

An Address to Young
men of the Texas Agri-
cultural and Mechanical
College

An item of the first
importance to every
Student is to determine the
relative value of different
lines of education.

From my experience
I place the highest value
on a thorough common
school education or
training in the elementary
branches. Without
thoroughness in the ground
work all subsequent

2 Training will be more
or less defective. A perfect
Knowledge of the English
Language is an acquisition
of high order and of
the greatest utility. The
foundations must
be laid in the Common
School

P A good Knowledge
of the Sciences comes
next in importance
without a Knowledge
of the Sciences we are
strangers to our environ-
ment. Nature is an
unread book

The modern methods
of acquiring ^{the} Sciences gives

3 gives a training of great value to men by every vocation in life

It is the unsealing of the eyes and the unstopping of the ears to observe the things in our environment -

A closely following the study of the sciences is the knowledge of English history and literature. To be ignorant of the historical facts and the writings of the great men who helped to mould the past ages is to leave our without a light - to which guide the future

4 In the study of other languages we find a line of inquiry which broadens human knowledge & opens upon a avenue by which we connect ourselves with the thoughts and experiences of men who have viewed things from a standpoint ^{widely} ~~different~~ from our own and thus human experience is broadened.

7 The next important step of the student is to outline his life work and determine

5- What course or
courses of study
will be of greatest
assistance to him

The so called learned
professions are already
crowded with mediocre
men and there is little
inducement to enter
them unless one
has exceptional
opportunities to
reach the top

From a financial
standpoint - there are
but three general lines
of vocation that appeal

6 to young men -
business, vocations
~~mechanics or manufacturers~~
and Agriculture

Business is very
attractive, and special
inducements are being
offered for College
bred men, because
their lives are broader
and more active
than in former
years.

The mechanic arts
hold out great inducemen^{ts}
to well equipped young
men - I have not time
now to discuss these
but shall confine my

7 remarks to a
plea for the life of
a farmer

To such as have
been raised on a
farm let me present
the following reasons
why they should return
to the farm

1st - It is the vocation
of greatest physical
vigor and independence

2nd - It may and should
be the best environment
for developing a high
manhood and the social
conditions can be made
of a superior character

8 In the near future
it will be the vocation
of greatest financial
gain

1st For the last half
century nearly all
the articles we consume
on the farm have been
gradually reduced
in price, ~~while~~ ^{whereas} the
products of the farm
have ^{as steadily} increased in value

This will continue

2 The effect of the use
of machinery in agriculture
is to enable the farmer
to do vastly more and
better work than
formerly

9. As a productive
operator ^{on the farm} a man ^{can} have
today nearly 15 times
the power of his grand-
father

3^d A farmer in this age
can have vastly more
comforts than his
forefathers enjoyed. The
razz better roads is approach-
ing, the tracey time
will soon traverse his
farm, the telephone will
occupy a place in his
house and the rural
mail carrier will knock
at his door

10 The lands of
Texas will soon
command a higher value

The tendency of rail
roads is to equalize
values. Prices of lands
in the older states may
not decline, but in
the newer states they
will assuredly advance

Our people have
rapidly spread over
the great domain of
the United States and
the best lands have
been taken. We are
on the eve of high priced
lands. The present

" generation of young
men will live to see
landed values in
Texas more than
double and in
many cases quadruple
their present prices
and the advance will
continue till land values
approach those of
egypt- and japan
where the best farm
lands are rated at
\$600- per acre

However before the
farm can attract the
well educated young

12 men of this period
business methods
must be applied
to the farm

*I In Young men of the Country
must apply business methods to the farm*

~~Farm Economics or Business Methods Applied to the Farm.~~

Modern civilization has more comforts and involves more expenses; *Than that of a former age* It is therefore necessary that all classes of labor receive a larger wage. In the factory; in commerce; in the various lines of general business, and in the office this evolution has gone forward till agriculture is confronted by a permanently higher scale of wages in all these lines than that prevailing on the farm, and much higher than can be paid under present conditions.

Should it be any surprise that young men leave the farm and go to the city?

The same talent that calls for \$50.00 per month as farm overseer readily secures \$100.00 to \$125.00 per month in other pursuits. How has it been brought about that occupations outside of farming can profitably pay the higher wage. It has been secured by the general introduction of labor saving machinery, by which one man can do the work of 20 to 50 men in the olden time and of course receives a part of the gain in a higher wage. In the office equipped with modern appliances one man can do ten times the work of the Clerk following the old methods and rightfully receives higher pay. In railroading grades have been lowered, the weight of rails doubled, the tracks better ballasted, engines of greater power constructed and cars of six-fold capacity provided so that a given train crew can handle ten times the freight now it could thirty years ago - the result, a larger wage, but a lower freight rate.

#2.

In ocean commerce the steamship has almost entirely re-placed the sailing vessel and in a third of a century its capacity has been increased from five to ten fold. In all these lines waste has been eliminated while efficiency and economy have been increased.

Have we noted the amazing progress of the world: The factory; the railway; the merchant marine; the navy; mining; constructive machinery, and nearly all business methods of one-third of a century ago are of no account today. They are too slow. The president of the largest steel company in America, prior to the consolidation, told me that his company at the initial, equipped with the best machinery known; in fifteen years it was necessary to throw it away and re-equip, because electricity had taken the place of steam.

In agriculture there has been some progress, but the evolution along economic lines has been slight and a lower wage prevails. Everywhere the American farmer ["]is up against it. ["]

It is evident why the brightest young men and women leave the farm and seek employment in the office, the factory, and the railway service. This must not continue. It tends to lower the grade of rural life and withdraws from it the very element that should up build it.

It can be remedied. Other things being equal, most people prefer rural life. Let us consider the reforms necessary to restore the equilibrium between country and town.

The farm must follow the lead of the factory, and do more work in a day by adding machinery and increasing the power. Each farm

#3.

laborer must be able to accomplish more work and thus be entitled to a larger wage. This requires more education for the average farm laborer, a clearer perception of the requirements of the farm, a more perfect knowledge of men and machinery and tireless energy.

It requires better farm tools and teams. The pony plow and the cotton mule stand for low earning capacity and should be relegated to the past. Instead of one acre per day the average farm hand must plow six acres. For one light mule he must substitute six heavy mules. Harrowing, disking, seeding, and harvesting must be handled with greater care and rapidity. With the greatest respect for the one mule and the one gallows farmer they should be placed among the antiquities. Their earning power is too small to compete with present conditions. The farmer must increase the amount of work he can perform in a day by at least six fold or concede that he has failed to keep step with the progress of general business. The demand is for greater intelligence in the man, more power in the horses or mules and better farm tools. In large fields one man could drive eight horses or mules, easily handling a gang, riding plow with cut of 2 1/2 to 3 feet, according to soil, and turning six to eight acres per day. If gasoline or steam engines can be adapted to this work, so much the better.

With at least equal facility more teams can be adjusted to the harrow, the seeder and the binder. In the cotton fields there is no difficulty in multiplying the accomplishments of a days labor up

to the time of picking, and there is little doubt that cotton picking will soon become a machine process.

2nd. Equally important with stronger teams and better tools are soils and soil conditions.

The average farmer does not know much about soils and their wonderfully productive possibilities. The soil is one of the most subtle, sensitive and complicated mechanisms known to man. It silently and automatically exerts more mechanical power than all the machinery placed upon the surface of the earth by man. The vastness of its chemical laboratory is incomprehensible; but we do know that its chemical action may be stimulated or checked and its mechanical powers strengthened or restored by human effort.

Without a genial and responsive soil and without a thorough knowledge of the conditions which underlie soil-energy even the most persistent labor is of small value. The successful farmer of the future must know how to break up the compounds of the soil and render them soluble in water; how to render soils light or heavy, porous or compact and how to bring out its best energies in crop production. He must be able to produce enormous crops without soil exhaustion; or if exhausted, he must understand how to restore it to virgin fertility. He must know how to bend the storms to his purpose and adjust the crop conditions to the uncertainties of the seasons.

The difference between the average crop of cotton in Texas and the best crop is at least six fold and in all the standard farm crops the room for possible improvement is very great.

3rd. The third item for improvement is farm seeds. One of the marvels of nature is a seed. ~~Wrapped~~ Wrapped in a minute germ which is surrounded by a supply of food, perfectly adjusted to the requirements of its dawning life, are all the possibilities of the future plant. This germ has within it all the characteristics and conditions of the generations of plants that preceded it in its line. If the cultivation of the preceding germinations of plants was of a high

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class and all the line of plants was of unusual vigor the seed will transmit this stored heritage to the future plant, and on the contrary, it will just as certainly transmit the neglect of the careless farmer. It is therefore possible in all cultivated plants that fruit to establish varieties that fruit abundantly or sparsely; mature early or late; manifest intense vigor or exceptional weakness, or cause other characteristics to become fixed.

After a seed has been matured much depends upon selection. The planting of early ripening seeds results in early maturing plants; large seeds ~~of~~ a given variety, in larger plants.

The germ is such a minute thing that it is easily damaged by exposure to dampness and the action of frost^{or} heat upon it at that stage. If it does not destroy it the vitality of the germ is lowered and the vigor of the future plant reduced. It is estimated that this is wholly or partially true of more than half the seeds planted in the Southern States.

In the Southern rice belt it has been shown that imported seed rice averages about 33% greater germinating power than home grown seed - due entirely to the above cause. Foreign seed is thoroughly sun-dried before it is stored.

If the loss from a failure to use the best seed is even 25% it mounts into the millions in the general aggregate.

4th. To another cause is due great and general losses on the farm, and that is a failure to understand the nutritive value of farm crops, that is their feeding value. Cash values of crops are

#6.

understood, and farmers try to get the best cash returns for their products; but cash values and feeding values are totally different. Inasmuch as considerable food must be consumed on the farm for the support of farm teams and stock - and the future farming will require more teams and heavier teams and general diversification, which will soon come in Texas, must include more stock - it is evident that the nutritive values of farm crops is a question of increasing importance. In the nine following States; Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Texas, the principal food for work stock is Indian corn and a low grade of hay.

The census shows that in these States 22,238,375 acres were planted to corn in 1899. The ^{average} average yield, was 14.3 bushels per acre. The most of this land if planted to cow-peas would have produced from one to two tons of peavine hay per acre, probably one and one-half tons on an average. but call it one ton. One ton of cowpea hay is equal ⁱⁿ feeding value to 25 bushels of Indian corn, a gain of nearly 80% in food value over the corn crop. A fair estimate on the average cow-pea crop would make an average of about 100% over corn, besides greatly improving the soil. Many acres of these corn lands **Could** produce alfalfa, possibly 3 to 4 tons per acre. Four tons of alfalfa is equal to 100 bushels of Indian corn in feeding value. This would be a gain of 700% over the corn.

An examination of the oat crop in the nine States mentioned

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shows an average yield of 12.7 bushels per acre. Approximately 42 bushels of oats are equal in food value to a tone of cow-pea hay or a ton of alfalfa.

A yield of one and one-half tons of either of these fodder plants per acre would equal 63 bushels of oats or a gain of nearly 500% in food value over raising oats. These crops are simply given as examples of what might be done by a knowledge of food values. It would evidently lead to the use of less grain and the feeding of more legumes.

Economic management requires that all waste on the farm shall be utilized. All grass, straw, weeds, fuel and the surplus water on, or flowing through or under the farm must contribute to the revenues of that farm. If the waste grass, straw and weeds on a half section of land were converted into mutton and the waste seeds of grain and weeds converted into poultry the receipts would be a valuable addition to the farm revenue.

Economic management requires the proper care and housing of farm implements and tools. Sky-shingled sheds should be a thing of the past. The future will call for more and better machinery, but it must receive more and better care.

Insurance. We insure our lives and the buildings on our farms. Why not extend the principle of insurance to other matters?

Insurance demands diversification. The farmer must produce the food required for the consumption of the people employed on the farm.

#8 .

The farm must supply the food for teams and stocks.

There must be more than one cash crop, and if possible, several minor cash crops that yield revenue different seasons of the year to meet current expenses. This plan may not be as profitable some years as the single cash crop, but it is safer and wins out ten times where the single crop wins once. These rules apply to the tenant and to the man who owns and works his farm. The capitalistic farmer is another proposition.

Diversification requires some stock on every farm, and it should be the best ~~and~~ improved animal that can utilize food to the best advantage. There are many reasons why the world cannot compete with the United States in the production of the best stock for all purposes, and therefore, in the long run it will be found a most profitable line of industry.

Economic stock raising depends upon successful grazing. Europe and Asia are so completely denuded of timber that general fencing of fields is impractical. Africa and South America are largely treeless plateaus.

The raising of high grade stock depends upon the superior intelligence of the farmers. Texas has all the conditions for becoming a great centre of stock raising. There is an increasing demand for large draft horses, superior roadsters and army horses. There is a shortage of good mules that weigh from twelve to sixteen hundred pounds. There should be a surplus of export steers in every township in Texas. Our home market will for a long time take all the

#9.

high grade mutton sheep and extra bacon hogs we can produce.

I note that conservative farmers in all parts of the United States never sell their surplus grain and hay till the crops of the following year are assured. This is done as an insurance against possible shortage of a crop. Banks find it necessary to retain from 25 to 40% of their deposits in cash assets as an insurance against emergency calls. This is considered essential to safe banking.

Safe farming requires that a farmer should have not only ^{a reserve stock of grain and hay and} enough money in the spring to make a crop, but in case of disaster that season that he should have enough money to make a crop the following year.

The plan of making crops on advances has been disastrous to Southern farmers and it will prove a quick-sand to 90% of the men who venture upon it.

It is needless to pursue these inquiries further. Enough has been suggested to show that it is possible to so reform farm management and re-adjust farm conditions that the farm can pay a wage equal to the factory on the general fields of industry; but one thing is all essential, that the farm shall secure a higher class of laborers. Thousands of good farm managers are wanted and tens of thousands of intelligent, honest, energetic and faithful laborers. The old time white laborers of this class have gone to the cities. The country must produce more men of this type and hold

#10.

them by a more profitable and attractive agriculture.

It has been shown that the farmer can increase the amount of labor he can perform in one day on the farm from three to six fold by the use of more and better teams and tools; he can multiply the product of each acre by an average of three to six fold by a proper management of the soil to retain uniform moisture and yield its highest product; he can increase the harvest 50% to 100% by planting more highly vitalized seeds: With less labor he can produce crops of many fold greater feeding value per acre than those now in general use; he can change the present system of farming from its annual crop and uncertain results to diversified crops which yield quick returns and add to the bank account many times in the year. By a thorough knowledge of agriculture and ample means to conduct the business the income from the farm may be made as safe as that of the factory.

In my opinion the equilibrium of wage between city and country can never be restored except by handling the farm upon the lines above indicated, then it will be more than restored and there will be a flow of the men of the best talent and greatest energy to the country. A large city represents centralization in wealth, in influence and in political power. It is arbitrary in its dictum and monarchical in its tendencies. The masses in cities depend upon the few for employment and support.

The country is the source of independent thought and action.

#11.

Life is segregated; there are no masses; the independent farmer stands for Democratic government.

To the abnormal growth of the large cities of the United States during the past twenty years with their immense wealth, prestige and power is largely chargeable any observed tendency to centralization in our Government.

The abnormal growth of cities, as compared with the country is causing alarm among thoughtful people, but alarm without remedy is useless and sensational. We note that cities ~~are~~ are increasing not only in population but in wealth, modern conveniences and power, all out of proportion to their actual earning capacity or real production of wealth. There are evident reasons for this. The National Banks have absorbed in capital and deposit over Three Billions of the peoples' money and the law is so framed that the securities which the farmers have, and the time for which they need generally to borrow can not be accepted by the banks.

The great Insurance Companies have gathered hundreds of millions from farmers, and stored it in the cities, and mainly use it to improve and enrich the cities. The merchants and manufacturers of the cities send out their wares to the country and pile up their wealth in the cities.

The Rail Roads and Steamship lines carry the products of the country, but store their gains in the cities. Cities have sewerage, water, pavement, electric lights, telegraph, telephone, rapid transit and the comforts and conveniences of modern civilization, and much of it was done because country earnings flowed to city coffers.

#12.

Primarily this preponderance of power, influence and wealth, in favor of the cities is due to lack of broad education among the farmers. They fail to discover the insidious ways by which their property is filched, their privileges abridged and they are made dependent on the cities. This must be ^{reversed} ~~revised~~, and will be, through a broader education of the farmers. Then the farmers will see to it that provisions are made in the National Banking system for the financing of the country, that insurance ^{shall} ~~should~~ largely be co-operative and the massing of money be prohibited from this source. That better facilities for transportation and communication are secured for the country.

All legislation that gives superior co-operative advantages to the city, will then be cancelled and fostering legislation enacted till the prosperity of the country is as notable as that of the city, ^{and} till ^{all} the advantages are at last equal_x; Till money is abundant for every improvement, and every acre of farm land is as good security for its value as a Government bond_x; ⁺ Then can the American proudly boast of his Country's achievements, for it will stand upon a pinnacle of power based on the substantial and permanent development of all interests.

The short road to this result is the general and broad education of the farmers and the universal adoption of the new Agriculture. The sturdy sons of American farmers must attend the Agricultural colleges and study Agriculture to practice it. The older men should attend Farmers Institutes and become versed in the better practices of a thrifty Agriculture.

#13.

When in the adoption of the New Agriculture the tide of the educated and the energetic manhood shall flow towards the country and fill the rural districts of our land with intelligent and vigorous white farmers, many of the serious problems of our nation will be settled. Especially does it appeal to the South as one of her most imperative problems, that her virgin lands shall be immediately settled with cultured and sterling white farmers. Such a consummation will bring great prosperity and avert threatened calamity.

Young men of Texas! let us build up a great Americanism, grand and peculiar. It can not be in the greatness of our cities. Babylon was great and powerful, and Rome was rich in stolen wealth, magnificent in borrowed treasures, and mighty in the legions that followed her Eagles. There are in other lands vast cities that rival our own in splendor and wealth.

It is in the country that Americanism can be made peerless. Our language shows the degradation of the country in former ages. While Rome was at the Zenith of her power the Roman farmer was compelled to live in villages for protection and such was his degraded character that we now use the word villian. (the name of the Roman farmer) to signify the ^{sum} ~~son~~ of all infamies. Boor, clown, heathen,

In The Dutch language the word for farmer is boor - which is a term we employ to represent coarseness and ignorance - From The Danish language we have the word, clown meaning a farmer and from ^{the farmers of} the heathen or primitives of England we have the word heathen. The young men of this generation should

wipe out this stain. *upon country life*

The greatest heroes are not those who march ~~at~~^{to} the music of the drum, or who die amid the carnage of battle. The greatest force to contribute to the happiness of a people or mould its destiny, is a model country home, where intense vital forces are blended with the ~~best~~ culture.; ~~where~~ the humblest farm house, as well as the

most imposing indicates that the occupant has some love of flowers and some knowledge of art.; ~~where~~ the school house has supplanted the saloon, and the library is more attractive than the horse race.

Thus far, what have we been doing to the country? Simply purloining the stored wealth of the soil ~~as to~~ ^{to} eggrandize cities and towns. It is the mission of the young men of this age to build up the country,

1st. By maintaining the fertility of the soil.

2nd. By emancipating the country from financial vassalage to the cities, *and equalizing wage conditions as between city and country*

3rd. By seeing that the good roads, electric railways, telephones and mail delivery are extended to all parts of the country

4th. By residing in the country and establishing model country homes; where nature yields her most magnificent returns at the touch of an intelligent husbandry.; ~~where~~ ^{where} art and learning flourish ~~ed~~ in conjunction with healthful toil, and where fair women and brave men ^{are} ~~were~~ bred and trained to an exalted destiny.

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Season
Abundant testimony has come from our co-operators to show that as long as weekly cultivation of the crop with violent agitation of the stalks is continued, the damage done by the weevil is greatly reduced and that as soon as they are discontinued the weevils attack not only all the squares, but the half grown bolls in increasing numbers.

Violent agitation of the cotton stalks at the time cultivation is of almost equal importance with the cultivation. It disturbs the weevil and knocks off the fallen squares. The later this can be continued the better.

& cultivation of the
art of