Lincoln's View of Agriculture-1859

(with some Projections by Hopkins—1909)

The story is told that Preacher Jones, of a southern country church, was in the habit of quoting liberally from the great pulpit orators, without giving very much credit for the quotations. A brother of the congregation who boasted some literary attainment, and who recognized the quotations, took a front seat one Sunday morning, and at the proper time he wrote something in a note book and said to himself above a whisper: "That's Beecher"; and a few minutes later, he added: "That's Lyman Abbott".

After another notation and a similar remark, distinctly audible to most of the congregation, Preacher Jones stopped short and said: "I want it understood by one gentleman in this aujience, that I'm doin' the preachin' for this here church".

In the brief and awful silence which followed, the literary brother quietly made another notation, and was heard to whisper to himself: "That is Jones".

In the paper I have prepared upon Lincoln's View of Agriculture, I have included much of Lincoln's own language, taken from his Agricultural Address, delivered fifty years ago before the Wisconsin State Agricultural Society. On paper I have made the proper use of quotation marks; but, if I sometimes fail to state just where these quotation marks are, I think this audience will have no difficulty in distinguishing the language of Lincoln from that of—Jones; and you will doubtless observe, too, that, commonly in his own remarks, Jones is thinking Lincoln's thoughts after him.

"Farmers,.....as a class.....are neither better nor worse than other people..... but..... their interest is the largest interest. It also follows that that interest is most worthy of all to be cherished and cultivated—and if there be inevitable conflict between that interest and any other, the other should yield."

While Lincoln acknowledged that the farmers' interest was of greatest importance because at that time they represented the most numerous class, he also recognized the permanent success of American agriculture as the foundation upon which must rest our ultimate national success.

"My first suggestion is an inquiry as to the effect of greater thoroughness in all the departments of Agriculture than now prevails in the Northwest—perhaps I might say in America. To speak entirely within bounds, it is known that fifty bushels of wheat, or one hundred bushels of Indian corn, can be produced from an acre..... Take fifty of wheat, and one hundred of corn, to be the possibility, and compare it with the actual crops of the country. Many years ago I saw it stated in a patent-office report, that eighteen bushels (of wheat) was the average crop throughout the United States."

These are Lincoln's words, spoken fifty years ago. The average yield of wheat in the United States has now fallen to 13.7 bushels per acre, as a ten year average, 1899-1908.

"As to Indian corn, and indeed, most other crops, the case has not been much better..... It is true that heretofore we have had better crops with no better cultivation, but I believe it is also true that the soil has never been pushed up to one-half of its capacity.

"What would be the effect upon the farming interest to push the soil up to something near its full capacity. Unquestionably it will take more labor to produce fifty bushels (of wheat) from an acre than it will to produce ten bushels from the same acre; but will it take more labor to produce fifty bushels from one acre than from five? Unquestionably thorough cultivation will require more labor to the acre; but will it require more to the bushel? If it should require just as much to the bushel, there are some probable, and several certain, advantages in favor of the thorough practice. It is probable it would develop those unknown causes which of late years have cut down our crops below their former average. It is almost certain, I think, that by deeper plowing, analysis of soils, experiments with manures and varieties of seeds, observance of reasons, and the like, these causes would be discovered and remedied."

Lincoln? Yes, that's Lincoln.

"It is certain that thorough cultivation would spare half, or more than half, the cost of land, simply because the same product would be got from half or from less than half, the quantity of land. This proposition is self-evident, and can be made no plainer by repetitions or illustrations. The cost of land is a great item, even in new countries, and it constantly grows greater and greater, in comparison with other items, as the country grows older.

"It also would spare the making and maintaining of inclosures for the same, whether these inclosures should be hedges, ditches, or fences. This again is a heavy item—heavy at first, and heavy in its continual demand for repairs. I remember once being greatly astonished by an apparently authentic exhibition of the proportion the cost of an inclosure bears to all the other expenses of the farmer, though I cannot remember exactly what that proportion was. Any farmer, if he will, can ascertain it in his own case for himself.

"Again, a great amount of locomotion is spared by thorough cultivation. Take fifty bushels of wheat ready for harvest, standing upon a single acre, and it can be harvested in any of the known ways with less than half the labor which would be required if it were spread over five acres. This would be true if cut by the old hand-sickle; true to a greater extent, if by the scythe and cradle; and to a still greater extent, if by the machines now in use. These machines are chiefly valuable as a means of substituting animal power for the power of men in this branch of farm-work. In the highest degree of perfection yet reached in applying the horse-power to harvesting, fully nine-tenths of the power is expended by the animal in carrying himself and dragging the machine over the field, leaving certainly not more than one-tenth to be applied directly to the only end of the whole operation—the gathering in of the grain, and clipping of the straw. When grain is very thin on the ground it is always more or less intermingled with weeds, chess, and the like, and a large part of the power is expended in cutting these.

It is plain that when the crop is very thick upon the ground, a large proportion of the power is directly applied to gathering in and cutting it; and the smaller to that which is totally useless as an end. And what I have said of harvesting is true in a greater or less degree of mowing, plowing, gathering in of crops generally, and indeed of almost all farm-work.

"The effect of thorough cultivation upon the farmer's own mind, and in reaction through his mind back upon his business, is perhaps quite equal to any other of its effects. Every man is proud of what he does well, and no man is proud of that he does not well. With the former his heart is in his work, and he will do twice as much of it with less fatigue; the latter he performs a little imperfectly, looks at it in disgust, turns from it, and imagines himself exceedingly tired—the little he has done comes to nothing for want of finishing.

"The man who produces a good full crop will scarcely ever let any part of it go to waste; he will keep up the inclosure about it, and allow neither man nor beast to trespass upon it; he will gather it in due season, and store it in perfect security. Thus he labors with satisfaction, and saves himself the whole fruit of his labor. The other, starting with no purpose for a full crop, labors less, and with less satisfaction, allows his fences to fall, and cattle to trespass, gathers not in due season, or not at all. Thus the labor he has performed is wasted away, little by little, till in the end he derives scarcely anything from it.

"The ambition for broad acres leads to poor farming, even with men of energy. I scarcely ever knew a mammoth farm to sustain itself, much less to return a profit upon the outlay. I have more than once known a man to spend a respectable fortune upon one, fail, and leave it, and then some man of modest aim get a small fraction of the ground, and make a good living upon it. Mammoth farms are like tools or weapons which are too heavy to be handled; ere long they are thrown aside at a great loss."

"The prudent, penniless beginner in the world labors for wages awhile, saves a surplus with which to buy tools or land for himself, then labors on his own account another while, and at length hires another new beginner to help him. This, says its advocates, is free labor—the just, and generous, and prosperous system, which opens the way for all, gives hope to all, and energy, and progress, and improvement of condition to all. If any continue through life in the condition of the hired laborer, it is not the fault of the system, but because of either a dependent nature which prefers it, or improvidence, folly, or singular misfortune. I have said this much about the elements of labor generally, as introductory to the consideration of a new phase which that element is in process of assuming. The old general rule was that educated people did not perform manual labor. They managed to eat their bread, leaving the toil of producing it to the uneducated. This was not an insupportable evil to the working bees, so long as the class of drones remained very small. But now, especially in these free States, nearly all are educated—quite too nearly all to leave the labor of the uneducated in any wise adequate to the support of the whole. It follows from this that henceforth educated people must labor. Otherwise, education itself would become a positive and intolerable evil. No country can sustain in idleness more than a small percentage of its numbers. The great majority must labor at something productive. From these premises the problem springs, 'how can labor and education be the most satisfactorily combined?'

"By the 'mud-sill' theory it is assumed that labor and education are incompatible, and any practical combination of them impossible. According to that theory, a blind horse upon a treadmill is a perfect illustration of what a laborer should be—all the better for being blind, that he could not kick understandingly. According to that theory, the education of laborers is not only useless but pernicious and dangerous. In fact, it is, in some sort, deemed a misfortune that laborers should have heads at all. Those same heads are re-

garded as explosive materials, only to be safely kept in damp places as far as possible from that peculiar sort of fire which ignites them. A Yankee who could invent a strong-handed man without a head would receive the everlasting gratitude of the 'mud-sill' advocates.

"But free labor says, 'No'. Free labor argues that as the Author of man makes every individual with one head and one pair of hands, it was probably intended that heads and hands should cooperate as friends, and that that particular head should direct and control that pair of hands. As each man has one mouth to be fed, and one pair of hands to furnish food, it was probably intended that that particular pair of hands should feed that particular mouth—that each head is the natural guardian, director, and protector of the hands and mouth inseparably connected with it; and that being so, every head should be cultivated and improved by whatever will add to its capacity for performing its charge. In one word, free labor insists on universal education."

"This leads to the further reflection that no other human occupation opens so wide a field for the profitable and agreeable combination of labor with cultivated thought as agriculture. I know nothing so pleasant to the mind as the discovery of anything that is at once new and valuable—nothing that so lightens and sweetens toil as the hopeful pursuit of such discovery. And how vast and how varied a field is agriculture for such discovery! The mind, already trained to thought in the country school, or higher school, cannot fail to find there an exhaustless source of enjoyment. Every blade of grass is a study; and to produce two where there was but one is both a profit and pleasure. And not grass alone, but soils, seeds, and season—hedges, ditches, and fences—draining, droughts, and irrigation—plowing, hoeing and harrowing—reaping, mowing, and threshing—saving crops, pests of crops, diseases of crops and what will prevent or cure them—implements, utensils, and machines, their relative merits, and how to improve them—hogs,

horses, and cattle—sheep, goats, and poultry—trees, shrubs, fruits, plants, and flowers—the thousand things of which these are specimens—each a world of study within itself.

"In all this, book-learning is available. A capacity and taste for reading gives access to whatever has already been discovered by others. It is the key, or one of the keys, to the already solved problems. And not only so: it gives a relish and facility for successfully pursuing the unsolved ones. The rudiments of science are available, and highly available. Some knowledge of botany assists in dealing with the vegetable world—with all growing crops. Chemistry assists in the analysis of soils, selection and application of manures, and in numerous others ways. The mechanical branches of natural philosophy are ready help in almost everything, but especially in reference to implements and machinery.

"The thought recurs that education—cultivated thought—can best be combined with agricultural labor, or any labor, on the principal of thorough work; that careless, half performed, slovenly work makes no place for such combination; and through work, again, renders sufficient the smallest quantity of ground to each man; and this again, conforms to what must occur in a world less inclined to wars and more devoted to the arts and peace than heretofore. Population must increase rapidly, more rapidly than in former times, and ere long the most valuable of all arts will be the art of deriving a comfortable subsistence from the smallest area of soil. No community whose every member possesses this art, can ever be the victim of oppression in any of its forms. Such community will be alike independent of crowned kings, money kings, and land kings."

The story is told that, when the ark began to float, a skeptic, worthy to represent the Emerald Isle, hung on the outside till Noah rapped his fingers and made him let go; whereupon, as he swam to higher land, he shouted back:

"Go long wid ye; it's only a little shower annyway".

If I say to you that the most important material problem of this Union is to discover and to adopt systems of farming that will not only maintain but increase the productive capacity of our so-called

rich land, some of you would agree with me; but when I say that, if our future shall be a continuation of our past agricultural history, famine and starvation in America are easily possible for your children's children in the twentieth century, who will believe my report?

Moralists sometimes tell us that the fall of the Babylonian Empire, the fall of the Grecian Empire, and the fall of the Roman Empire, were all due to the development of pride and immorality among those peoples; whereas we believe that civilization tends rather toward peace, security, and higher citizenship. Is not the chief explanation for the ultimate and successive fall of those great empires to be found in the exhausted or wasted agricultural resources of the country?

The land that once flowed with milk and honey might then support a mighty empire, with independent resources sufficient for times of great emergencies, but now that land seems almost barren and supports a few wandering bands of Arabs.

The power and world influence of a nation must pass away with the passing of material resources, for poverty is helpless; and ignorance is the inevitable result of continued poverty. Only the prosperous can afford education or trained intelligence.

Old land is poorer than new land. There are exceptions, but this is the rule. This fact is known and recognized by all men.

What does it all mean? It means that the practice of the past and present art of agriculture leads toward land ruin,—not only in China, where famine and starvation are common, notwithstanding that thousands and thousands of Chinese are employed constantly in saving every particle of fertilizing material, even gathering the human excrements from every house and by-place in village and country, as carefully as our farmers gather honey from the hives; not only in India where vast multitudes of people suffer want and hunger; not only in Russia where famine is frequent; but, likewise in the United States of America, the present practice of the art of agriculture tends toward land ruin.

Nations rise and fall; so does the productive power of vast areas of land. Better drainage, better seed, better implements, and more thorough tillage, all tend toward larger crops, but they also tend toward ultimate land ruin, for the removal of larger crops only hastens soil depletion.

Do you ask how it is that Rhode Island and Connecticut produce more corn per acre than Illinois? Because Rhode Island and Connecticut make large use of manures produced in part from Illinois corn and oats.

It is well to know, and well to remember, lest we be deceived by false arguments, that the corn acreage of Rhode Island is less than half of one township; that the corn acreage of Rhode Island and Con-

necticut combined is less than one-tenth of Champaign county; and that the total corn acreage of Maine, New Hampshire, Vermont Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Delaware, and Maryland, all combined, is less than the corn area of Georgia. The acreage of corn in Illinois is twice as large, and the average yield three times as large, as that of Georgia.

Do you ask why the average yield of wheat in England is more than 30 bushels per acre while that of the United States is less than 14 bushels? Because England produces only 50 millions bushels of wheat, while she imports 200 million bushels of wheat, 100 million bushels of corn, nearly a billion pounds of oil cake, and other food stuffs, from which large quantities of manure are made; and, in addition to this, England imports and uses much phosphate and other commercial plant food materials.

Germany imports great quantities of wheat, corn, oil cake, and phosphates, and thus enriches her cultivated soil, and Germany's principal export is 2 billion pounds of sugar, which contains no plant food of value.

Denmark produces 4 million bushels of wheat, imports 5 million bushels of wheat, 15 million bushels of corn, 800 million pounds of oil cake, and other food stuffs, phosphate, etc., and exports 175 million pounds of butter, which contains no plant food of value, but sells for much more than these imports cost.

Phosphate is the only fertilizing material the American farmer will ever need to buy for use in establishing permanent systems of agriculture on our normal soils, and, from our limited deposits, we allow a million tons of our best phosphate to be exported annually for which we receive less than five million dollars at the mines, while the additional corn that this phosphate would ultimately produce, if applied to our soil, would be worth more than six hundred million dollars.

To bring about the adoption of systems of farming that will restore our depleted Eastern and Southern soils and that will maintain or increase the productive power of our remaining fertile lands of the Great Central West, where we are now producing half of the total corn crop of the entire world, is not only the most important material problem of the United States; but to bring this about is worthy of, and will require, the best thought of the most influential men of America.

In these latter days there is much talk of conserving our natural resources, but 90 percent of the talk is directed toward 10 percent of the resources. Without a prosperous agriculture in America there can be no permanent prosperity for our American institutions. While some small countries can support themselves by conducting trade,

commerce, and manufacture, for other countries, American agriculture must not only be self-supporting, but, in large degrees, agriculture must support our other great industries.

Without agriculture, the coal and iron would remain in the earth, the forest would be left uncut, the railroads would be abandoned, the cities depopulated, and the wooded lands and water ways would again be used only for hunting and fishing. Shall we not remember, for example, that the coal mine yields a single harvest—one crop—and is then forever abandoned; while the soil must yield a hundred—yes, a thousand crops, and even then it must be richer and more productive than at the beginning, if those who come after us are to continue to multiply and replenish the earth.

Even the best possible system of soil improvement, we must admit, is not the absolute and final solution of this, the most stupendous problem of the United States. If war gives way to peace and pestilence to science, then the time will come when the soils of America shall reach the limit of the highest productive power possible to be permanently maintained; and before that limit is reached, if power, progress, and plenty are to continue in our beloved country, there must be developed and enforced the law of the survival of the fit; otherwise, there is no ultimate future for America different from that of China, India, and Russia, the only great agricultural countries comparable with the United States. An enlightened humanity must grant to all the right to live, but the reproduction and perpetuation of the unfit can never be an absolute and inalienable right.

"It is said an Eastern monarch once charged his wise men to invent him a sentence to be ever in view, and which should be true and appropriate in all times and situations. They presented him the words, 'And this, too, shall pass away.' How much it expresses! How chastening in the hour of pride! How consoling in the depths of affliction! 'And this, too, shall pass away'. And yet, let us hope, it is not quite true. Let us hope, rather, that by the best cultivation of the physical world beneath and around us, and the best intellectual and moral world within us, we shall secure an individual, social, and political prosperity and happiness, whose course shall be onward and upward, and which, while the earth endures, shall not pass away."