

with stones and brush, fences and buildings going to decay, impoverished and uncared for. But this is not the worst effect upon the community. It drives out the small operator and capitalist doing a single business, and utterly destroys him as an independent operator by force of the monopolist engaged in the same industry, who gathers all these industries under one control, makes him a servant, an operative, a laborer, thus increasing the number of dependent laborers, and deprives him of his independence as a laborer by limiting and decreasing the number of places of employment and thereby controlling wages and the value of labor. The centralizing of business in a few colossal enterprises ruling the industries of the country injures the community in two ways. It invests a few with wealth and power dangerously great. It reduces men who would otherwise be principals in independent branches of industry to positions of subordinates, and not only comparatively impoverishes them, but it robs the community of the energy and skill which they would be stimulated to exercise as independent workers when guiding their own affairs and their indifferent employés, glad when the day's work is done.

There is not time on this occasion to carry this discussion to its end; very many topics in the subject would alone consume more of your time than you could spare.

Among them are—

Whether property invested in mercantile pursuits is properly taxed by assessing the vendor, or should it be valued and assessed as land, horses, mules, &c., are?

Whether the road-way of railroad companies should be taxed as real estate, and the local taxes of the places and towns where the road runs, or by the larger division of the governments, like counties, or wholly for State purposes, as now fixed, thereby giving every taxable the benefit of this property?

Is not the education of the children of the State a State matter? and should not the support of the schools mainly come from the State, raised by taxation of corporate property, thus relieving lands from taxation, and making the school more efficient than at present?

Ought the owner of real estate to pay all the taxes on it when he is indebted largely for its purchase price?

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## WHAT FARMERS MOST NEED TO KNOW.

By Hon. JOHN A. WOODWARD, *Howard, Pa.*

[Read at the annual Meeting.]

If, when I take my seat, those who hear me through shall note that I have failed to answer the query which forms my title, I trust they will charitably forbear the criticism that I have imitated that eminent agricultural lecturer who announced as his subject, "Milk," and then failed to refer to it, even in the most remote manner, during his entire discourse.

I once happened to be a guest at a dinner given to the alumni of one of our agricultural colleges, when, between nuts and coffee, some one was asked to respond to, "What does the Farmer Most Need to

Know?" The reply was: "Just what may be learned at this college;" and while at the time it seemed to me much more strongly marked by its brevity than its wit, I afterwards thought I discovered in it a grain or two of sense, and borrowing the sentiment for a caption, I adopt the germ of the reply as my subject, and beg to present, though in a necessarily hurried and imperfect manner, a plea for a better, broader, more general education of the farmer and the farmer's boy. The somewhat narrow ground occupied by certain who assume to be leaders of thought upon this subject, that the only education needed by the farmer is of the technical character relating specially to his vocation, does not, in my judgment, afford the best stand-point from which to view it, but from it we may profitably take a passing glance:

Nature is no less bountiful now than when she first came smiling from the hands of the Creator; the earth is no less productive to-day than when, in the first garden, the first man and woman had but to reach forth their hands and pluck, to satisfy every need for food or raiment; but the conditions under which she consents to yield up her products for our use and profit, have wonderfully changed, and he who would reap must not only sow, but sow intelligently. This was true a score, or ten score years ago. It is not more true now, but the same truth has vastly greater significance. The time when, in order to laugh with a harvest, the earth needed but to be tickled with a hoe, has long since passed; and he who would secure from her a yield which will return profit for his labor, must use more elaborate instruments of titillation, and woo her with a far wider knowledge of her moods and tempers. It is doubtless quite within the memory of many of those present, when the man who lacked the capacity to become a mechanic or artisan; who was not keen and bright enough to make a successful merchant, tradesman, or middleman; whose mental equipment was not sufficient to warrant him in joining the "innumerable caravan" of the professions, learned or otherwise; who was not deft enough to be a barber or tinker, and not quite mean enough to be a politician, was held to be about the right material for a farmer; so he was christened "Hodge," and hitched to the tail end of the plow. But all this has changed: The business that feeds the world has levied tribute upon the highest grades of mechanical skill, and called into requisition the ablest services of science; and to-day the man who would be the most successful farmer must not only be capable of making himself a success in any other calling in life, but must be possessed of the trained mind, the quick intelligence, and the skilled hand which will make him the peer of the best specimens of two or three others combined. To judge correctly of what crops will best meet the demands of the most accessible market, he must have that intuitive insight into business which would qualify him to take high rank among tradesmen. To be able to produce these crops with the widest possible margin of profit, he must know the needs of his crops, and the lacks of his soil; and while this does not require that he should be a chemist, he must be able to understand and intelligently apply the teachings of chemistry. In the battle with the weeds which are sure to contest with him his right to possession of the ground, he will find a knowledge of botany his cheapest and most effective armament; and in all the varied processes of culture, beginning with the turning of the first furrow, and ending with the shipping of the crop, the many modern implements which he finds it profitable to use, from

the gang of steel plows, which will "run without holding," if properly adjusted, to the steam thrasher, which will run itself and its attendants to destruction unless properly withheld, demand a degree of mechanical skill in their management, only less than that required in their construction.

Farming will never develop into an exact science, yet it is becoming more and more a system of applied knowledge, and the best farmer is, and will continue to be, he who has the most thorough theoretical knowledge of his work, coupled to the greatest degree of practical skill in the application of that knowledge. In short, he must be a man of many sides, and every side a bright one. Brain-power is the crying need; and the force of a mind trained to exactitude and laborious thought is of as great importance as that of the skilled hand. Manual labor cannot be dispensed with, but must rather be made more valuable and effective, because better applied and directed by the better equipped mind. I do not underrate, nor fail to value at its highest worth, the practical knowledge and manual skill to be gained in the school of the farm, with the practical farmer for a teacher; but I am very sure that I cannot, in this day and generation overrate, nor magnify beyond its true greatness, the importance of the scientific study of farming as a profession, nor emphasize too strongly that it is a business, not only an occupation, and requires training, ability, and powers of mental, as well as physical, endurance beyond most other kinds of business. The truth is, that farming is a profession, though not recognized as such, and he who would make his mark in it must learn it as he would any other, and from the scientific, as well as practical stand-point. Whatever it may have been in the past, the time has come when, for its most successful pursuit, the highest intelligence is a necessary qualification. Of any two farmers, physically equal, he will accomplish most who possesses most brain-power, and who most assiduously and carefully cultivates the crop within the inclosure of his own cranium; and this is true even from that intensely practical point of view which regards the farmer merely as the producer. The investigations into the great truths and principles which underlie the production of man's sustenance, that are now being made by careful students and profound thinkers, fall far short of their possible results in adding to the productive power of the farmer's labor, because he too often lacks the trained mind required to understand and apply them. In a recent address upon the work of experiment stations, Dr. Sturtevant said:

"I have not endeavored to cover the whole field, and in selecting what seems to me the most important problems for illustration of various branches of farming, I may seem by some to have overlooked or underestimated a whole series of work, which is usually considered experimental. I have done this purposely, for advance is not in the line as currently supposed, but must come from the studying into causes, and the laws which modify. Mere local work must be left for the farmer himself; for the station purposes, our work must cover general causes, and furnish clues which may be adapted by the intelligent farmer to such conditions as he finds about him.

To understand, to follow up the work as here outlined, requires some education, and some measure of training. I may hope to be understood by a representative body such as yours, as by other bodies of intelligent self or school-educated farmers, and it is my object to gain

your support to such views, in order that the general tone of farmers' thought may be elevated."

The mind of the farmer, *as* a farmer, needs toning up. Laxity of thought and looseness of method too largely prevail. It is too often the case that the farmer hitches himself to his manual labor in the morning, and unhitches himself from it at night, much as he does his team. The brain needs stimulating and cultivating that it may think, observe, invent, as varying circumstances require, or changing conditions demand. Nowhere more than on the farm is needed the disciplined mind, capable of exactness in method, aiming at and accomplishing definite results. "Think of the forces, the properties, principles, influences, the laws—developed and undeveloped—with which the farmer must come in contact, and understand, if he would succeed. So far from being less dependent upon the arts and sciences than those engaged in other occupations, he stands in need of a far wider range of knowledge than is requisite in almost any other business. Men of one idea cannot succeed in farming, and those engaged in it should lose no opportunity of adding to their present stock of ideas by reading, by investigating for themselves, and through intercourse with others." Brains are not lacking on the farm; nowhere are they to be found in greater abundance, nor of better quality; but we have set the limit of their special education and cultivation at too low a standard, and they are right, so far as they go, who insist that, from the most practical point of view possible, "Knowledge is power," even upon the farm.

But there is a higher and more advanced ground from which we should view this question: Citizenship is greater than profession; manhood stands before vocation; the man outranks the farmer. Whether one be priest or soldier, citizen, tradesman or farmer, he is first a man and citizen; and that view of his educational equipment for life which limits it to service in the narrow field in which he gains his livelihood, tends to contract his powers, hamper his energies, hedge in his usefulness, and assign him to that unimportant part in the management of affairs to which he is, by his foreshortened acquirements, adapted, and which he has hitherto filled much too exclusively for the common good. For this larger, more extended view of what the farmer most needs to know, I make my urgent plea.

True, his special work is mainly of a manual character; true, he feeds himself and the world largely by the labor of his hands, but "a man's a *man* for all that," and if he is to bear a man's full share of the world's work, he must be accorded a man's fullest and most complete furnishing.

The farmer boy of to-day is to be the farmer of to-morrow, and, as I hope and believe, much more than that. There is no better material in the world to make men of, men fitted to fill any place that may call for them, or do any work that may fall to their lot, than farmer's boys. "There is no place on this green earth so well adapted to perfectly develop mind, muscle, and manhood as the farm. There boys have the purest air, the freshest and most healthful food, plenty of exercise, the brightest sunshine, and the soundest sleep—the very conditions necessary for the highest development. The surroundings of farm life are better calculated than any other to call out what there is in the boys, and develop full-grown, healthy, perfect, self-reliant men." These are the men we want, not only on the farm, but off it. We want them for our future governors, law-makers and judges; our

leading surgeons, eminent divines, successful railroad managers, and great engineers. We want them everywhere for these positions and thousands of others of trust and responsibility, waiting always for young men of sound bodies, clean hearts and level heads, just such as the farm can furnish, to fill them.

"But," says some one disposed to be critical, "you are not talking to the point, you are not sticking to your text." Very well! I intimated as much when I began. Further, you are unfitting the boys for farm work, and educating them away from the farm, not for it. To meet this point I will temporarily admit that it is well taken: Let them alone and they will come back to it. There is a great deal of twaddle talked and written upon this very subject of keeping the boys on the farm. It is nonsense to assume that all the boys are needed on the farm, any more than are all the girls, or calves, or colts. They are the very best crop we grow, and what we want to do is to make the most of them, and put them where there is the best demand for them, just as we do our other crops. We don't need them all, and the towns and cities do. If they want to go, let them go. We want our boys to be successful, and to this end their life-work must be done in the direction in which their talent lies. If the boy does not like the farm, you cannot make him like it, nor can you make a successful farmer of him by forcing him to remain upon it. Study his tastes; note carefully the direction in which his inclinations run, and help him on in that. Teach him to be courageous, thoughtful, earnest, self-reliant, and then encourage him to climb any ladder toward the top of which he may be disposed to look. The chances are about even that after he has reached the top, and made himself a success, he will turn again to the old farm, or to a new and better one, and prove a better farmer than he will if you thwart his early ambitions, or dwarf his mind by *limiting* his education to the narrow plane required to make him *merely* a successful farmer.

Now let me go back to the charge that to educate the boy is to unfit him for farm life, that I may deny the contemptible slander. Do you tell me that a widened education, a broadened understanding of the laws which govern the universe, and an enlightened view of the relations which man holds to his Creator and all his co-creations, tend to drive him from the pursuit of that vocation which first received the Maker's sanction when "the Lord God took the man and put him in the Garden of Eden, to dress it, and to keep it?" The charge is as monstrous as it is slanderous. Do you mean to assert that that training in the sciences which lies at the foundation of the power of mind over matter tends to force man from that occupation which brings him into daily contact with the things of nature, and into some of those which are but subsidiary to, and dependent upon, it? I say that the assertion is an insult to the farmer, and a calumny upon intelligence. The sixteen thousand school-houses scattered through the country districts of our State enter their eloquent, though silent, protest; every grange hall within her borders is a dignified refutation of the untrue thought; and all the thousands of intelligent, educated men, who are giving every energy of mind and body to pushing on the car of agricultural progress, are living witnesses that the charge is a lie, and that education does *not* unfit a man for the farm.

But granted that the boy is to be educated for the farm as his life-work, shall he not also be educated up to the highest standard of the privileges and duties of that citizenship which is his by inheritance

and right, as certainly as it is that of the man who sells him legal advice for cash, or barter his groceries and dry-goods for produce? Is that imaginary line of distinction that custom seems to have drawn between the "man of business" and the farmer so nearly real and tangible that it must needs intervene between the farmer's son and that broad, liberal education which will qualify him to be as much a business man, or man of affairs, as his brother, who merely buys and sells what he produces? Well says Charles Richards Dodge, "The earlier the farmer essays to look over the stone wall that separates him from the *business* world, the better it will be for himself and family, and for American agriculture;" and the ladder by which he may climb to the top of his bugaboo wall, if such there be, and scale its only imaginary heights, is the generous, liberal education which I stand here to advocate.

We are a nation of equal freemen, and every man in it is a sovereign; but shall sovereignty, so far as its supreme function—that of enacting the laws under which we live—is concerned, be relegated to that class of citizens alone whose vocation it is to afterward explain them, or whose duty it may be to interpret and enforce them? Verily, not; and yet, practically, it is so. Everywhere we hear the complaint, long, loud, and deep, that lawyers make the laws, and that there is not a due proportion of farmers to be found in our legislative bodies, either State or National, and the complaint is a just one. The fact is as stated. But why is it? Do not misjudge me if I assign as a possible reason that the lawyer, by virtue of the greater breadth and depth and extent of his education—by reason of his more general and generous mental equipment—is, as a rule, the better qualified for the position. No one can insist more strongly than do I that there should be more, very many more, farmers in all our law-making bodies; but then I insist, just as strongly, that there should be more, very many more, farmers better fitted and equipped for these positions. I am glad to believe that I am in accord with the best thought of the day upon this subject, and that, instead of advocating a new departure, I am but adding my mite to give momentum to a movement already under way. "There is a political future for the farmer, without regard to party." He is to take a higher place in governmental matters, and to have a more potential voice in public affairs; and this because the mental training which fits and prepares for these public duties is becoming more general among farmers and their sons. Let the good work go bravely on. Educate the farmer boys, that we may have farmer men competent to fill, and fitted to grace, any public position to which they may be called.

And to this end, let me urge, as a practical closing thought, the encouragement and patronage of the agricultural colleges, provision for the establishment of which in all States was, some years ago, wisely made by the general government. I confess that I am not in sympathy with that view of the work of these institutions which would *limit* it to the teaching of the practical details of practical farming. I am not one of that small but intensely active class, quoting from one who has had large experience in the education of farmers and farmers' sons, "who constantly, in season and out, preach the doctrine that farmers' sons shall be educated only in the direct line of practical farming, and who inveigh with special unction against those 'literary fellers' who assert that the farmer is a man with a soul, and not a mere machine for extracting from the soil crops of corn and herds of

cattle and hogs; and that, as a man, he is entitled to a knowledge of men, and the literature, science, and laws of men. The 'education of farmers' should be a broad and general culture; so broad, indeed, as not merely to retain in the student his practical skill and interest in agriculture, but broaden and intensify his sympathies in that direction."

No harm will come to him by association and fellowship with those who are fitting themselves for other lines of life work. No injury will accrue to him by daily attrition, in his college days, with the men with whom, in after-life, he will come in business contact as bankers or doctors, lawyers or railroad managers. There is no way of preventing him from associating with these men in the active life of after years, and there should be no attempt to separate him, as a goat from the sheep, in his training days. With Prof. Morrow, "I hope to see the time when the belief in the value of a liberal, special education for the farmer will be so strong that it will no longer be thought necessary to keep the student of agriculture from association with those preparing for other occupations, or to secure him by remitting his fees, or requiring a lower standard of preparation."

I must not, however, be misunderstood as insisting that a course in college is the *only* means by which the generous education which I have come here to claim for the farmer may be obtained, nor as intimating that a graduate's diploma will stand as a certificate for that enlightened intelligence which will fit a man to be at once the best of farmers and the best of citizens. If this were true, then must our hopes be indefinitely postponed; but it is not. Wherever the common school, constituting, as it does, one of the grandest achievements to be credited to Pennsylvania's great name, has faithfully performed its *only* legitimate work of investing the youth within its reach with a thorough rudimentary education, the young farmer who has passed the college period, but who has yet three-fourths of his life before him, has a foundation whereon he may, by his own unaided hand, build such a superstructure of intelligence and culture as will make him a peer of the realm of scholarship, and fit and equip him for any duty or position that may come to him. The world has never been so filled with the riches of knowledge as it is to-day, and never before have the facilities for obtaining it been so easily within reach. The land is literally flooded with good books and good papers, better in quality, greater in quantity, and less in cost than ever before; and any young man may take up any line of industrial work, and find the means for obtaining a complete theoretical knowledge of it ready to his hand, requiring only that he shall have energy enough to utilize it.

And now, if a specific reply to the query, "What does the farmer most need to know?" were required of me, perhaps I could not better epitomize my idea than in the single word, "more." More of the practical details of his work; more of the principles and truths which underlie it all; more of science, more of politics, more of art, more of literature; more of any and everything, in every department of human knowledge, that will tend to broaden and enlarge him to the full stature of manhood and citizenship. Certain it is, he can never know too much. The more he knows—the better he is educated and informed—the larger man and better citizen will he be, the broader the mark he will make on the pages of the world's history, and the better, because the more potential, friend will he be to himself.