891 and 1892, are associated with nearly equal amounts of water used per unit of area, but the smaller yields are associated with the smaller amount of water. In the case of the barley where the yield in 1892 is nearly double that of 1891, the depth of water supplied was also nearly doubled.

These results point very strongly toward the conclusion that we rarely have enough water in our soils under natural conditions to realize even approximate possible returns from our land, and that were we prepared to irrigate almost any of our crops at such times as there is a deficiency of water in the soil, very much larger average yields would be secured.

As everyone knows, the kernels of corn are utilized in making meal, brewers' grits and starch, and in fattening hogs and cattle. There is only little waste in the manufacture of corn into commodities; but there is an immense waste on the farms of a valuable nutrient which is contained in the corn stover, or, as it is commonly called, corn stalks.

Careful computations show that for every pound of shelled corn there have grown one and one-half pounds of corn stalks. In Nebraska, where 241,268,490 bushels of corn were produced in the year 1897 at a valuation of more than 41 millions of dollars, there were therefore produced likewise 10,133,277 tons of stover. The value of this stover as a nutrient is estimated by chemists at \$8 per ton. The greatest objection to corn stalks as a food for cattle has always been found in the pith of the stalks. This corn stalk pith, as everyone knows, is a great absorbent. Because of its absorbent properties it has been introduced into the United States navy as a protection to battleships. Henry W. Cramp, the great shipbuilder of Philadelphia,

said in a lecture read before a meeting of the Society of Naval Architects & Marine Engineers in New York :

"By using corn pith, packed in cofferdams, protection is given to the vitals of a vessel and great stability is secured. It does not corrode, but protects the iron and is non combustible. After exhaustive tests at the Indian Head proving grounds on the 10th of June, 1895, the superiority of the corn pith was demonstrated in a striking manner. As a result, the navy department in its specifications for the battleships *Kentucky* and *Kearsarge* and numbers 7, 8 and 9 has inserted a clause requiring the cofferdams of these battleships to be packed with corn stalk pith."

The fact that corn stalk pith or pulp will absorb water so rapidly makes it very objectionable when it enters into food for cattle. Every pound of dry pith will absorb from eighteen to twenty-five pounds of moisture in the digestive tract of an animal. The animal organism is fattened by the quantity of food it digests, rather than by the quantity which it consumes.

Save Nutriton.

Everyone understands the immense value of the hay crop. All who have studied the forage plants of the United States are posted as to the limited number of such plants cultivated among the farmers. Agriculture in the United States needs cheap forage and more of it.

In view of this, there can be no invention of greater value to the corn-growing region than one which shall properly conserve in its best form corn stover, separated from corn pulp or pith.

Up to this time no perfect machine for the purpose indicated has been brought to public notice. It is true that the Marsden company of Philadelphia organized some years since and established at Owensboro, Ky., Rockford, Ill., and Chester, Pa., some manufactories which were intended to utilize this waste product of the corn fields of the country. The Marsden company proposed to make out of corn stover a refrigerator lining, tile blocks, waterproofing compounds, gunpowder, leather enameling and linoleum. Whether or not that incorporation has succeeded THE CONSERVATIVE is unable to state.

The Main Object.

But the main object, or aim, it seems to THE CONSERVATIVE, in the utilization of corn stover ought to be to save its nutrient qualities for the farmer who raises the corn. A machine which shall be not too expensive, not too complicated and require not too much power, which shall be compact and not occupy much space, and which can be operated successfully by the farmer himself and which shall properly separate the pulp or pith from the shell of the stalk, leaving the latter clean and in

proper condition for cattle food, would be of inestimable value to every corn-grower and cattle feeder. Such a machine would make every acre planted in corn yield at least a ton and a half of nutritious and easily handled cattle food.

THE CONSERVATIVE is almost convinced that such a machine has been invented, patented, constructed and put in operation by a citizen of Nebraska. From time to time THE CONSERVATIVE will continue its investigation of corn stover and the possibility of so utilizing it as to save to Nebraska 30 millions of dollars per annum in wholesome, nutritious and fattening fodder.

THE DEMOCRATIC PARTY.

Let us face the facts, let us no longer deceive ourselves. The democratic party today is without character and standing in the nation. It has lost the confidence, if not the respect, of the great body of intelligent, thoughtful men of this country. What does the party stand for? What are its principles? What man is there in this party today who can stand up with any sort of confidence and declare them? Does democracy stand for imperialism or expansion? Bryan answers one way and Jones the other. Does it stand for free silver or the single gold standard? Bryan and Jones answer one way; Croker and a distinguished member of the national democratic committee answer another. Does the party stand for tariff reform or protection? Nobody knows, for the Chicago platform declared that that question was retired until the money question should have been settled.

Where are the party leaders? Where are the great men of the past who could upon any occasion, at any time of the day or night, if called upon, stand up and with accuracy and confidence proclaim democratic doctrines? There are no leaders, there is no man or set of men who are recognized today as the mouth-pieces of the party. There was a so-called leader of the minority forces in the house of representatives. He raised a constitutional question and called upon the democrats in the house to stand by him in the position that he assumed, but when the test came more than forty members of his party voted against him, and he then and there resigned.

Alas for the party of Thomas Jefferson! Surely it has fallen upon evil times. It is paying the penalty of the folly of 1896. Every prediction that we made when it then went astray has been fulfilled, or is about to be fulfilled. It must reorganize upon a true democratic platform or go to pieces. Gentlemen may mock at this, as they mocked at it in 1896, but it is the truth. Those who then forsook the old ship must come back to the little band of democrats who remained to keep the colors flying, or be wrecked.—Richmond Times.