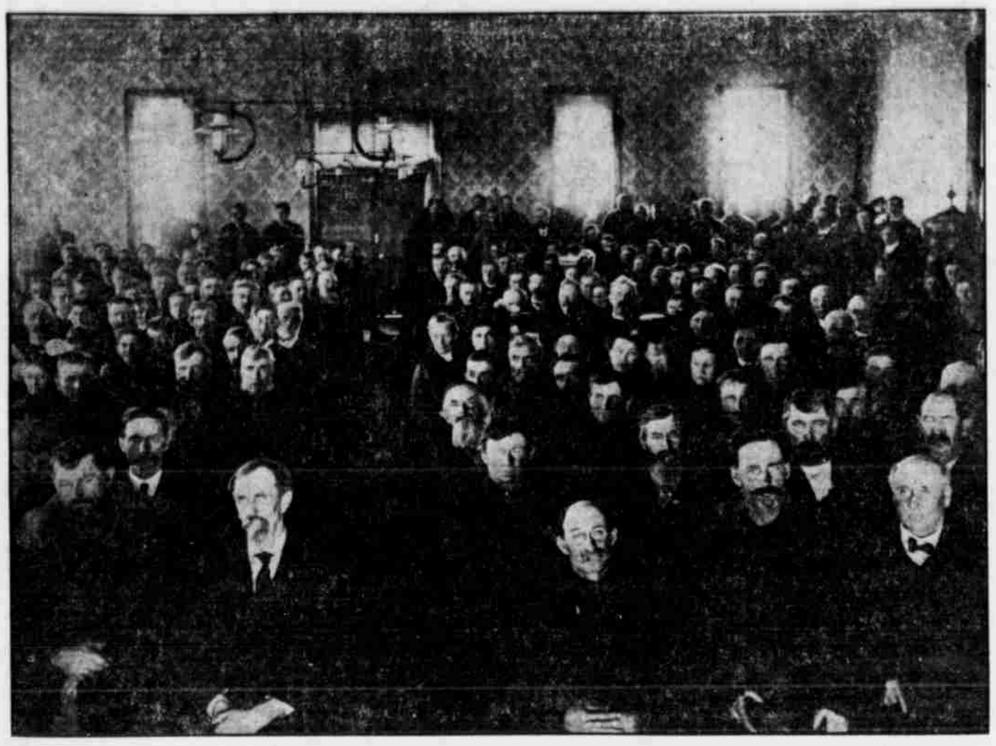
Gospel of Good Seed Corn Preached by Experts to Western Farmers



AUDIENCE AT LECTURE AT GIBBON.

CROWD AT KEARNEY STANDING IN THE SNOW.

SPECIAL LECTURE TO SCHOOL CHILDREN AT LEXINGTON

THE Union Pacific railroad in Nebraska conducted a three-day seed special train, February 13 to 15, inclusive, in conjunction with the Nebraska State university, touring its lines in central and southern Nebraska and northern Kansas, in the interest of farmers' education in improved crops and soil management. This proved one of the most successful efforts in the history of seed train special work. The attendance at the lecture points was unusually large, in many places beyond the capacity of the three auditorium cars to accommodate, necessitating the holding of overflow meetings in the waiting rooms of the depots. The general character of the attendance was that of the interested, practical farmer. That there has been started a spirit of revival in agricultural improvement, in both seed selection and method of crop cultivation, there cannot be the least question or doubt. That the seed special train has been a potent factor in helping to create this sentiment and spread it broadcast over the country is equally true; that many thousands of farmers have received their first inspiration, the first quickening influence that has led them to a reform, through this same medium of education cannot be gainsaid.

Mission of the Seed Train.

The seed train special is one of the most serviceable combinations, from the standpoint of business enterprise, that has ever been introduced to the public. In the first place it is pre-eminently a public benefactor in its voluntary, free disposition of a knowledge of agriculture that benefits the farmer and enriches the country. It brings to the attention of the citizens of the state the work that the State university, Agricultural college and experiment station are doing and are capable of doing. It gives increased confidence in this great educational institution, called the State university, by taking its professors around over the state and making them acquainted with the common people, the farmers, the taxpayers, the persons who contribute in patronage to the maintenance of these schools. It offers the railroad an opportunity to invest the expenses of operating this train in view of increased production in crops along its line of road, thus enhancing the possibilities of increased shipments. In all this combination of mutual interests great good is sure to follow.

School Children Attend Lectures.

In the midst of all the excitement and interest of the gathering together of farmers, discussion of the seeds, the crops, the soil, the novelty of a visit from university professors, and the railroad officials, together with a seed special train bearing the banners "Educational Crop and Soil Train" there came at many places a mighty rushing, clamoring throng of public school children that demanded attention, amusement and information, and who at times severely taxed the ingenuity of the lecturers to entertain. The latter feature, which on this excursion became so prominent a factor in the attendance at these lectures, demonstrated the educational earnestness upon which is based the principles of present day agricultural reform.

One of the most profound, earnest and convincing demonstrations of the natural and acquired interests of the present day school with agricultural education was manifest at North Platte, where the entire high school, numbering more than 150 pupils, came to the train headed by its full corps of teachers to listen to the lectures on soil and seeds. So interested and enthusiastic were these happy, cheerful boys and girls that Mr. Darlow, in charge of the train, volunteered them an outing to Gothenburg and return free of charge, which was gracefully accepted by the teachers. In recognition of this courtesy four young girls, Irma Clinton, Esther Antonides, Stella Snyder and Jennie Finney, members of the North Platte High school sextet, rendered a number of popular songs with such astonishing proficiency and skill as to completely captivate their hearers and drew from them the most profuse expressions of appreciation. The public schools are rapidly approaching an era of agricultural education, a period when the study of elementary agriculture will be as prominent and common in our schools as geography and arithmetic are today. A wave of reform in methods of cultivation and crop management is now spreading over the country and is assuming an epidemic form, affecting all classes and conditions of tillers of the soil.

Subjects of the Talks.

The lectures on this seed special were mainly confined to instructions on the selection of seed corn and the management of soils. The usual description prevailed of the ear of corn that is cylindrical in form, carries its thickness well out to the tip, with even, regular rows of kernels running the full length of the cob and ear of medium size, thus combining the properties of ear that will produce the largest amount of shell corn, etc. The early selection of this seed and the thorough drying of the ears before the approach of severe freezing weather, and the placing of them in a dry, secure place for storage, free from damage of mice is the subsequent preparation of the seed.

There is one difference of opinion among seed corn experts, or more properly speaking, seed corn lecturers, which might be well for the corn grower to observe in his gaining of information, and this is as to the keeping of seed where the temperature is above freezing, after it is thoroughly dried. On the famous Funk seed corn farm, in Illinois, there has been some very accurate tests made, and records kept, showing that the per cent of germination in the seed kept in rooms with temperatures above freezing, is much above that which is exposed to freezing temperatures. The germination, under such conditions, is practically perfect where good, vigorous seed has been selected.

Big Crops the Aim.

The great and central thought in all this seed corn proposition is the stimulating influence towards greater effort to produce larger crops of corn on the same acreage now used for this crop. There are but few farmers or corn growers who do not know a good ear of corn when they see it, and who have not heard all about the kind of ear to select, and how to take care of it when selected, but the careless indifference in carrying into effect the knowledge already possessed is the demand for instruction and instructors to prompt them to action. When it can be proven that by the mere selection of a certain type of ear for seed, that possibly may be found in their own crib, they can increase their yield of corn 20 to 30 per cent, it seems business suicide to let this opportunity pass unheeded. Let every farmer who raises an acre of corn, stop and consider his own pocketbook but for a moment and see if thirty bushels of corn per acre is more satisfactory than forty-five? This advantage has been secured merely by the selection of the seed ears from the same field. "Like produces like," is a principle in nature that holds good. It is by this principle that improvement has been made in animal and plant life.

The great wizard in plant creation, Luther Burbank, is credited as saying that one grain more added to each ear of corn now grown in this country would increase the yield 5,000,000 bushels. It is within the possibility of the present day corn selection to increase the entire yield of corn 20 per cent in actual weight and not increase the number of ears.

Soil management is becoming the important and most interesting feature in present day farming and crop growing. There seems to be over large areas of the older farming districts of the western country a realization that the cultivated lands are losing in fertility, that they are not producing as liberally of the cultivated grain crops as in years gone by. The constant taking away without returning any thing to the land must result in impoverishment of soil fertility.

The analyses of the most of the prairie soils shows that there is an abundance of the mineral elements of fertility present, enough, it is believed, to last for all time in the production of maximum crops. The addition of commercial fertilizers containing these properties is not necessary, and possibly never will be. The need is to supply the humus that is being exhausted. This is the vegetable mold formed by decomposition of grasses, grass roots, etc., which has for many years been supplied to the prairies by natural means of growth and decay. This accounts for the dark color of the soil to a depth equal to where the washing of the humus has extended down into the ground. In the process of the decomposition of this vegetable matter organic acids are formed, which attack the mineral properties in the soil and convert them into soluble form to be taken up and used by the plants. Plants must have the mineral matter to produce growth, and without humus or vegetable mold they are unable to get it. Humus is a releaser of mineral fertility.

Growing of Grass Crops.

"In a prairie soil fairly well supplied with humus there will be about 3½ per cent of this material present or about 100,000 pounds per acre. This amount of humus will have combined with it about 2,500 pounds of mineral matter which is available for plant use. A similar soil which has been under cultivation for a long time without the restoration of humus will only have about 800 pounds of the mineral fertility combined with the humus. Roughly the long cultivated soil will have about 32,000 pounds of humus per acre, a little over 1 per cent of humus, approximately 1¼ per cent."

The importance of growing grass crops and resting the soil or giving the land a chance to accmulate humus in a coating of decomposing vegetation on the surface is readily seen, when it is understood how important this property is for soil fertility. Lands in grass, where not abused by close cropping, are constantly growing richer, while the cultivated lands are constantly growing poorer. The greater the amount of humus in the soil the more able it becomes to resist drouth and the more productive it is. This knowledge then practically solves the question of soil fertility and soil productiveness. The same results may be had by the liberal use of barnyard manure, but the very limited supply to be had on each farm does not compare favorably with the requirements, thus necessitating the use of self-fertilizing crops, such as the clover, alfalfa and other legumes that may be employed as fertilizers.

In the case of lands rund down and low in fertility, it will justify the sowing of a fertilizing crop to be plowed under in its green stage of growth. In the best agricultural districts of the east it has been the custom for the last fifty years or more, to plow under a crop of clover occasionally, in order to secure a high state of fertility and obtain large crops of grain for several years following.

This introduces the subject of crop rotation, some system of which must be adopted on all well managed farms, sooner or later. It now remains for the practical farmer to take hold of this feature of the work and determine what is best for his particular needs. It will be found, as a general proposition, that for this district of country called the Missouri valley, that clover or alfalfa will be the fertilizing crop to use and that the order best suited to conditions will be alfalfa sod plowed under for corn after several years' cropping to hay. The planting of corn should not exceed two years, then to oats one year, then wheat, then seeded back to alfalfa. The system of rotation must be governed to suit the demands of the farm operations, live stock kept, amount of land to be farmed, etc.

In the course of the lectures the following example was given of the comparative values of alfalfa and barnyard manure in growing of corn at the Nebraska experiment station:

"A piece of land sown to alfalfa in 1895 was plowed up and planted to corn in 1902. Another piece of land of the same size and on the same farm that had not been seeded down, but had been well manured with barnyard manure and given the best of tillage, was planted at the same time, with the same variety of corn. The alfalfa land gave a yield of eighty-six bushels of corn per acre, the other field gave seventy-five bushels per acre. The land that had not been in alfalfa was evidently in very good shape or it would not have produced seventy-five bushels of corn per acre. Poor soils do not produce such yields. Although this land had been liberally manured and well tilled, it failed to produce as much corn by eleven bushels per acre as the alfalfa land."

For Keeping Humus in Soil.

The experiment station lecturers defined their system of rotation for the keeping of the humus supply in the soil as follows: "Corn is grown two years. The third year the land is thoroughly disked early in the spring and sown to oats. The oat crop is removed from the land and stacked as soon after harvest as possible. If the ground is sufficiently wet it is plowed at once. If very dry or cloddy the land is double disked, thrice if necessary, and then plowed deeply. Disking the land not only prevents a further loss of the water by evaporation, but it also fines the surface so that fine earth is turned under at the bottom of the furrow slice instead of clods and chunks. The plow is followed on the same day with the disk or subsurface packer in order to thoroughly fill up all open spaces in the sub-surface. The common drag harrow follows these tools to work the surface down into shape. After every rain the land is harrowed, as soon as it is fit to work, in order to break up any crust that may form and by keeping a loose surface prevent the loss of moisture by evaporation."

Sowing of Winter Wheat.

"At the proper time for seeding, winter wheat is sown, using the press drill. Unless Hessian fly is to be fought, the wheat is drilled in about the middle of September. This method of treatment accomplishes two things, the plowed land will take up more of the rainfall than unbroken stubble and it will store it up for the use of the wheat crop. The early plowing and subsequent disking and harrowing make a fine, well compacted subsoil free from large air spaces and give a fine loose surface. Such a seed-bed is ideal for wheat. The moisture stored up enables the young plants to make a good vigorous start and to develop a strong root system before freezing weather stops the growth. They are thus much better able to withstand the rigors of winter.

"The fourth year, after the wheat crop is harvested, the soil is treated just as for the oat crop. If the land is in fairly good shape the rotation is repeated by putting into corn the following spring. If the land shows that it is running down in fertility, it is seeded in the fall to grass, if the season is wet enough, sowing the grass about the last of August or the first of September. Fall plowing gives a crop that first year, thus saving the loss of the land for one season. If too dry for fall seeding, the land is sown to grass the following spring. The land is thus left in grass from two to five years, when it is again broken up and put under cultivation.

Conservation of Moisture.

"To prevent undue loss of water by evaporation is one of the important objects of tillage. Early fall plowing breaks up the compact surface layer at the top, which breaks the capillary upward movement of the soil water and thus checks evaporation. The loose plowed soil catches the rain better than a compact surface and thus gets more of the rainfall. The trash turned under also has a much better chance to rot and help render fertility available. If fall grains are to be sown the water thus stored makes conditions of fall growth more favorable. A good strong full growth is secured, which makes the crop much better able to withstand severe winters. In the case of a drouthy spring, the water stored up in the fall may save the crop.

Late fall plowing is sometimes an advantage where no fall crop is to be sown. It thoroughly prevents further evaporation of soil water, there are few roots to injure at this time and aeration is more needed. Evaporation is also less early in the season. Cultivation should become shallower and less frequent as the season progresses. The need of aeration becomes less. And it is desirable for the plants to develop as many of the surface feeding roots as possible.

"The soil has two principal movements, percolation, the soaking downward of water after rains, and capillary, the slow upward movement of the water between rains, to supply that lost by evaporation or taken up by growing plants. A loose open structure favors percolation, as it permits the water to run into the soil more readily. A close compact structure favors capillary movement, as this is the upward movement in the small spaces. What is desired then is a loose surface to catch and allow rain to soak in, and a compact sub-surface so that there will be strong upward movement to supply the roots of growing plants. The loose mulch will prevent its loss from the surface."

The evidences of appreciation of this educational enterprise on the part of the railroad and the State university is apparent from the many expressions of approval and endorsement from the thousands of persons who visited this special train in its tour over the state. The spread of the gospel of pure seed and better methods of farming has created a spirit of revival among the tillers of the soil, and the light which is beginning to show forth in their works they have no desire to hide, but on the contrary aid in its reflection that others may see the easy and broad way to better farming and independent wealth.

Stirring Incidents in Life of David B. Henderson

A SCOTCHMAN by birth, an American by choice, the late David Bremner Henderson of Iowa played a conspicuous and honorable part in American affairs. All but the first ten of his 65 years were devoted almost entirely to the well-being of his adopted country. As lawyer, soldier, politician and finally as speaker of the house of representatives he was a factor and a force in the constructive measures of war and peace for thirty years. Naturally a career of such wide activity and prominence in public affairs is marked with stirring incidents which illustrate the dominant traits of the man.

Colonel Henderson sprang from some of the fighting stock of Scotland. Before emigrating to America the family dwelt in the village of Old Deer, on the earl of Buchan's estate in Aberdeenshire. The ability of his father to sing and improvise ballads won him favor with the old earl, who one night, after an especially good song, following an especially good dinner, declared the singer and his descendants for three generations should enjoy without rent the use of a generous slice of land on the main street of the village. The elder Henderson immediately erected six cottages on the land and the rent from five of them made him a man of distinguished consideration in the village. It was in the sixth cottage that the future speaker of the American house of representatives first saw light.

The earl dropped dead one night and the title and estates passed to his brother. Henderson had never procured from his benefactor any written title to the land and the new earl visited and ordered him to move away within two days. Thoroughly angered, the Scot booted his lordship from the house. Henderson's wife, alarmed, begged forgiveness from the enraged nobleman, engaging that there should be no dispute over the property. Two days later the Henderson family sailed for America.

When David B. Henderson was old enough to work he saw the sun rise and set while he was at his farm labors in Iowa. He had a strong mind and a strong body, and the work of the long day did not prevent another kind of work which extended far into the night. The boy read everything upon which he could lay his hand. Before he was 16 years old the people of the countryside regarded him as nothing less than a giant of knowledge. His learning seemed simply to stun their comprehension. He knew Shakespeare and Milton by heart, and he retained nearly every line of both the masters through the years.

The Fighting Trait.

At 18 he entered the Upper Iowa university. There he studied for three years, working on the farm in summers and living with the greatest frugality in winters. He and a chum rented quarters and kept house for themselves. They cooked their own food, swept their own floors and made their own beds. Young Henderson got special standing among his fellow students through an incident. His skill as a debater was as great as his superiority as a wrestler. He had begun when he was only 8 years old, his oldest brother George being his opponent generally and his father the judge. His reputation in this line had preceded him at Fayette, and he had not been in the college a week before he was chosen to lead a discussion before one of the debating societies. On his first appearance he was interrupted by a senior who asked a flippant question. Henderson stopped and looked at the fellow, but soon resumed. Three or four minutes later came another interruption, but more flippant in tone—insulting, even. Henderson turned again and looked at the fellow. This time young Henderson spoke up:

"Mr. Chairman," quoth he, "if you cannot preserve order in this room, I will."

Then he upset the senior and piled him up in the woodbox. There were no more interruptions at Upper Iowa university when Henderson was making remarks.

Off for the War.

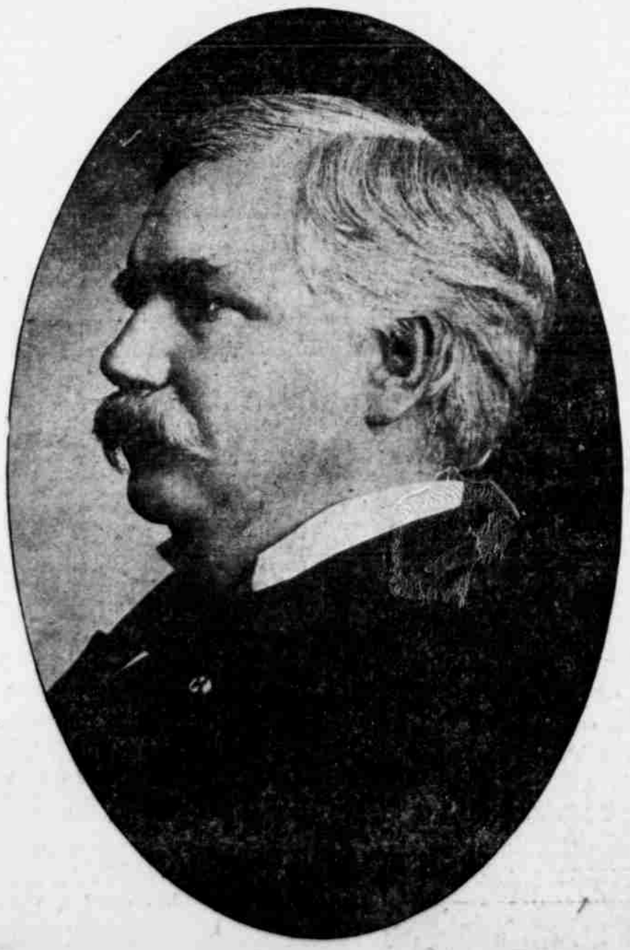
The call for volunteers in 1861 suddenly ended the studies of young Henderson. He was then 21. One morning in August of that year Henderson arose in the class room and asked permission to say a few words on a subject of vital interest to everyone present. He had no complaint, no protest to make, he said, but he wished earnestly to be heard.

This was an entirely novel proposition and the faculty hesitated, but permission was finally given. Then the young man made his first war speech. He dwelt upon the government's need for the services of its strong young sons and declared it to be the duty of all who could to rush to the front. When he had finished he read a series of resolutions setting forth the situation in sober phrase and concluding with this sentence: "We therefore close our books to fight our country's battles." To this was appended a muster roll bearing the names of twenty-two students.

Before he went to the front Henderson enlisted 104 more volunteers, and thus the career of this typical American soldier, professional man and statesman was begun. Though he could have had a captain's place, he said he was too young and so was made second lieutenant. Twice he was wounded, once in the face when he was first under fire, and once below the knee, which made amputation necessary. Nevertheless, he returned to the front, though wearing a timber leg, and when the war was over was made a colonel at 23. After that he studied law, served as internal revenue collector for the Dubuque district and later was elected to congress.

Campaign and Convivial Songs.

Colonel Henderson was almost an ideal campaigner. In his stump speeches the most notable characteristic were heartiness, obvious belief in what he said and enthusiasm. His habit of livening up the proceedings occasionally by asking the audience to join him in singing "The Star Spangled Banner," "Marching Through Georgia," or some other patriotic song, has long been famous. On such occasions he led the singing himself in a strong and really musical voice. In convival company the colonel's favorite was "There's a Hole in the Bottom of the Sea." For twenty years he sang that song in Washington at every gathering where song was permitted, and at some where it was not. It was his never-failing resource when he felt impelled to burst into melody. The impulse generally came at dinner, and David Bremner Henderson had three or four invitations for every night of the season.



DAVID BRENNER HENDERSON.

Many a man has cried into his glass when the ex-speaker trolled those immortal words—not because of the singing, mind, but because of the overpowering pathos of it all. When the speaker put on the tremolo stop and sang "There's a hole—there's a h-o-o-o-l-e," there was nothing to do but cry. Weeping was required. No sobs or sighs would do—there must be tears.

Experts say—men like the Clover club chaps of Philadelphia and the Gridiron men of Washington—that David Bremner Henderson was one of the best give-and-take, rough-and-tumble dinner entertainers who ever stood up with a glass in his hand and a joke on his tongue. Henderson thought like lightning. His retorts were sometimes savage, sometimes pleasant, but always witty and always apropos. He wasted no time beating about the bush, at a dinner where every man's wit was against every other man's. He was usually in first and hardest. He could keep things going better, make more fun and sing more songs and show up with a clearer eye and a smoother skin the next morning than any other man in congress. That is a strong statement, too, for every one of the 357 representatives and the eighty-eight senators has to be a "mixer."

Career as Speaker.

There was little casting about for candidates when Thomas B. Reed resigned as speaker of the house of representatives in 1899. David Bremner Henderson was chosen with almost singular unanimity to control that turbulent body. The gallery loved dearly to listen to him in debate. The phases of his character were many. Distinguished men have laughed immoderately when Colonel Henderson, divesting himself of his coat at the liquor course of a dinner, struck up his pet song, "There's a Hole in the Bottom of the Sea," and requested everyone to join in the chorus. Here was good nature without a dross of alloy. Yet the next morning Colonel Henderson might flay in debate the diner with whom he clinked glasses.

He was somewhat proud of the distinction of being the second alien-born to occupy the speaker's chair. The other was Judge Crisp, who was born in England.

Shortly after the first speakership election, the metamorphosis of Henderson began. He was still the good fellow to a few of his intimates, but to the public at large he became the speaker of the house of representatives in all that the term implies. Formerly the most approachable of men for newspaper purposes, he froze suddenly and became as silent as a joss. He sat in solitary state in his room and let people in to see him with the condescension of a great personage who had important matters on hand at all times and could not be bothered with little details presented by little folks. He started in to force social recognition for his place. He developed peculiar views as to precedent, and his claims often embarrassed private as well as official hosts and hostesses. He had a regular feud with Senator Frye, president pro tem of the senate. So bitter was this feud that President Roosevelt felt it unsafe to invite Henderson and Frye at the same time to any function where the placing of the guests implied seniority or precedent in rank.

President McKinley bore the brunt of this feud. Shortly after the first election of

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