"Willis" or the Model Farmer.

by

G. H. Alford.

Yours Very Truly,

GEO. HOWARD ALFORD

"WILLIS"
OR THE
MODEL FARMER

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G. H. ALFORD, B. S.

Author of "TALKS TO FARMERS," "TWENTY-EIGHT ADDRESSES ON INDUSTRIAL SUBJECTS," ETC., ETC.

"Without the farmer, our whole country, smiling in beauty and bringing forth its rich products each year, would soon lapse into a barren waste. Even our commerce would languish; our country would soon dwindle to nothing and our towns and cities would cease to grow. The agricultural population at least constitutes the solid foundation upon which all our private and public prosperity must forever rest."—KING.

AKRON, O.

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DEDICATED TO

The thousands of aspiring young men in this country by their friend,

The Author.

PREFACE

THE life of a model farmer is given in this little book. The life he has lived is a good example for young men to follow.

He has set an example that should be followed by young men; yet he followed the example set by no man. He planned out his own course and followed it.

Custom told him that farmers should not be college graduates; that they need not be careful in selecting a wife; that they need not study their business; that they should farm in the same way as their forefathers. He paid no attention to custom — he used common sense.

The following pages will tell you how he lived and how he has succeeded.

Reader, "Go thou and do likewise."

ACKNOWLEDGMENTS

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HIS BOYHOOD DAYS

WILLIS, the model farmer, was born on the 22d of February, 1870, at the old homestead in Pike County, Mississippi, and remained at this home until seventeen years of age.

Much good fortune has come to him since birth, but no greater has or ever will come to him than the great good fortune to be born and raised on the farm,—the place where physical, mental, and moral manhood are developed.

Not only was it a great blessing to him to be born and raised on the farm, but it was a great blessing to his country. For a man to be in sympathy with the farming class, he must be one of them. Lincoln sympathized with the laboring class because he had split rails: Christ was not born in a palace but in a manger,—a carpenter's son.

About a mile from the home of Willis was a log schoolhouse, which had two redeeming features; it was large and well ventilated.

At the age of five Willis entered this school where he spent four months out of every twelve. The instructor did not possess much learning so

a pupil soon graduated from his school. Willis graduated at the age of fifteen.

However, Willis was not dependent alone upon the instruction received at the log schoolhouse. His excellent mother, who was very fond of her children, took great delight in teaching him. She realized the fact that, "A child's character and future are mainly shaped, for all time, before he has passed seven years of age."

His mother wanted him to be an educated man so she taught him to read, what to read, and how to read. She often read to him the words of Bacon: "Reading serves for delight, for amusement, and for ability." "Reading makes a full man; writing an exact man; conference a ready man." Of David: "Read, mark, learn, and inwardly digest." Of Choate: "Happy is he who has laid up in his youth and holds steadfast in all fortunes, a genuine and passionate love of reading, the true balm of hurt minds, of surer and more healthful charms than poppy or mandragora, or all drowsy syrups in the world."

She also read to him the words of Browning: "We generally err by reading too much, and out of proportion to what we think. I should be wiser, I am persuaded, if I had not read half so much; should have stronger and exercised faculties, and should stand higher in my own apprecia-

tion." And of Robertson: "I know what reading is, for I could read once and did. I read hard or not at all; never skimming, never turning aside to merely inviting books."

His mother never let him lay aside a book until he had completely mastered it,— until it was his own,— a possession for life. She taught him to read the best literature and to commit to memory its choicest passages. The Bible, Pilgrims Progress, Emerson's Essays on Behavior and Social Aims, the Classics, the lives of Webster and Washington, and the newest works on science were diligently and profoundly studied by Willis.

Willis at an early age believed, "That no one reaches the summit of honor, unless he prudently uses his time." So he made it a rule, "Never to be doing nothing." He believed that every lost moment is a chance for future misfortune, and acted accordingly.

Willis never spent a cent unless it was absolutely necessary. He learned early in life the value of a dollar. He earned dollars by the sweat of his face. He not only considered the present but he looked into the future. He did not live alone for the present moment, but for life as a whole.

He never used tobacco in any form; he let the bottle alone; he kept good company; he was

courteous to all; he was a truthful boy; he was a fine looking boy; in fact, he was a model boy; he became a model man.

He took great interest in everything pertaining to the farm. From the time he began to pick cotton and put it into his father's sack he studied agriculture. He was always asking his father questions in regard to some phase of agriculture, and his father took great delight in answering those questions. In fact, he never did anything on the farm without discussing the matter with Willis and his two other sons. He asked them for their opinions in regard to whether certain things should be done and how and when. By those means Willis gained valuable information.

Each boy had a "Saturday Evening" cotton patch. They prepared, fertilized, and cultivated their patches as they pleased. The boy that made the most on his acre was given five dollars by his father.

It is needless for me to state that each boy did his best. Willis won the prize four years out of seven. He was a model farmer when a boy,—and he is a model farmer now.

HIS CHOICE OF A PROFESSION

WILLIS studied the subject of selecting a profession for several months. From his thinking, reading, and advice received from friends he gathered many good ideas. He was fond of writing compositions so he wrote the following essay on "The Choice of a Profession:"

When we look about among our acquaintances we are astonished to see so few who have been really successful in life and so very few indeed that have reached the desired goal. Many of them were among the first at school,—champion debaters or able law students. They were all launched on the stream of life amid the cheers of their friends, but many have sunk beneath the waves.

While thousands of men never attain success in life, many do succeed. Many men of ordinary intellect and calibre have made for themselves a place in history. Men who had but little educational advantages in early life have achieved for themselves more than ordinary success. In fact, many idiots, blind, and crippled men have succeeded in life.

Every young man is desirous of succeeding in life; no man wants to make a failure of life. Now as many men of a high order of intelligence fail, many men of average brain power succeed; many educated men fail, many ignorant succeed; many rich boys fail, many poor boys succeed; now what causes success?

To no other cause is failure in life so frequently to be traced as to the failure to select a suitable calling. The man who desires to succeed in life must early select a profession. It is very important that he should promptly determine to what calling he is to devote his energies. Competition in every pursuit is so close that a man must devote his whole time to one thing if he expects to succeed.

The first law of success in this day is to bend every energy in one direction. The day for "jack of all trades" is past. Broad culture and many sidedness are good things to talk about but the man who would succeed in this day must select one profession and bend all the energy of his hands, head, and heart in that one direction. The successful men in every profession are those that can say with Paul, "This one thing I do."

Dryden says that no man need ever fear refusal from any lady if he only give his heart to getting her. But in order to win her he must first select

only one and devote his whole heart to that one. The same is true of success; a man must select only one calling and devote his whole time to that one thing. More persons fail from following too many pursuits than from poverty of resources.

America is full of people that know something about everything, but they do not know everything about anything. They have done like the general that scattered his forces over the whole country, and they have come out like that general, in defeat. Not because they have no talents, but because "They are not willing to be ignorant of a great many things in order to avoid the calamity of being ignorant of everything."

An American chemist once said, "Mr. A—— laughs at me because I have but one idea. He talks about everything,—aims to excell in everything; but I have learned that if I ever wish to make a breach, I must play my guns continually upon one point." That man was successful. He became president of a great scientific institution. What the chemist did in order to succeed, Watt, Arkwright, Davy, Harvy, Jenier, Morse, Whitney, Puck, and the hundreds of other men did whose names adorn the pages of history. The road that led to success in days past and gone leads there now.

A man in order to succeed in life must not only choose a profession, but he must choose wisely. In

order to do this it is necessary for him to study his aptitudes, to find out what he was designed for.

It is true that some great men deny the doctrine of inborn aptitude. That a man can by hard work and study become whatever he wants to be; that every man is at birth potentially a Webster, a Lee, a Davis, a Washington, and all that he needs is the proper education to electrify the world just as they did.

That idea has caused the failure of thousands. Many youths who might make first class blacksmiths, salesmen, or stenographers, have the great misfortune to be born of parents who think it is more honorable for them to be lawyers or doctors. They are sent to college where the professors have the insane idea that only Greek and Latin can make a man. They are pitch-forked through the course, receive their diplomas and settle down to expose their ignorance. They were educated in the wrong business. The truth of the whole matter is that men differ at birth in mind as well as in face. They are designed for a special calling. The individual who recognizes this fact and acts accordingly is the one that succeeds. The nation that realizes it and acts accordingly succeeds. The individual or nation that does not heed the advice of this fact suffers an ignominious defeat in life.

The Jesuits who lived in ages past succeeded in the education of their youth as no people since have done. What was the secret? The sagacity they showed in educating their children for the calling for which nature designed them. Who claims that such a system of education if adopted by this nation would not add strength to the Republic?

"If you choose to represent the various parts of life," says Sydney Smith, "by holes in a table of different shapes,—some circular, some triangular, some square, and some oblong,—and the persons acting these parts by similar bits of wood, we shall generally find that the triangular person has got into the square hole, the oblong into the triangular, while the square person has squeezed himself into the round hole." This is why so few people succeed in life.

The Latin poet, Horace, advised authors in selecting subjects to write about to select something suited to them. It is just as essential for a man who desires to succeed to select a profession suited to him. A man by self-determination can do much in a career not suited to him, but let a crisis come and he succumbs to the inevitable. He is defeated when defeat means his downfall.

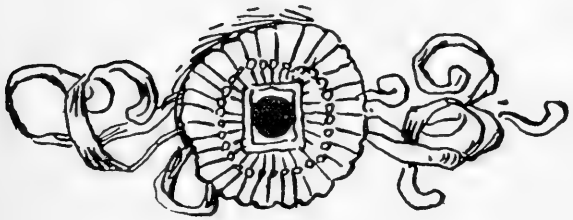
Many sorrows come upon men by the will of God and through the mistakes of their parents. To these sorrows they submit with comparative

resignation, but how about the sorrows they bring upon themselves by selecting a wrong profession? Over the mistake they mourn all the days of their lives!

I have been advised by all my friends to make an Honorable, an M. D., a D. D.,—they have told me about the honor and money that wait for me if I will only select one of the three graces for my profession. But I have different views about making and winning wreaths of laurel; I claim that it is not the profession of a man that makes him honored but how he succeeds in that profession. The man who succeeds in any profession is honored. The man who fails in any profession is disgraced. Mason, the maker of shoe-blacking made a fortune and won a name that will never die. Faber, the lead pencil manufacturer, amassed a fortune and will live in the minds and hearts of the people as long as time lasts. The great benefactors of the world, who have by cross fertilization and other means changed many poisonous plants into plants now used as food by human beings, have ceased to exist, but their names will adorn the pages of history forever. Those who have by selecting and crossbreeding produced cows that give thirteen gallons of milk per day, sheep that produce fifty-two pounds of wool at one shearing, the swift-running and trotting horses, and

animals of such great intelligence will always be revered.

I am satisfied that I was predestined, foreordained, and elected to be a farmer. For that reason, if for no other, farming will be my vocation. I am thankful to Providence that I was cut out for a farmer. I will be a free and independent man as long as I live. I can vote as I please, express my views on any subject, and my farm will continue to yield the same amount of produce and that same amount of produce will command the same price on the market. In fact I will have what the men who follow other prosessions have not — LIBERTY!



HIS CHOICE OF EDUCATION

After Willis had fully decided upon farming as his life work, the question most prominent in his mind was, "Shall I attend college?"

From his youth up he had heard it said, "any fool can farm," and he was far from being fully decided on this question of attending college. He consulted his father and mother in regard to spending four years in college. They advised him not to do so. They told him that only young men expecting to be lawyers, doctors, preachers, merchants, and other consumers attend college. He talked to his old school-teacher and other friends about entering college. They advised him not to do so as soon as he stated, "I have selected farming as my vocation."

Receiving no encouragement from his living friends, he decided to listen to Huxley, Curtis, Bacon, Hamilton, Webster, and others who had long since gone to their reward. He wanted to know if they were opposed to farmers being educated.

At the beginning of his studies, he stated the question, "Resolved that as I have selected farming for my life work, it is unnecessary for me to

attend college." He began searching for arguments in favor of the affirmative side. He soon found that the arguments on the affirmative side were based on two propositions. First, some of our successful statesmen, bankers, farmers, and merchants have never attended college. Second, that some men have been sent forth with diplomas from colleges who have not succeeded in life.

He read the lives of Lincoln, Tyndall, Bunyan, and other successful men who had not spent years in college. He found by reading their lives that they earnestly deplored the fact that they had not in early life obtained a liberal education. He also learned that these men were among the warmest advocates of a college course.

He learned by searching for facts in regard to the second proposition that the college graduates who had failed in life were men with little talent and but feeble ambition.

He was now ready to begin studying the negative side of the question. He found that Huxley looked upon life as a great game, and claimed that the life, the fortune, and the happiness of a man depends upon his knowledge of the game. Learning the rules of the mighty game, Huxley termed education.

He next read the great oration of George William Curtis on "The Public Duty of Educated

Men." Because men naturally great have done great service in the world without advantages, does it follow that lack of advantages is the secret of success ?

"Was Pericles a less sagacious leader of the State during forty years of Athenian glory because he was thoroughly accomplished in every grace of learning ? Or, swiftly passing from the Athenian rostrum to the Boston town meeting, behold Samuel Adams, tribune of New England against Old England,— of American against Europe,— of liberty against despotism ! Was his power enfeebled, his fervor chilled, his patriotism relaxed by his college education ? No, no, they were strengthened, kindled, confirmed." These words spake volumes to Willis.

I will not mention all the works that Willis read on this subject, but will quote a few of the sayings of great men. Wellington, in speaking of his college course, said: "There was gained the battle of Waterloo." Bishop Fowler said: "The reason why there are not more great men, is because we are not waked up. Our brains are capable of a million pounds to an inch, and we work them with about fifty," which is simply another way of saying that we should obtain a liberal education. It was a saying of his that, "education was an ornament in prosperity and a refuge in

adversity," and another saying that, "education was the best viaticum of old age."

"It was in making education not only common to all, but in some sense compulsory on all, that the destiny of the free republic of America was practically settled."

"The very spring and root of honesty and virtue lie in the felicity of lighting on good education." "'Tis education forms the common mind: just as the twig is bent the tree's inclined."

"It is only the ignorant that despise education."

"A boy is better unborn than untaught."

"Into what boundless life does education admit us. Every truth gained through it expands a moment of time into illimitable being—positively enlarges our experience and endows us with qualities which time cannot weaken or destroy."

Dr. Vincent, one of the most distinguished educators of the century, gave the following points in favor of a college education: "First a boy gets a general survey of the field of knowledge; he goes up a high mountain and looks out in every direction and forms a general idea of the vastness of the field. Second, he acquires a certain amount of mental discipline. Third, he is stimulated by the rivalry and competition which he encounters. Fourth, the advantages of contact with cultured minds, the professors and lecturers

being leaders in every department of human thought. Fifth, it inspires a man or should, to study all his life, and to grow."

He also said: "If I wanted to educate my boy for a blacksmith, I should first send him to college."

Willis now realized the difference between the men who succeed in life and the men who fail. The men who succeed have strengthened and enlarged and disciplined their minds in college. For a college training by its thorough discipline sharpens the mind, makes its visions clearer,— and these qualities of mind are of great use in fighting the battle of life.

Willis had now decided to enter college. But he had not as yet decided what college to enter. He had not decided whether to enter a literary school or an industrial school. He had learned from his study of the subject of education that some people mean by it, "the acquisition of knowledge," others, "the development of faculty."

Willis desired to enter a college where he could not only develop his mind but also acquire useful knowledge in regard to farming. He believed in the mind being trained by acquiring useful knowledge. He believed that he could develop his mind as fast by studying agriculture as he could by studying Greek. He knew that a

knowledge of Greek would not be of any direct benefit to him in life. But he realized the fact that the time had come when the farmer should improve his condition, and move onward and upward into a higher and grander sphere of life. He knew that this condition must be brought about by the farmer being taught wisdom and understanding concerning farming.

After due study of the subject, Willis decided to enter the Agricultural and Mechanical College of Mississippi, in September, 1887.

HIS COLLEGE DAYS

On the 13th of September, 1887, Willis bade his parents, brothers, and sisters good-bye and left for Starkville, Mississippi, where he entered college.

When he arrived at the college he was soon initiated by the boys and received into full fellowship with them. He was then entitled to all the the privileges of a " Prep."

On the morning of the 16th the large bell in the steeple rang long and loud. The old students knew what it meant. Willis did not understand the language it used, but on inquiring was informed that for nine months " General Lee's boys," must pore over tedious text-books. He joined a crowd of boys and was soon in the chapel. That venerable man, General S. D. Lee, made an excellent talk to the boys. He told them why Mississippi appropriated thousands of dollars per year to maintain the Mississippi Agricultural and Mechanical College. He told them why their parents had sent them to college. He said, "no lazy boy will be permitted to remain at this college."

Entrance examinations were held that day. All except two or three of the new boys tried the examination for Freshman class. Only seventy, out of the two hundred and five that tried, passed a satisfactory examination. Willis was one of the seventy.

That night while Willis and his roommate were sitting in their room discussing the trials of a new boy at college, three boys entered, and, after passing some pleasant words, invited them to be present at the opening meeting of the Philotechnic Literary Society. Neither Willis nor his roommate had ever had the privilege of attending the meetings of a literary society. They knew nothing of the advantages of such an organization. However they decided to attend the meeting on this occasion. Although another literary society at the college held its meeting on the same evening the large hall of the Philotechnic society was filled to overflowing.

The program consisted of two declamations, an oration, a debate, and a talk by the president. The declamations were delivered in a faultless style. The debaters showed the advantages to be derived from a debating society. Each of the debaters divided and sub-divided the question in argument with masterly discrimination. They stripped off the husk of irrelevancies, all manner

of disguises, and showed in the clearest light what the proposition in question was and what it was not. Every sentence spoken by them was a statement not made but born of that neccessity which the logic of the subject required. Each debater explained and exposed the utter worthlessness of a large part of his opponent's argument. When the end of this destructive process was reached the debater stopped short.

The president made an excellent speech on "The Benefits of Debating Societies." He considered the benefits of debating societies under four heads:

1. "They are the best schools for logical disputations."

2. "They furnish the best opportunities for the practice of oratory."

3. "They are the means of acquiring a great variety of useful knowledge."

4. "They familiarize us with parliamentary laws."

The central thought on the first part was, "Logical disputations rests upon the basis of a science, which deals with the laws of thought, which like every art, derives its perfection from culture." On the second, "Decrees affecting the interests of whole classes of people,— war or peace, tariff, free coinage of silver, and many

other questions which reach down to the details of social and domestic life, are often suspended on the tongue of a deliberative orator." On the third, "Many a boy who never awoke under the discipline of a school or college has in debate shown signs of great mental ability." And on the fourth, "How easy is it for an able logician and an eloquent speaker, who is not up on parliamentary law, to be turned down by one who is far inferior to him in every respect, except that he is a man familiar with parliamentary usage."

When the president finished his speech, he said, "All those who desire to become members of this society will please come forward and take the oath." Willis, with about eighty other boys, became a member that evening. During the four years that he attended college he was never absent from the society meeting unless he was sick. He not only did what was required of him, but he made many speeches in the place of absent boys. He took part in every debate, and was soon recognized as one of the ablest debaters in the society.

In his Junior year he was selected to meet, in public debate, a representative of the other society of the college. This debate took place during the commencement exercises. Willis won the medal.

Willis had been taught at home to look to the development of his moral nature as well as to the development of his mind. Therefore, when Sun-

day evening came he was always in attendance at the meeting at the Y. M. C. A. The president made an appealing talk to the young men. He made many excellent points, but the following, quoted by him, especially affected Willis: "Christianity is adapted to the highest development of character and life. It is adapted to man's entire constitution. It addresses his reason. It enlarges his understanding and gives activity to thought. It tends to the harmonious growth of all the faculties; it is so suited to human needs that it elevates man to the highest degree of purification, whether considered as to his physical, mental, or moral nature. 'A man industrious in his calling, if without the fear of God, becomes a drudge to worldly ends; vexed when disappointed, overjoyed in success.' 'Mingle but the fear of God with business,—it will not abate a man's industry, but sweeten it; if he prosper, he is thankful to God who gives him power to get wealth; if he miscarry, he is patient under the will and dispensation of the God he fears.'"

From that day until he received his diploma Willis was never absent, except when in the hospital, from a meeting of the Y. M. C. A. During his college days he thought of, "A City not built with hands, nor hoary with the years of time; A City whose inhabitants no census has numbered; A City through whose streets rushes no tide of

business, no nodding hearse creeps slowly with its burden to the tomb; A City without griefs or graves, without sins or sorrows, without births or burials, without marriages or mournings; A City which glories in having Jesus for its King, angels for its guards, saints for citizens; whose walls are salvation, and whose gates are praise," as well as the sin-cursed earth.

Willis never wasted a minute of time. He was a hard student. And, as might be expected, he stood at or near the head of his class until he graduated.

He was especially interested in the subject of agriculture. He not only completed the agricultural course of the college in a most creditable manner, but also read nearly everything emanating from the experiment stations and the Department of Agriculture, as well as most of the standard books on agriculture.

He worked in the farming department ninety hours per month during each session. He also remained at the college during the three months of vacation and worked on the farm. He did all kinds of farm work, he also worked in the greenhouses, flower gardens, orchards, vegetable fields, and in the fruit and vegetable packing houses. When he received his diploma he was a practical as well as a scientific farmer.

HIS CHOICE OF A FARM

While at college Willis became well acquainted with the farming interests of the different States in the Union. He learned what farm products were produced in each State and the climate of the different sections of the country. Every man should be well informed on this subject before he invests in land. As soon as Willis received his diploma he began to look for a farm. He wanted a farm in a good section of the country. He did not care whether it was in the North, East, South or West. He first considered the climate. He compared the monthly and average temperature; the amount of daily temperature oscillation; the average and absolute monthly and annual temperature extremes; the average and extreme dates when ice forms in the spring and fall; the number of days free from ice, and the average variability of the daily temperature for each month in the year. He compared the average amount of precipitation; and the average intensity of the rainfall. He also compared the average velocity of the wind for each

month and for each year,— and the average number of times the wind blew from each of the eight points on the compass. He made the comparisons between every State in the Union. After taking every point into consideration, he found the climate of Mississippi to be fully as good as the climate of any other State in the Union. This was a big point in favor of Mississippi, so he decided to compare Mississippi with the other States on every point that should be taken into consideration by a farmer.

He learned from a careful study of the farm products of each State that Mississippi produced every product found on the list of products of the United States. The corn and wheat of the North, the tobacco of Virginia, the rice and sugar cane of Louisiana, the vegetables of Florida, and the grass of every section of the country. Diversification can be practiced in Mississippi.

He found the death rate to be larger in thirty-three states than in Mississippi. He knew that the negroes were the cause of that State not having the lowest death rate.

He took special interest in the schools, the churches, and the laws of the different States. Mississippi stood near the bottom of the public school list; but it was being reconstructed by one of the greatest educators in the country—

J. R. Preston. Professor A. A. Kincannon took up the work where Professor Preston left off and carried it forward until the State called him to the highest educational position in the State. The work is now being rapidly carried forward by Professor Whitfield. Although far behind yet, in a few years Mississippi will stand at the head of the list.

The laws of the State did not compare favorably with the other States. The general laws were all right, but the laws in regard to agriculture and manufacturing were conspicuous by their absence. The State was filled with cur dogs on account of not having a dog tax; there were no laws against adulterated food stuffs; no money was appropriated for farmers' institutes; there was not a technical school in the State. In fact, little attention was paid to the industrial class after the election. Such is still true to a great extent; but with the present statesmen at the head of the State, the industrial classes will be looked after.

Willis also compared the roads, markets, railroads, labor, and other things in Mississippi to the same things in other States. He graded Mississippi low in several things but the average grade was not exceeded by a single State. He decided to farm in Mississippi.

He soon found a neighborhood near the railroad with a good school and church. He lives in that neighborhood to-day.

Willis wanted to buy a large, fertile plantation, but he was not able to do so. He did not have the money to pay for it and he was not willing to buy a large farm on credit. So he decided to get a small farm.

He wanted level land. Well did he know that it is impossible to keep hill land from washing. Ditching, deep plowing, terracing, and other means can be used to prevent land from washing, but hilly land will continue to wash so long as rain falls. The land that he bought is just sloping enough to drain well.

The farm that he bought had been thrown away for years. About ninety acres of it were worn out before the Civil War. No farmer had attempted to make a crop on it since the war. The farmers acquainted with it said that it would not grow cow-peas.

The soil is a dark, sandy loam. The subsoil is a deep red clay. The growth on the land is mostly long-leaf yellow pine. A few hickories, post-oaks, and red-oaks are to be found on it.

Willis examined the soil for two or three feet deep on every part of the farm before he decided to buy it. Most of the top soil had been removed

from the old field part of the farm, but a good subsoil remained to build on. He found the proportion of sand and clay to be about right. The physical condition of the soil was excellent.

He sent a sample of the soil, together with samples obtained from several other farms in the same neighborhood, to the State chemist to be analyzed. In a few weeks he received an analysis sheet giving the per cent. of nitrogen, phosphoric acid, and potash in the different soils. He was agreeably surprised.

The soil taken from the old field was richer than the average of the other samples sent. The land had been covered with broom sedge, briars, and scrubby oaks for over twenty-five years. The negro had never burned it off in order to run the rabbits out, so nature had made the land as rich in the elements of plant food as it was when first cultivated. It had been redeemed.

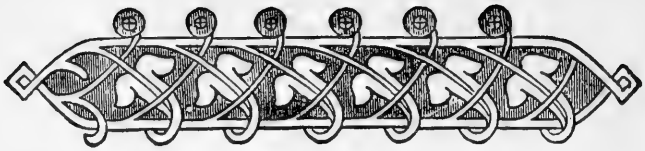
Willis decided to buy that farm if he could get it at a bargain. He talked to a number of farmers to find out what value they placed on it. They told him that several farmers had left the farm to keep from starving to death. He learned that a farmer had bought it for a son, and the son refused to take it as a gift. No reliable tenant would go on the farm when it was in cultivation. It was too poor for the average farmer to make a living on.

Just before he went to see the owner of the land, a friend told Willis not to give much more than the value of the timber for the land. There was about seventy acres of fine pine timbered land and ninety acres of old field with many dead pines from which the sap had long been fallen.

By inquiry he found that timbered land similar to this was selling near sawmills for three dollars an acre, so the timber was worth two hundred and ten dollars.

When Willis spoke to the owner of the land in regard to buying it, the owner seemed to be surprised, and said to Willis, "Do you expect to farm on the land?" When Willis answered in the affirmative he was still more surprised. He eyed Willis for a few moments and said: "I have been trying to sell the land for a number of years and have not succeeded. I will gladly sell it to you." As he said this tears came into his eyes, for he was a kind-hearted man and deeply sympathized with Willis, who was then only a boy. When Willis asked the price of the land, he replied by asking: "What are you willing to give for it?" Willis replied, "I am willing to give you four hundred and twenty dollars." The owner said, "You can have it."

Willis borrowed the money from his father and paid for the land that is now one of the most productive farms in Mississippi.



HIS CHOICE OF A WIFE

WILLIS had a good farm as well as a large and comfortable home. This home was surrounded by sweet scented flowers and tall and friendly trees. The vines climbed up the walls of this house and hung their pretty blossoms about the lattice: the pots of beautiful flowers in the windows shed their fragrance about the house, and if love ever visited any place it must have visited this home.

He had everything necessary for his existence, yet it was not good for him to be alone. The home was without beauty, the birds made no music because he had no Eve to see and listen with him. He, like Adam in the Garden of Eden, was sad because that home was not lighted by the smiles of a woman.

The subject of matrimony troubled him. He could solve the hardest problems in philosophy and mathematics with ease, but he could not it seemed solve this problem. Reason told him not to marry. Instinct urged him to marry. He knew

not which to obey. He at last decided to find out what others thought about marriage.

He was handicapped at the beginning of his studies by not being able to find any "authorities" on the subject of woman and marriage. He found it was a subject concerning which very little is known or upon which few people are agreed. Each person married knows how his or her marriage has turned out, but that knowledge is nothing when compared to the knowledge of marriage generally. However, Willis gathered some good advice from various sources.

Walter Scott spoke as follows: "Settle yourself in life while you are young and lay up, by so doing, a stock of domestic happiness against age and bodily decay. There are many good things in life, whatever satirists and misanthropists may say to the contrary; but probably the best of all, next to a conscience void of offense, is the great exercise and enjoyment of social blessings, in which we are happy ourselves and the cause of happiness to those dearest to us."

George Eliot expressed her views in the following words: "What greater thing is there for two human souls than to feel that they are joined for life,—to strengthen each other in all labor, to rest on each other in sorrow, to minister to each other in all pain, to be with each

other in silent, unspeakable memories at the last parting."

Middleton spoke in the following verse:

> "The treasures of the deep are not so precious,
> As are the concealed comforts of a man
> Lock'd up in woman's love.
> I scent the air
> Of blessing, when I come but near the house.
> What a delicious breath marriage sends forth —
> The violet beds not sweeter."

Willis did not read many such quotations before he fully decided to marry. He must now select and win the love of a woman. He had always been noted for his common sense and to the surprise of his friends he did not, as most young people do, lay it aside in selecting a wife. He knew that selecting should be done first and love-making afterwards. But how can a man select unless he knows what he wants?

Having decided what kind of wife he wanted or needed, he made a list of all the ladies that he considered at all suitable for wives. He then began making a careful study of each lady on his list. He found out whether there had been any idiots, any blind, any consumptives, any with heart disease, or any other hereditary diseases among their ancestors. He also found out whether there had been any murderers, drunkards, infidels, dishonest men, and short-lived men among their

ancestry. In fact, he found out all he could about each lady's pedigree. He realized the fact that God visits the iniquity of the parents on the children unto the third and fourth generation.

He was now ready to begin studying their living relatives. His field of study in this case was not very broad. He cared only to know the character of the parents, brothers, and sisters. He was soon fairly well-informed on this point. He was now ready to study each lady. He considered their forms first. He gave the best grades to the ladies who had every part of the body well developed. He made special note of the ladies who had well-developed breasts, good sized waists, and large hips.

He took note of the condition of their eyes and the soundness of their teeth. Well did he know that weak eyes and decayed teeth are signs of a weak constitution.

He left no stone unturned in his study of the health of these ladies. He had learned early in life that beauty depends largely upon good health. Ladies, by the use of lotions, paddings, nostrums, and such things, delude and disappoint many young men, but Willis was not to be deceived. The clear, ruddy complexion, the bright eye, the active movement, and the flow of spirits had more effect upon him than the so-called beauty obtained by recourse to artificial means.

He studied their minds next. He obtained by talking with them their views on woman's rights, religion, economy, industry, worrying, dress, and other subjects of importance.

He inquired about education. In this he was very much interested. He wanted an "all around" girl for a wife. He wanted one that could cook, sew, sing, talk science and philosophy, make music at the piano, make such tea that every friend would love to take tea at their house, play the hostess as though she had never read Homer or worked out an astronomical problem.

He believed in a girl being educated so that she can earn an honorable and independent living in case of an emergency, but he also believed that her education should prepare her for the duties of a wife and mother. He treated with scorn the fallacy that a woman cannot be well read, possess a broad culture and a well-disciplined mind, and at the same time be a good housewife.

Willis could not endure the thought of marrying a girl weak in intellect. He valued physical beauty, riches, and good kinsfolk, but he valued intellect more than all these. He realized that the successful men in life have wives who co-operate with them, and he wanted a wife who would co-operate with him. He found her as easily as a King's son finds a King's daughter.

In the selection of a wife he did not forget moral beauty. He valued physical and mental beauty, but he desired moral beauty more than either. Only Christian wives make happy homes and Willis knew it. He wanted his home to be full of love and joy; therefore, he wanted a wife who would kneel with him in prayer and ask God to bless their home and endow them with strength to perform their duties.

He did not learn all about the girls by any means, but his knowledge was sufficient to make him cut his long list down to three. Only three seemed likely to prove themselves efficient.

I do not know by what means Willis won the love of one of those three, but I do know that he succeeded in winning the love of the one he learned to love.

Willis and Mary were married on December 23, 1891. At least they were partly married, for it requires years to completely bind two hearts, however loving they may be.

Willis married the woman he loved. Mary married the man she loved. They are still falling in love.

HIS HOME

THE dictionary says that a home is the residence of a person. All homes are residences, but all residences are not homes. The residence of Willis is the home of Willis. And while he thinks much of his farm, his live stock, and his farm buildings, his home is the real object of his efforts. He thinks that everything else should be used as agents to build up and maintain a model home.

The house that he lives in was built before he married. It was also built before the barn in his lot. He thought first of his family and himself and he built his house for comfort and not for show; to use and not to look at.

He does not think that a man should have large barns and money loaned out at interest and at the same time live in a hut. He thinks that a farmer should live in a good comfortable house. So the first thing that he did was to build a large, comfortable house. Now before studying the plan,

furnishing, etc., of his house, let us consider the beautiful lawn around the house and the flowers, shrubbery, fruit trees, and shade trees near the house. All these add beauty to his lovely home.

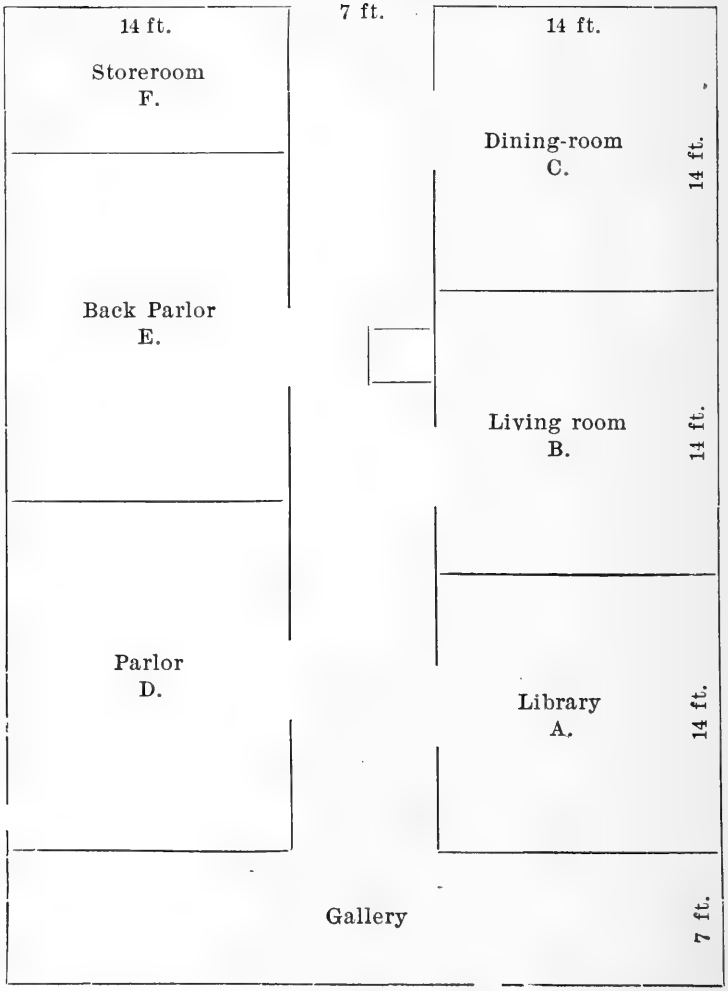
Many necessities are found around this house that are not found at the home of the average farmer. A woodshed joins the kitchen; it contains plenty of dry wood at all times, so Mary is not forced to go out into the rain or cold to get wood. The kitchen gallery surrounds the well. The water is drawn by the use of a pump. Every window and door has a screen to keep out the flies. A cask is kept at the kitchen door to pour the slops in. These and many other conveniences make it pleasant to live in such a home.

The drainage at this house is excellent. The barnyard, poultry, and hog houses are not near the well. No slops, wash water, or any kind of dirty water is emptied on the ground near the house. The sun and air are given free access to every part of the building and its surroundings.

DRAWING

The drawing given here shows the plan of the first floor of the house. The plan of the upper floor is the same except the six rooms are all the same size. The upper floor is used for bed rooms.

HIS HOUSE



Scale 12 ft. to inch.

Entering the broad hall which extends through the entire length of the house, one is impressed at once with that sense of homeliness and rest which pervades every real home.

The first room to the right on entering the hall or room A, is the library. In selecting his library Willis did not like many people give undue importance to works of fiction. He selected the great books, the original books, the books containing great ideas. He tried to get books on every branch of human knowledge. The leading books on religion, agriculture, economics, history, biography, law science, poetry, fiction, medicine and many volumns of classic prose and poetry are to be found on the shelves in this library. The room itself is a model place for reading, getting the light from two directions, and fitted up with soft shades in brown. A large table with large chairs occupy the center of the room, while a prettily shaded lamp ready for use is placed conveniently near.

Back of the library, and also having an entrance from the hall, is the family sitting room, or room B; this room by some thinking people has often been called the living room and very properly too. Here after the day's work is done and the evening meal has been partaken of, the members of the family meet for social intercourse; where father

talks to his children telling them stories and in this way getting down to their very lives which in the work of the day there is no time to do. In this room are easy chairs, mother's sewing basket, the boys' checkers, the girls' embroidery, father's daily paper, in which the news of the day is discussed, in short, where all may meet in absolute freedom and recreation. There is a fireplace at one end of the room from which in wet or cold weather a bright fire burns, sending its brightness over the faces of the "dear home circle," and vying with the soft light from the large lamp on the center table in making the room a real haven of rest.

Room C, or the dining-room, is another important room as all the small boys in the family will agree. This is large, light, and furnished with neatness and simplicity. A large extension table, which can be made to accommodate quite a large company, and yet arranged in a way that only the home-folks can be seated comfortably, is of course the main feature of the room. Pictures of fruit and flowers adorn the walls while other adornments, such as only a womanly woman can give add the necessary finishing touches.

Crossing the hall and entering the small room back and almost under the stairs leading to the floor above, is a storeroom for canned fruits which

is very necessary in a large family where a great deal of canned fruit is used.

Rooms D and E are the parlors, separated by sliding doors. These rooms are tastefully furnished with touches here and there that give the necessary homeliness that through the entire house is never sacrificed for mere beauty or elegance. In the back parlor is the piano and other musical instruments. Here the family often gather and with mother at the piano and father with his violin there enjoy many pleasant hours, singing the old songs that are dear to every heart. If there be sorrows they are driven away; if there be fatigue, it is forgotten; if there be worry, it is soon no more. The music keeps the dust of every-day life washed away from the soul. The spirits are kept fresh and elastic and ready to combat with the trials of daily life. The inmates are not only happy, but the children will not be black sheep when they grow up, but will be useful men and women. The blessed influences of that music will never be forgotten, but will live in the hearts of the children as long as time lasts.

In every home there is one very important room, the bath room, and Willis has not overlooked this important feature. For numerous reasons he has put it on the second floor and directly over the storeroom. In the kitchen a small iron tank is

connected with the stove by an iron pipe and then by another pipe to the second floor. By this warm water is secured which is essential, and every member of the family recognizes the fact, "That cleanliness is next to Godliness."

From what has been said it will be seen that Willis is a model farmer and his wife is a model housewife, and their home a model home. True there are many times when each have to forbear but with that deep tender love for each other and for their children it is easy to forbear and forgive. Christian love occupies the throne in this home and will do so until Willis and Mary are carried to the realms of everlasting love where they will sing the songs of love and rejoice forever.

HIS WORKING POLICY

Work is necessary. It is honorable. But it can easily be carried to an excess. A man should not live just to work. He should get some pleasure out of life. It is true that only those who toil enjoy rest. But a man should not be a slave to labor. This is an age of labor-saving implements, so no man should work from sun-up to sun-down from one year's end to another. A farmer can have a good time if he only will.

Willis has a good time. He begins work at six A. M.; eats breakfast at seven A. M.; eats dinner at twelve M.; returns to work at two P. M.; and quits at seven P. M. He works in the field eight hours per day and two hours per day at his barns. He allows three hours for eating and eight hours for sleeping. Ten hours for work, three hours for eating, and eight for sleep leaves three hours for reading, writing, and other enjoyments.

Willis makes good use of the three hours for rest. He often takes his wife out for a ride as he did before they were married. He keeps a horse that does nothing except pull his buggy. That

horse is always fresh and spirited and loves to go. It is a pleasure for Willis and Mary to ride behind such a horse. He farms to enjoy life.

By far the best part of the three hours is spent by the family in the library. Willis desires to keep well posted on farming and Mary studies the subjects of poultry, gardening, and dairying. While they devote most of their time to the study of agriculture, they read journals and books on other subjects. That is they try to know everything about farming and something about everything else.

Willis is an able writer. He is not only an able writer, but he can and does write articles that are instructive to practical farmers. His writings serve as a connecting link between extremely practical and extremely scientific writings. He writes a short article every week for two agricultural journals. The readers of those journals are greatly benefited by reading such articles.

Many farmers claim that they cannot make a living without working twelve or fourteen hours a day. That is true. They have not removed the stumps and roots from their land, they cannot use labor-saving implements; they have no good plow team; their land is poor; they are busy at one season of the year and idle at another; they are always behind time and are forced to take nine

stitches instead of one. Farmers who farm in such a manner cannot expect to make a living by working sixteen hours a day. They will hardly be able to exist.

Willis claims that a man who has time for rest and recreation will do as much in ten hours as the average farmer does in twelve. He is right about it.

A man must take a moderate gait in order to hold out for twelve or fourteen hours. He can work faster for ten hours. The men in the factories work for about ten hours per day. Why cannot farmers live by working ten hours per day? The answer will be found in the last paragraph.

Willis does as much work in ten hours as the average farmer does in twenty. His brain is an excellent overseer, so his efforts are well directed. He uses labor-saving implements. He plows two acres from four to six inches deep in one day; the average farmer scratches one acre per day. He cuts five or six acres of pea vines, grass, or oats in one day; the average former cuts from one-half to two acres per day. This is the main reason why he can live by working ten hours per day.

His farming is diversified, therefore he is just as busy in January as he is in July. He does not work fifteen hours per day in June and three or

four in January. He has profitable work to do every day in the year. So he puts in about as much work in a year as the average farmer.

He does not over-crop himself. He knows that "a stitch in time saves nine." He never gets behind with his work so that nine stitches will be required. The crop is well cultivated, and the result is a large harvest in the fall.

He keeps plenty of stock and good pastures for them to graze on; the stock require but little time as they receive most of their feed in the pastures. They harvest the grass and the hay for him. When the stock require feed and care he is not busy cultivating crops.

I will not discuss all the ways by which Willis economizes time, but have mentioned several to show how any farmer can so arrange his business that he need only work ten hours per day; why cannot others do so?

Every farmer should use business methods so that he can secure big results with little labor. The men who are now tilling the soil will soon be dead and buried. If they get any pleasure out of life they must do so now. It is well to work hard and lay up something for a rainy day, but we should enjoy life as we go along.

He often takes a day off and goes on a pleasure trip. His wife and children always go with him. He

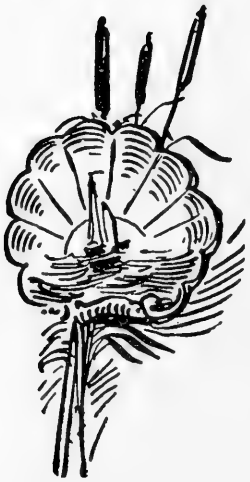
knows that his wife needs the change more than he does and he wants his children to enjoy life. About once a year they take advantage of a cheap excursion to some place of interest. A long ride is enjoyed by them and much that is new is seen for little money. He visits his neighbors occasionally and talks farming and other things of interest with them. He says, "I never lose by it."

He works with a vim. He does not plod along in such a way that but little work is done. He can well afford to work in a hurry for he rests three hours per day and in addition takes off a number of days during the year for recreation. The bow is not always bent so it does not lose its power. He does not neglect his work for pleasure but he gets it in such a shape that he can leave it in the care of his farm hand.

He never leaves his farm unless his hired man remains at home, for his stock must be well cared for.

Of course, only a few farmers can enjoy life as Willis does. He knows how to farm. He knows what branch of farming pays best and devotes most of his time to that branch. He uses improved farm implements so that he can do a great deal of work. His land is very productive, consequently he secures large yields. But I claim that what has been done by Willis can be done by every

young man in the South. It is true that men who are now farming cannot attend an agricultural college, but they can read farm papers and bulletins. and attend farmers' institutes. They can do much better than they are now doing.



REMOVING TIMBER

The farm that Willis lives on was covered with stumps and trees when Willis bought it. There was on an average of twenty pine stumps and trees to the acre. He tried to get a farm clear of timber, but he could not do so.

His father's farm was covered with timber; his grandfather's farm was covered with timber; in fact every farmer's farm in the country was covered with timber. It was not the style to remove the pine timber from the land. Willis did not believe in being in style, if such is called style. He did not care to cultivate land full of stumps. He took his paper and pencil and figured out the space occupied by the timber. He found by examination that each pine or stump occupied on an average of thirty square feet. So a space of six hundred square feet to the acre was taken up by the stumps and trees.

The actual space occupied by the timber did not amount to much when compared to the loss of time occasioned by not being able to use labor-saving implements. Large plows, harrows, mowing machines, hay rakes, and many other labor-saving implements cannot be used on timbered land,—but little work is done. And then it is a great deal more pleasant riding on a spring seat than in following in the furrow behind the plow.

After considering the advantages and the cost of removing the timber, he decided to clear his land of stumps and trees. Having decided to remove it, he must now decide how to do so. The timber was too heavy for a stump puller and explosives were very costly. He soon found the burning process to be the best. The only trouble with fire was rain.

He soon planned so that but little risk was run on that account. He removed the timber from the land in pasture. As he constantly changed his pasture, his farm was entirely clear of timber in a few years.

He removed the dirt from around the stumps at any time. He cut the timber and sawed it into five feet blocks. Two or three of these blocks were placed against each stump and made ready for the fire to be applied when the ground dried out. The month of May is usually dry, so he fired

the stumps on the first dry day in May. He and another man remained in the ten-acre field all day long for at least a week The blocks were kept against the stumps at all times. When one block burned up another was put in its place.

At the close of one week most of the stumps were burned out or burned from one to two feet below the surface so that they would not interfere with the plow. During the second and third weeks he spent several hours per day in placing new timber around the burning stumps. He never let a stump remain in the way of the plow.

Willis went entirely contrary to public opinion in removing the timber.

Some farmers thought he had gone crazy. He was called a college farmer by many; the book farmer by others; and the fool farmer by still others. But he knew what he was about, and continued to remove from ten to twenty acres per year until his farm of eighty acres is now entirely cleared of timber, and has not cost him more than ten dollars per acre.

DIVERSIFICATION

WILLIS has hanging on the wall in his parlor a large frame containing the motto: "Live at Home." He obeys that motto.

While he realizes the fact that cotton is and always will be an important money crop in the South, he does not plant his whole farm in cotton and buy rice, sugar, meat, lard, and other things that he can produce cheaper than the farmers of any other State in the Union. He produces everything that he needs that can be grown on his farm.

He has two acres in a garden. He knows that a good garden is half a living; that a home may be a place to sleep, but it is not a true home unless the inmates have plenty of vegetables to eat; that nothing adds more to the comfort and health of people than a diet composed mostly of vegetables; that a good garden keeps its owner from spending many dollars for meat and canned vegetables.

He grows hundreds of bushels of sweet potatoes, Irish potatoes, peas, pindars, rice, artichokes, oats,

rye, corn, velvet beans, vetch, and other crops. He makes at least one thousand gallons of Louisiana syrup each year and several barrels of sugar. He grows hundreds of melons, and gathers barrels of peaches, apples, figs, plums, pears, strawberries, and grapes; in fact, he grows nearly everything that he consumes.

His pastures are the wonder of his State, yea of every State in the Union. He has green pastures every month in the year. No farmer in the States grows more or better forage to the acre than Willis. The Bermuda is his best forage grass for summer; rye, oats, and vetch are his best winter grazing crops; and orchard grass, meadow grass, red clover, rescue grass, crimson clover, sorghum, and cowpeas also afford excellent pasture on his farm.

He has produced as much as seven and a half tons of dry forage on one acre in one year. He plants turf oats and hairy vetch in November to be cut the first of the next June; next he plants cowpeas to be cut the first of August; he then plants sorghum to be cut the last of October. He grows three forage crops on the same land in one year. Two of the crops are soil improvers.

Many farmers claim that they have no market for anything but cotton so they do not diversify their crops. Willis has a home market. He keeps

hogs, sheep, cattle, poultry, and other live stock to manufacture the coarse products grown on his farm into highly concentrated products. His hay, peas, pindars, corn, cotton, and other feed is converted into meat, wool, butter, mules, milch cows, and other products that can be sold at a good profit.

Diversification enables him to cultivate and utilize about three times as much land as the average farmer in Mississippi. The average farmer wears out about fifteen acres at a time. Willis manages forty acres to the farm hand in such a way that its productiveness is continually increasing. He does not cultivate cotton alone but he grows corn and peas, oats and peas, hay, and has good pastures. His system of farming is balanced, he grows everything that his farm will produce for home use and to sell. He cultivates several crops to enrich instead of wear out his land.

Diversification makes it possible for him to practice rotation of crops. If a farmer cultivates only cotton and corn, his land will soon be ruined. Their continuous cultivation exhausts the vegetable matter in the soil and this is one of the reasons that the soil washes as badly as it does. The system that Willis practices keeps plenty of vegetable matter in the soil and gathers tons of nitrogen from the air and puts it into the soil.

The large yields of corn, peas, hay, etc., necessitate the keeping of stock on the farm. The stock converts the crops into concentrated human food. He sells the human food at a good profit. The manure obtained from the stock is put on the farm and its fertility thereby increased. The feed, the stock to eat the feed, the money obtained from the sale of butter, meat, wool, etc., and the increasing fertility of his land pay him to diversify his crops.

His family fares sumptuously every day in the year. They have plenty of fresh vegetables, milk, fruit, butter, pork, beef, chickens, eggs, rice, and other farm products to eat. In fact, they have everything to eat that is produced on any farm in this country. Other professional men cannot afford to live as Willis does. The man in the city must spend hundreds of dollars for the food his family consumes and then get stale goods. Willis does not live to grow cotton only; he considers happiness.

He never spends a cent of money for anything except taxes, doctors' bills, church expenses, literature, and car fare. He carries farm produce to town and exchanges it for white sugar to go in the the cake, flour, clothing, farm implements, and such things. He goes to town with a wagon full and returns with it nearly empty and his pocket

full of money. The merchants always owe him. He owes no merchant for supplies.

To sum it all up, Willis bases his business on: Buying takes money out of my pocket; selling puts money into my pocket.

INTENSIVE - EXTENSIVE FARMING

WILLIS had been taught from his youth up that other things being equal, a farmer prospers just in proportion to the amount of produce that his farm yields; that the farmer that obtains only one-fifth bale of cotton per acre and other produce in proportion will likely always be near starvation; that the farmer who obtains one bale of cotton to the acre and other produce in proportion will very likely be able to buy everything that he needs.

He believed in using the paper and pencil; so he did some figuring on the subject when he began farming. His first crop having been gathered and housed or sold, he took his books and figured out the cost of producing his cotton, corn, potatoes, peas, oats, and other farm crops.

The following accounts show cost of production, amount of produce, value of produce, and gain or loss on each crop:

COTTON

Rent of land per acre	$ 2.00
Taxes, fences, ditching, etc.	.75

COTTON — *Continued*

Preparation of land	$ .75
Fertilizer	2.00
Plowing	1.50
Seed and planting	.25
Hoeing	1.00
Picking	2.50
Ginning	1.00
Marketing	.25
Cost of producing	12.00
Sold one-third bale (at 9c)	$ 15.00
Seed	4.00
Total value	19.00
Gain on cotton	$ 7.00

CORN

Rent of land	$ 2.00
Fencing, ditching, etc.	.75
Preparation of land	.75
Fertilizer	2.00
Seed and planting	.25
Plowing	1.50
Hoeing	.50
Gathering and housing	.35
Cost of producing	8.10
Value of 15 bus. (at 50c)	$7.50
Loss on corn	$ .60

Willis figured the cost of producing every crop on his farm, and the cost of his butter, eggs, poultry, beef, pork, and other farm products. The foregoing examples will show how he did it.

The profit of his farm taken as a whole was 17 per cent. This was an excellent showing for his

poor land; but few merchants, bankers, and speculators make that profit. However, Willis was not satisfied. He wanted to make the Dutchman's 1 per cent; therefore he decided to do some more figuring.

As cotton is the standard of value in the South, he figured on it. He knew that he could in a few years make his land yield on an average of one bale to the acre. So he figured out the cost of producing cotton when the yield is one bale to the acre:

Rent	$ 2.00
Fencing, taxes, etc	.75
Preparation of land	.75
Fertilizer	2.00
Seed and planting	.25
Plowing	1.50
Hoeing	1.00
Picking	7.50
Ginning	3.00
Marketing	.75
Cost of producing	19.50
Value of one bale (at 9c)	$45.00
Value of seed	12.00
Value entire	57.00
Gain on cotton	$37.50

He found the profit to be as shown nearly 200 per cent. The profit on each acre would be $37.50 and on twenty acres $750.00. This would be a

large profit on the land in cultivation; but the number of acres would be few. Consequently, the total amount of profit small.

Willis had been taught to take a few acres and by the use of fertilizers and other means make it very productive. But his figures showed him that his income would be small if he practiced that system of farming. This caused him to do a great deal of hard thinking.

He began practicing what he has named "intensive-extensive farming" as the result of that thinking. That is he utilizes nearly three times as much land per hand as the average Mississippi farmer and manages it in such a way that its productiveness is rapidly increasing. His farming is extensive as well as intensive. And although the price of cotton is now only seven cents per pound, he makes about 100 per cent. on eighty acres of land.

A farmer must utilize about forty acres to make farming profitable. That is he must practice intensive-extensive farming in order to secure large yields.

He must have sufficient land in cultivation to enable him to practice rotation of crops and to have pastures to furnish feed for stock that manure may be obtained to increase the fertility of the soil. All that Willis does.

HIS GARDEN

WILLIS has two acres in a garden ; it is two acres long and one acre wide.

He wanted his garden to be near the house ; so he could not put it on an ideal garden spot. However, it is located in a far better place than the average garden.

The soil is just sloping enough to drain well; ditching and tile drains are unnecessary. The physical and chemical condition of the soil is now good, but such was not the case when Willis purchased the land. At that time it was "worn out."

He has made the soil fertile by deep plowing, careful tillage, growing leguminous crops, and by the application of fertilizers. The compact soil was made loose by plowing for ten or twelve inches deep. Vegetable matter was plowed under to furnish the soil with plenty of humus. Leguminous plants were planted to transfer the nitrogen to the soil. Fertilizers were added to the soil to supply the elements in which it was lacking. It was once poor soil, but now it is rich.

Fertile land will not yield large crops unless it is well cultivated. This fertile garden yields abundantly because Willis cultivates it thoroughly. The

soil is well prepared before the seed are planted; and the soil is kept fine and mellow among the plants. The soil is well stirred every day during the early growth of the plants, because the more frequently it is stirred the more moisture it will absorb from the air, and the more air will be admitted to the rootlets of the growing plants. It is well stirred after each rain as soon as the soil is sufficiently dry to prevent incrustation. There are no lumps or clods in this garden soil.

Willis has no hot-bed; he has only one good-sized cold frame. It is twenty feet long and eight feet wide. On the back side two planks one foot wide and one-half inch thick are nailed to corner posts driven in the ground. On the front side only one plank is nailed to the posts. The ends are planked up with the same kind of plank, and the frame is covered with cotton cloth.

The soil in the frame is exceedingly fertile. It is elevated about six inches above the surrounding soil, and is well pulverized and drained.

The seed are sown from one-fourth of an inch to one inch deep in drills three or four inches apart across the bed. If the soil is dry it is well watered as soon as the seed are planted.

The cloth is used only as a means of protection against cold weather; it is rolled back when not needed to protect the plants.

When the danger of frost is past Willis prepares his garden soil thoroughly, and transfers the plants from the cold frame to the garden. He removes a portion of the leaves from each plant, plants it to the depth it was in the cold frame and presses the earth uniformly around it.

His garden never suffers for water. He has a large tank near his barn that holds seventy thousand gallons. A hose two hundred feet long is attached to this tank with which the garden can be well watered when the vegetables need it. The tank was built by Willis in two days. The lumber and tar cost five dollars.

Willis does not sell many vegetables. What he does sell are sold in the home market; he never ships vegetables. He grows vegetables for his own use and sells only the surplus. He says he can make more money on other farm products.

I have not the space to discuss at length his gardening. He follows the examples of other successful gardeners. He is not a specialist in gardening, but he has asparagus, beans, beets, cabbage, cauliflower, cucumbers, egg plants, kale, lettuce, onions, peas, potatoes, radish, squash, tomatoes, and strawberries on his table in their season.

He eats to live, and lives to eat.

HIS PARTNER

WILLIS is not alone in business. He has an excellent partner. He obtained his partner by marriage; so the firm will not be dissolved until death calls one of the members home.

The members of that firm are equal partners. Neither one rules over the other. The wife is a partner and not a slave. The lord and master spirit is not in Willis. He loves his wife. Mary is a sensible woman and does not try to "wear the breeches." She knows that a woman should not try to rule over her husband.

They adopted the following platform before they married:

1. The husband should plow, sow, reap, and attend to the bulk of the business. The wife should keep the house.

2. The husband should always consult his wife about his part of the business. The wife should always consult her husband about her part of the business.

3. Whatever the husband and wife make should belong to both. Neither one should be forced to ask the other for money.

4. The work of the wife is just as important as that of the husband and should be so recognized.

5. The wife is the equal partner of the husband and the husband should treat her as his equal in every respect.

6. The husband should do all in his power to make money to buy what is needed in the home. The wife should always make the home pleasant so that her husband will be stronger to battle with the world.

Now let us discuss briefly the above platform. The husband should run the farm, — the wife the house. The husband should be acknowledged as authority in regard to farm matters; the wife in regard to household affairs. Man and woman were intended to be helpmates for each other. There should be a division of labor between man and wife. By this division each will be benefited.

The old saying that "two heads are better than one if one is a sheep's head," is true. The man knows more about farm matters than the wife; and the wife knows more about household affairs than the man; but each is competent to give the other advice. So man and wife should always consult each other on matters of importance.

The husband should not give the wife so much money to do as she pleases with or so much a month. She is not a hireling, — but his affectionate wife, — his loving, equal partner. Neither should the

wife have the pocketbook in her care and keeping all the time and make the husband ask for every cent he spends. The money that they make belongs to one as much as it does to the other. They both make the money. They both should spend the money.

It is true that the work done by the wife does not usually bring in as much cash money as that done by the husband, but the wife's work is as important, or even more so than the husband's. The husband's work may bring in the value of three or four dollars a day ; and the wife's only one dollar a day ; but the wife cooks three meals for the husband and children and makes the house a happy home for them. She makes it possible for the husband and children to sing "There is no place like home." She brightens the home with the sunshine of love. She moulds the character of the children in that home. The future destiny of the children and of the Nation depends upon the work of the wife.

The man is recognized as the head of the family, but he is not the enslaver of the family. The wife is his equal and he should recognize her as such. They were created equal and intended to help each other, not to lord over each other.

The husband promised before witnesses to love and support his wife ; so he has no right to be indolent. He must work and support his family. And he should not spend what they make for

tobacco, whisky, or anything else that is unnecessary. The wife should help her husband to make a living, she was not made for simply an ornament. She should make life pleasant for the inmates of the house.

To sum it all up, — the husband and wife should try to make each other's life long and happy.

Willis and Mary re-adopt the above platform every year. They obey it. They are happy.

A FERTILE SOIL

A FERTILE soil is the foundation of success in farming. The farmer depends on what his soil produces for bread, butter, and clothing. If the soil does not yield bountiful harvests, he will suffer for the necessities of life. If it yields abundant harvests, he will have money to buy everything that he needs.

The farmer cannot change the condition of the air, neither can he change the seasons, but he can make a productive out of a non-productive soil. He can change the texture and chemical composition of the soil that yields only one-third of a bale of cotton to the acre until it produces one whole bale. He can enrich his land so that it will produce seventy-five instead of fifteen bushels of corn to the acre. He can make his farm fertile so that he will make money on every acre instead of losing money.

No man considers a fertile soil of more consequence in farming than Willis. His well-fed soil is the best testimony to the fact. He does not starve it and at the same time expect it to feed his

farm animals. He knows that he has no right to rob the soil that God has entrusted to his care. So he is not robbing it but adding to its store of fertility.

In the following chapters on Tillage, Rotation of Crops, the Cowpea, Barnyard Manure and Commercial Fertilizers, I will tell how Willis has increased the fertility of his soil.

THE COWPEA

WILLIS is called a "cowpea crank;" but he is not called so justly. He plants peas in his corn and cotton, and follows his oats by peas but he is no crank. I will discuss briefly the benefits of peas and I think I can show that the farmer who does not agree with Willis is a crank.

There must be fourteen elements of plant food present in the soil in a soluble condition before plants will grow in the soil. Eleven of these elements are present in sufficient quantities in nearly all soils. The soil that Willis cultivates is deficient in only three of the fourteen elements. These are nitrogen, phosphoric acid, and potash.

Now nitrogen costs about twelve cents, potash four cents, and phosphoric acid four cents per pound when bought in commercial fertilizers. So we see that nitrogen costs about three times as much per pound as phosphoric acid per pound. And as it costs so much every farmer should know how to obtain it free of expense. He can do so by planting cowpeas.

We have about two hundred species of leguminous or soil enriching plants, but in Mississippi the cowpea surpasses them all in producing a maximum crop in a minimum time. Alfalfa clover, lupine, and other leguminous plants, are grown in the different States in the Union in order to increase the fertility of the land, but in Mississippi a farmer needs none of those plants to occupy his land the entire year. He can grow two crops of cowpeas, the growth of each crop being enormous on good land.

Ever since the pea has been cultivated it has been recognized as a land improver; but how it improved land was not known until a few years ago. The chemist taught that the pea was very rich in nitrogen but while it took more nitrogen from the soil than other plants he could not account for its leaving more nitrogen in the soil.

The chemist failed to solve the problem and the biologist, a man who deserves as much praise at the farmer's hand as the chemist, took the matter in hand and by using his microscope, made one of the most important discoveries of the nineteenth century. He found on the roots of peas millions of bacteria,—a form of organized life. These bacteria wound the roots of the peas and cause a sap to exude like the gum on a peach tree. No one knows just how this is done, but it is known that

these busy little friends of the farmer build their homes on the roots of the pea and in these little houses that they construct they spend their lives, obtaining the necessary mineral matters for their existence from the pea roots, and nitrogen from the air. These bacteria work night and day during their existence to enrich the farmer and when they have lived their allotted time die leaving their homes to enrich the farmer's land.

These little organisms delight in benefiting the farmer and will transfer as much nitrogen from the air to the soil as will be required to produce as large a crop as can stand upon it if they have the cowpea to live on. They only demand that the soil be in a well-drained, porous condition and that the peas be planted in it.

I have spoken of the pea as being beneficial to the soil on account of gathering nitrogen from the air, but I have not mentioned the good it does by sending its roots deep down into the earth and bringing up potash and phosphoric acid and depositing them near the surface. This is very important as most crops root very shallow and soon exhaust the plant food in reach, or that near the surface. The pea pumps up mineral matter from the soil, or rather the subsoil.

An average acre of peas will gather as much nitrogen from the air as is furnished by ten dollars

worth of cotton seed meal. The farmer who plants peas in rotation will not need to use cotton seed meal or any other nitrogenous fertilizer.

Willis is a sensible man. He does not believe in wasting hard-earned money. He does not buy nitrogen when he can get it for less than nothing from the air. He does not care who calls him a crank if by a crank they mean a man who has sense enough not to burn money. He plants peas and by so doing enriches his land and fills his pocket-book with money.

TILLAGE

IN ORDER to make one understand why Willis cultivates his land as he does it is necessary to make several explanations.

The soil is composed of very small grains.

These grains are arranged among themselves so as to form minute capillary tubes.

These tubes connect the bottom layers of the soil with the top layers.

The water in the soil passes up through these tubes to the surface where it is evaporated.

Plants take up food in solution only.

Every grain of soil is surrounded by a small film of water.

This thin film of water disolves the plant food in that grain of soil.

A root hair must come in contact with that film of water around the grain of soil before it can obtain the plant food in that grain.

Many farmers spend thousands of dollars for fertilizers when good tillage is all that is needed.

But as Willis is not a man to waste money he cultivates his land properly.

When he bought the land the soil was "thin" but he deepened it by plowing deeper each time. He turned very little of the subsoil out on the surface when he plowed in the spring; but when he plowed in the fall he turned out a large amount.

The tools used by Willis are fine and simple. They consist of two twelve-inch steel plows, one six-foot roller, one eight-foot steel harrow, two straight-teeth steel cultivators, and one subsoil plow.

He does not plow all his land alike, for different land requires different treatment.

He breaks all of his stiff and compact soil in the fall for the following reasons:

1. He is not as busy in the fall as he is in the spring.
2. The grass, trash, etc., is turned under to decay.
3. Insoluble plant food is brought to the surface where the frost and air can change it to soluble plant food.
4. Housed insects by being turned out on the ground are frozen.
5. The soil is rough and loose so that it will drink in the rain that falls.

He plows all of his land that has a clay foundation deep:

1. To loosen the subsoil so that the plant roots can go down deep after food and water.

2. To increase the water-holding capacity of the soil.
3. To permit the air to circulate in the subsoil.
4. To let the water escape from the surface without running over the ground and washing it off.
5. To secure crops against drought by enabling the roots to go down to perpetual moisture.

The land that he does not break in the fall is broken in the early spring:

1. To save water. It has been found by experiments that unbroken land will lose about two inches more water than broken land.
2. To prevent clods.

He uses the roller:

1. To break clods.
2. To make loose soil compact.
3. To make the soil firm around freshly planted seed.

He uses the harrow:

1. To pulverize the soil.
2. To remove the trash from near the surface.
3. To smooth surface inequalities.
4. To bury seed.
5. To stir the ground just before the seed comes up.

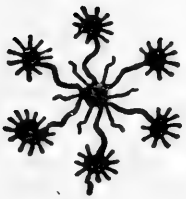
He uses his subsoil plow on all of the land that has a compact clay soil. That is he uses it every two or three years. He runs the subsoil plow

just behind the turning plow. It does not throw the clay out on the surface, it only loosens it up.

Willis never uses the plow, roller, or any other farm implement when the soil is wet.

He follows the roller when possible with the steel harrow. The roller causes the water to rise to the surface and evaporate. The harrow forms a mulch and prevents the water from escaping.

Every farmer should follow the example set by Willis. He uses good tools and teams. He is improving his land and adding money to his pocketbook.



ROTATION OF CROPS

Willis has eighty acres in cultivation. This is divided into five fields,—three twenty-acre fields and two ten-acre fields.

He uses the three twenty-acre fields for his regular three-year rotation, one ten-acre field for corn, pindars, chufas, and such like, and one ten-acre field for pasture.

His fields are numbered 1, 2, 3, 4, and 5. In number 1 he planted cotton, in number 2 corn and peas, and in number 3 oats followed by peas. That is the method he pursued the first year of his rotation of crops. The second year he planted oats, followed by peas in number 1, cotton in number 2, and corn and peas in number 3. The third year of his rotation he planted corn and peas in number 1, oats, followed by peas in number 2, and cotton in number 3. He is now practicing this three-year rotation. He keeps the ball rolling. On his farm no two crops are grown on the same land two years in succession, and the cowpea, a plant that gathers

large quantities of nitrogen from the air and places it in the soil, is grown two years out of the three.

This method of rotation for increasing the fertility of the land was practiced thousands of years ago. It is true that the farmers then did not practice the same system that Willis does now, but the principle was the same. They knew that some plants root shallow while some send their roots down deep into the earth; that some plants can secure food where others fail; that crops grow better after the land has been occupied by other crops; that insect pests are not so bad where rotation is practiced, and that the cowpea transfers costly nitrogen from the air to the soil to be used by other plants. Willis gives these and a number of other reasons for practicing rotation of crops as the cheapest means of enriching the soil.

It is true that the rotation practiced by Willis cannot be practiced successfully by every farmer. Corn, oats, cotton, and peas will not grow on every part of their land. But such cases in the South are few and far between. As a rule, cotton, corn, oats, and peas can be grown on every part of every farm in the South. In other portions of the country a different rotation can be practiced. But the value of rotation of crops should never be forgotten.

When Willis began farming, the land that he now cultivates produced on an average of one-third

of a bale of cotton or fifteen bushels of corn per acre. This land now produces on an average of one bale of cotton or fifty bushels of corn per acre. He attributes this change in the productiveness of the land to the rotation of crops which he has practiced. And the rotation of crops did not cost him one cent; he did not have to use hard-earned money to build up his land. He uses fields 4 and 5 for pasturage and truck crops. He uses number 4 for pasturage for two years and then 5 for two years. By this method the fertility of the fields is increased constantly. The grass roots bring up new stores of plant food from the subsoil and deposits it near the surface. The stock eats the grass and restores all of it to the soil except a small portion of the mineral matter. Nothing is ever lost by practicing rotation of crops, but a great deal is gained.

BARNYARD MANURE — HUMUS — COMMERCIAL FERTILIZERS

WILLIS does not let his barnyard manure wash off down the hill in gulleys and then spend the value of three or four bales of cotton for commercial fertilizer to enrich his land. He saves the manure and puts it on the land.

He never sells a ton of hay, fodder, or cotton seed. He keeps plenty of stock to eat the forage and saves the manure to put on the farm. He knows that a ton of cotton seed contains about $10 worth of plant life, and that a ton of potatoes contains only about $1 worth of plant food. He sells the potatoes and keeps the cotton seed.

He has a stall for every cow and horse ; the hogs and sheep have lots. He throws all scattered manure into the stables. He keeps plenty of litter in the stables to furnish bedding and to absorb all liquid manure. He is as careful in applying his barnyard manure as he is in using his commercial fertilizers. He does not throw either out on the ground in piles to waste.

HUMUS

No grass or trash is burned on his farm. He plows under all the cornstalks, grass, trash, etc., and by so doing the tilth and water-holding capacity of his land is greatly improved. The soil is made loose and porous. Its productiveness is greatly increased.

COMMERCIAL FERTILIZERS

Willis has found by experiment that his land requires potash and phosphoric acid in the proportion of 1 to 3. He gets his nitrogen by the use of the cowpea and also by the use of barnyard manure on his land. So he buys a mixture composed of three-fourths of acid phosphate and one-fourth kainit. He mixes 100 pounds of this mixture with every 500 pounds of barnyard manure that he puts on his land. He also fertilizes his peas with the mixture of acid phosphate and kainit. Acid phosphate and kainit are cheap so his fertilizer bill does not amount to much. But he has nearly quadrupled the productive capacity of his land.

HIS BUYING

When Willis first began to farm he was in debt and could not send to the factories for what he needed. He did not buy much until he was out of debt. He bought only the necessary tools to farm with and the necessary things for his house.

Now he pays cash for everything that he buys. By cash I do not mean simply money, but also produce. He always buys where he can get goods the cheapest. If he wants anything that he is forced to pay money for he sends to the factory for it. He does not pay middlemen 100 per cent. profit.

He does not blame the middlemen for making big profits. He does the same thing with his farm produce. He makes about 100 per cent. on his farm produce, and would make more if he could. The middlemen make about 100 per cent., and would gain more if competition could be killed. The middlemen are not to blame. Any man will gladly take what is thrown in his way. No; the middlemen are not to blame, it is the farmers. The farmer

should look out for his own interests. It is foolishness to hire a man to do that which he can do himself,— be businesslike.

The county in which Willis lives is infested with agents who want to sell everything ever used on the farm, but Willis transacts no business with them. He sees no reason why he should give an agent ten or twenty dollars to write a letter for him. Stamps and paper are cheap, and Willis knows how to write a business letter. So he orders his own goods and saves many dollars by so doing.

It is true that factories generally protect the agents and middlemen who handle their goods. Willis had some annoyance on this account when he began to order his own goods. His first fight was in regard to fertilizer. He wrote to a fertilizer firm in the State asking for cash terms on ten tons of fertilizer. In a few days he received this answer: "Your communication received. We refer you to ———, a merchant of your town, who handles our goods for us." He received about the same reply from two other firms, but the fourth firm that he heard from offered to sell the acid phosphate and kainit mixture for twelve dollars per ton in his own town. He ordered this fertilizer, and by so doing saved sixty dollars. This act created a sensation among the local fertilizer dealers. Several of the merchants asked him what he paid for the fertilizer,

and when he told them they were astonished. They did not think that a farmer could buy goods as cheaply as a merchant. He now not only orders his own fertilizer, but also orders it for the members of an agricultural club. The farmers are saving on an average seven hundred dollars per year.

The second round that he had over the agent question was with a manufacturer of milk separators. He wrote to the firm for a catalogue of their milk separators. The firm referred him to their agent for his county. He immediately wrote to a firm not represented in his county. He received a long letter in reply, the firm offering to sell him a separator at a greatly reduced price in order to introduce the machine. He bought a small one and accepted the agency for his county. The agent for the other firm has not sold one since that time, but Willis sells one every few weeks.

He also had trouble with agents when he bought a piano. Several agents called on him and tried to sell him theirs. He did not consider their propositions. He wrote to several manufacturers for prices of pianos. Every firm referred him to its agent. One firm sent a large catalogue and his wife examined the catalogue and found the kind of a piano that she wanted. Willis wrote the following letter to the firm: "I will not deal with agents. If you are willing to sell me piano No. 87 at the same

price that you sell to agents let me know, — if you are not I will buy elsewhere." He got the piano and saved $56.25 on that transaction.

I could give the details of at least a dozen victories won over agents and middlemen by Willis, but I think that these are sufficient to show what a farmer can do. The fault lies at his own door if he gives middlemen and agents money to write letters for him. Farmers follow the example set by Willis.

Some people say that a man should patronize home industry. They say that the money should not be sent away from home, and many people are misled by such statements. But let us examine it. Willis sends $120 away from home every year for fertilizer. He could get it from his home dealer for $180, and the dealer would send $120 of it to the same place that Willis would, — to the factory. In other words, there would not be a cent more or less in the town. Willis would be minus $60 and the dealer would be plus $60. The $60 is of as much value to the county in Willis's pocket as it would be in the merchant's pocket.

It is well to take an interest in the welfare of others, but common sense tells a man that his own self should be considered first. Charity begins at home, a man must provide for his own household. The merchant buys where he can get goods cheapest, — the farmer should do the same.

LIVE STOCK

The soil on his farm produces all kinds of grass, and a beautiful stream of water flows through it. He has green pastures every month in the year; it is only necessary for him to to feed three or four months out of the twelve ; and cotton seed, the cheapest feed of its kind in the world, is grown on his farm. Good markets are near by; no biting north wind and raging storms affect his stock in the winter; and the many tall trees afford them friendly protection from the summer's sun.

Willis realized the fact that live stock can be kept for less in Mississippi than in any other State in the Union. He knew that farmers in Illinois, Iowa, and other northern States made money in the live-stock business, so he decided to devote most of his time to that branch of the business.

The benefits that he is deriving from stock farming can be briefly summed up as follows:

1. He has plenty of meat, milk, butter, and such things for home use and for sale.

2. He sells horses, mules, sheep, beeves, milch cows, and other farm animals at a large profit.

3. The coarse foods grown on his farm are converted into beef, butter, eggs, and other highly concentrated products that command a good price.

4. He is forced to practice a system of diversified farming. He must raise food stuffs and have pastures for his stock to graze on, therefore he cannot grow cotton exclusively.

5. He saves the manure and puts it on the land. He is not a robber; he is not willing to rob the soil entrusted to his care. So his land is increasing in fertility.

6. He never buys on credit. He sells pork, lard, butter, wool, beef, mutton, and other farm products the entire year. His farm will never be under a mortgage.

7. His crop never fails. The late cold may kill his fruit and oat crop; the dry weather may injure his corn and cotton crop; but his live stock is sure.

8. He is never idle. He is employed profitably in the winter as well as in the summer.

It is true that many farmers that live in Mississippi fail to make money in the live stock business. They have "scrub cows," and "razor-back hogs." They are "scrubs."

If Willis had heeded the advice of those "pioneers" his pocket would now, like theirs, be empty. But he used common sense.

1. He bought thorough bred males and bred them to good native stock.

2. He has good pastures for his stock.
3. He feeds his stock scientifically.
4. He cares for his stock in the summer and winter. They have shelter in the winter and shade in the summer.
5. He does not let his stock drink foul water. In fact, he uses common sense.

This industry is fast becoming the predominant branch of farming in the section where Willis lives. Many poor cotton farmers are being succeeded by rich, independent stock breeders.

The pastures are being roamed by fat cattle, hogs, sheep, and mules. In fact an era of prosperity is dawning upon the farmers that live in that part of the State.

Willis has not only set a good example by engaging in stock breeding, but he enjoys the peace, happiness, and prosperity that blessed Jacob of old.

DAIRY COWS

WILLIS kept only one cow for several years after he married. He now keeps three milk cows. He says he does not care to keep any more. Not because there is no profit in the business, but because he cannot run a stock farm, dairy, and cotton farm and have spare time to enjoy life.

It is useless for me to say that he has thoroughbred milk cows. He has no use for "scrubs" or "general purpose" cows for dairy cows. He knows that cows, as well as men, are specialists. He knows that a doctor cannot succeed as a lawyer, a bricklayer as a tailor, nor a beef cow as a milk cow producer. He knows that milk cows convert their feed into milk, and that beef cows convert their feed into beef. He wants milk and butter, so he has specialists to attend to that work.

He did a great deal of studying before he decided what breed of cows to get. His surroundings did more than anything else to decide that question for him. He wanted to get rich milk. He wanted his cows to get most of their feed in the pastures.

He took special interest in studying the history of each milk breed. He found that the Ayrshire breed had always been noted for being active and hardy. He also found this breed noted for being quiet and docile. On account of these facts the Ayrshire breed has always had a world-wide reputation. He found many points in favor of the Ayrshire, and nothing against them from a historical standpoint.

He next studied the Ayrshire from the point of shape. Mr. Harley, one of the greatest dairymen that has ever lived, says that a dairy cow should have the following shape: "Head,—small, long, and narrow toward the muzzle; horns,—small, clear, and wide apart; eyes,—not large, brisk, and lively; neck,—slender, long, and tapering toward the head, with a little loose skin below; shoulders and forequarters,—light and thin; hind quarters,—large and broad; back,—straight and joints slack and open; carcass,—deep in the rib; tail,—small and long, reaching to the heels; legs,—small and short, with firm joints; udder,—square, but a little oblong, stretching forward, thin skinned, capacious, but not low hung; teats, or paps,—small, pointing outward, wide apart; milk veins,—capacious and prominent; skin,—loose and soft like a glove; hair,—short, soft, and woolly; general figure, when in flesh,—handsome and well proportioned." After

examining the representatives of several milk breeds, he found the Ayrshire to be the best as far as shape was concerned.

After adding this information to what he had gained at college, he decided to get an Ayrshire cow and bull. I am satisfied that he acted wisely in so doing. For one of the world's greatest dairymen has said, "For purely dairy purposes, the Ayrshire cow deserves first place. In consequence of her small, symmetrical, and compact body, combined with a well-formed chest and a capacious stomach, there is little waste comparatively speaking through the respiratory system; while, at the same time, there is a very complete assimilation of the food, and thus she converts a large proportion of her food into milk. So remarkable is this fact that all dairy farmers who have had any experience on the point agree in stating that an Ayrshire cow generally gives a larger return of milk for the feed consumed than a cow of any other breed."

Before I leave the point of buying thoroughbred milk cows, I will say that while Willis keeps only thoroughbred milk cows he does not advise the average farmer to follow his example. He advises the average farmer to buy thoroughbred Ayrshire bulls and breed them to their best native cows. This mode, he says, is simple and can be practiced successfully by every farmer.

He had decided upon the breed; he must now decide upon the individuals in that breed. He was fairly, well acquainted with the best breeders in the country, so he wrote to them for pedigrees and descriptions of their cattle for sale. He took great interest in studying the pedigrees of the cow's and bull's ancestry. He kept in mind the true saying, "Like begets like." He knew that breed should be considered in buying dairy cows, and he also knew that the pedigree, the temperament, the health, the activity, and the energy of the organs of digestion and secretion should be considered. A good constitution is indicated by a deep, broad chest, broad and well spread ribs, a good appetite, and a desire for water frequently. It is also best to buy a young cow. All these things and many others were kept in mind by Willis in buying a cow and bull.

Some idea as to how he feeds and cares for his stock will be given in another chapter, but I will mention a few things in regard to the feeding and management of his dairy stock in particular. He knows that milk cannot be secured from a cow's bag unless feed goes in at the mouth; that a good registered cow well fed and well cared for will give as much milk as several half-fed cows. He cannot afford to own and care for several cows, so he has three extra-well cared for and gets all the milk that Mary cares to handle.

Most farmers are very particular to give their cows the right kind of feed, but usually they fail to so proportion the feed that a balanced ration is given. Willis takes special care to give his cows the right kind of feed and the right amount of each kind. He keeps constantly in mind that a cow requires a certain amount of feed to replace the wearing of the body; that the excess over this amount is changed into milk; that the feed must have sufficient bulk to fill up the stomach; that a cow should not be given more than she will eat up clean; that plenty of good water must be given regularly; that the cows must be fed regularly. He knows these things and doeth them.

I will give a drawing of the ground plan of his barn. The location of the stalls in which the milk cows are kept is shown in that plan. You can see that they are well housed. Plenty of fresh leaves and straw are thrown into the stalls every day. They are well brushed and curried every day. During the cold weather in the winter they have heavy blankets buckled on them when they are turned out to graze in the fields. He gives his cows kind treatment and they manufacture large amounts of grass and coarse forage into milk.

The pastures in which his cows are kept are discussed in a separate chapter.

He begins to dry his cows two months before

calving time. He does not milk them any for six weeks before that time. A few days before calving time he separates that cow from among the rest and gives her plenty of green feed, salt, and water. He does not give her anything else to eat. He never disturbs the cow and in every case on his farm the parturition has been natural and easy. While this is true he watches the cow to see that no difficulty arises in parturition. His cows have calves every two years.

The same colored woman milks the cows at all times. She has been milking from her youth and understands the task well. She is very careful to clean the udder well before beginning to milk. She begins slowly and rapidly increases her speed until the udder is absolutely empty. She milks the cows at the same time every day and uses a pail sufficiently large to hold one cow's milk. She treats the cows with uniform gentleness; they do not know what harshness means.

Willis raises his calves, for it pays him much more to raise them than it does to sell them for veal. As soon as the mother has licked the calf it is removed out of her sight and hearing. The cow is then milked perfectly clean and the calf is made to drink a part of this milk. The calf is taught to drink by placing one's fingers in its mouth and then putting its mouth in the milk. For the first few

days it is fed five or six times a day, but soon it is necessary to feed it only three times per day. It is fed the whole milk from the cow for about three weeks, and then it is fed on warm separated milk, potatoes, and a little cotton seed meal. The quantity of solid feed is constantly increased until the calf is five or six weeks old when grass and hay are added. This feed is continued until the calf is seven or eight weeks old when it is placed in a pasture and given skimmed milk once a day for a few days. After it is two months old it is given about the same feed and care that the cow gets.

After the cow gives birth to a calf she is not fed anything except grass for about a week, or probably longer. Plenty of grass, water, and salt is all that she should have to eat. The feed is gradually increased until she is given full feed.

HOGS

COLUMBUS discovered America in 1492. De Sota landed on the coast of Florida in 1538. Each of these men brought with them what they considered were the best meat producing animals in the Old World. That animal was then and is to-day the hog.

It is true we are told that in days past and gone the hog was possessed of many devils, but we should remember the fact that that hog ran down the hill into the sea and was drowned. We are inclined to think that the devil finds no dwelling place in the hog now; the hog has been converted.

Willis uses common sense in this department of his work as he does in all others. He has no razorback hogs. He breeds only the thoroughbred Berkshire. He says that he has tried several breeds but found the Berkshire the best hog for his locality. He says that the Berkshire has a fine bone, extra good muscular system, firm flesh, and

excellent hams and shoulders. He also says that they are gifted with an excellent constitution and are energetic. The meat of the Berkshire is in great demand as it has a good proportion of lean distributed through it.

The South buys millions of dollars worth of lard from the North and West every year. The South has not yet learned that meat cannot be produced from razor-back hogs. When the South kills the last razor-back hog then the people can truly sing, "O, how happy are we to see the curse removed." Then the South will not only produce meat for its own use but will feed other people. The example and writings of Willis are doing much to replace the "hog built for speed" with the "hog built for meat."

Willis is very careful in selecting breeding stock. He uses every hog except the very choicest for meat; he reserves only the very best for breeding purposes.

He does not let his boar serve his sow before he is nine months old. The sow when served must be at least ten months old. His sows raise only two litters each year. The first litter of pigs is farrowed in February or early March. They are pushed from the time they are born until they are killed. At nine months old, they weigh on an average of 250 pounds.

He does not breed too closely in-and-in. He knows that the tendency of close breeding is to render the constitution delicate. For this reason he always takes special care in selecting hogs for breeding purposes. If he finds a pig in the litter that is free from cough, superior in size, and shows great constitutional vigor, he saves that pig for future examination. By so doing he constantly improves his stock.

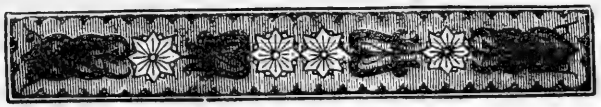
He values breed; but he also values feed. He knows that breed without feed is no good. The best bred pigs in existence will degenerate into the speedy type in a little while, if not properly fed. Never forget the fact that breed and feed must be combined if success in pork production is ever to be attained.

The sow carries her young three months, three weeks and three days on an average. There is sometimes a variation of twenty days; as stated before the first litter of pigs are farrowed in February or early March. At farrowing time the sow is kept by herself in a good warm place. The second litter comes early enough for the pigs to be weaned and eating by winter.

The pigs are castrated at from two to three weeks old, and weaned at six months old. He keeps them in good pastures, and feeds them on corn meal mash, soaked corn, potatoes, and skimmed milk.

He butchers his hogs at nine or ten months old. He knows that the daily gain of any animal becomes less and less every year they are kept. He also knows that hogs weighing 600 pounds will not bring as much per pound as hogs weighing 250 pounds.

Willis knows that it takes a certain per cent. of the food given to the animal to replace the daily waste of the body. He knows that a young animal converts a larger per cent. of the food it eats into flesh than an older one does. So he feeds his pigs high from birth and sells them at nine or ten months. He never allows the pigs to fall away at any stage of their growth. He keeps them growing ; he never lets them rest.



POULTRY

MARY has charge of the poultry department and she knows how to run this department as well as Willis knows how to run any department on his farm. She was raised on the farm and has made poultry and dairying a study since childhood. She was glad to relieve Willis of the care of the poultry and dairy departments when they were married.

She is inclined to be a specialist. She does not believe in trying to do too many things. She is now breeding turkeys, chickens, and geese. But she is thinking of selling her turkeys and devoting her time to chickens and geese.

During her life she has had experience in breeding the principal English and American breeds. She now breeds only the white Leghorns. She prefers that breed to all others. She says, "They are hardy; excellent winter layers; are not always trying to set; the young take care of themselves and feather out so that they look like grown chickens when they are seven or eight weeks old; they are quiet; the eggs are superior in flavor; and as a table fowl they are unexcelled."

Mary has always avoided crosses in breeding fowls; she always keeps the breed pure. She knows that the effect of cross breeding is bad shape and imperfect feathering.

One cock is kept for every ten hens; one cock for every eight or ten hens is sufficient under any and all conditions. If the object is eggs only, then no cock should be kept as the hens will lay as many eggs when not fertilized as when they are. When the raising of chickens is the object it is best to have plenty of males to insure fertile eggs. Eggs not fertilized will not hatch.

Mary has a large poultry house. The roof sheds water perfectly, but there are cracks in the sides to admit plenty of pure air. The house is kept free from all fowl pests.

The fowls range in the fields and woods near the barn and get a large part of their living by eating insects. They secure green vegetation in the fields at all times of the year so it is only necessary to furnish them with grain and meat. In fact, it is only necessary on the farm to furnish fowls with a covered shed to roost in and a little grain and meat to eat. They will do the rest.

The bulk of the feed given to the fowls by Mary is grain. Ground grain in the form of thick dough is fed to the young fowls. She never gives her chickens sloppy feed. The old chickens are usually

fed the whole grain. Very little meat is fed but that little is given regularly. Ground bones, charcoal, and grit are kept where the hens have free access to them. Plenty of fresh water is also kept where the fowls can obtain it at any time.

Mary keeps a little advertisment in several farm papers. By this means she sells all the choice fowls she has to spare at good prices. She also ships a good many settings of eggs. On this account she is not bothered with fattening and dressing the fowls for market.

She gives her turkeys the same treatment that she does her chickens. She sells most of them in the local market at excellent prices.

The geese are furnished shelter, green grass, water, and grain. They live on the grass in the cotton field most of the year. Grass cannot grow to any great size when geese have ready access to it.

Mary's accounts show that she is making large profits in the poultry business. Others can do the same.

FRUIT ORCHARD

WILLIS has almost every kind of fruit tree on his farm that will grow there. He is not willing to do without the choicest and most economical luxury on the farm. He knows that fruit is healthful and that health is happiness.

The planting of fruit trees was the first thing that he did after finishing his dwelling. He was determined to build a true home. He thought of the domestic uses of fruit, the profitableness of it as a market crop, and its beautifying effect on his home. The result of his thinking and acting is a fine fruit orchard.

His fruit trees are planted in a sandy loam with a subsoil of deep red clay. The soil is rich enough to produce two thirds of a bale of cotton per acre. He could not secure the kind of trees that he wanted anywhere near home so he sent to a nursery for them. They cost him five cents a piece and freight.

He received the apple and pear trees ordered in February. He planted the trees immediately. He dug holes about three feet in diameter and about

eighteen inches deep. Some of the best top soil and about a peck of bone dust was then thrown into the bottom of each hole. The trees were placed in the holes one inch lower than they were in the nursery. The earth was replaced in the holes, and since that time the trees have been well manured and cultivated. They are now rewarding their owner with delicious fruit.

He was able to secure plenty of good plum, fig, and peach trees from his neighbors. They would not take pay for them so he was in just that much. His neighbors like most Southern people would not charge their neighbors for anything but land and stock. He also planted those trees in February. He considers that the best month in which to plant trees.

The land on which his trees are planted had long been in briars, broom straw, and old field pines. It had not been in cultivation since the Civil War. For twenty-five or thirty years before the war "plantation darkies" fertilized it with their feet. But when they were given their freedom they did not care to work any longer so this land was uncultivated. It was very poor when last cultivated but Nature had been busy at work on it. Nature had reclaimed it.

The trees are forty feet apart so he has plenty of room to cultivate them. They are cultivated

very shallow with a cultivator twice every year. They are fertilized with kainit, barnyard manure, lime, and phosphates. He also puts leaves and trash broadcast over the ground at least once a year.

He began to prune the trees the first spring after they were planted. He has since pruned them annually. The lowest limbs on the trees are about four feet from the ground.

I could discuss the different varieties of pears, plums, grapes, apples, peaches, and other fruits in his orchard, the cultivation, pruning, grafting, and budding, in detail, but every farmer is well informed on this subject, so it is not necessary to tell how Willis does these things.

The point of greatest interest in connection with Willis' fruit growing is the canning, preserving, drying, of fruits. He makes his own sugar so it costs him very little money to put up all the fruit that the family can consume during the entire year. He buys one-half gallon and gallon fruit jars. He puts away pears, peaches, figs, apples, and other fruits to be consumed by the family. To be accurate, he now cans sixty gallons of fruit per year. He also dries a good many apples and peaches and makes several gallons of jellies each year.

I have given Willis credit for this work, but he is not the power behind the throne. His most ex-

cellent wife is the one to whom the credit is due. She does not believe in farmers living on bread and bought bacon. She says, "Farmers can live better than kings." Visit her home and you will see the verification of what she says.

SHEEP

WILLIS keeps a number of the descendants of the flocks kept by Abel, David, and Moses. Those men of old knew a good thing and took advantage of it. They made a great deal of money by handling sheep. Willis makes a great deal of money by handling sheep and every farmer can do likewise.

We read in the Bible about how pleased God was when Abel brought him an offering. That offering was a dressed lamb. If I may be permitted to speculate as to the reason why God preferred the offering of Abel to that of Cain, I will say that it was because God recognized the divinity in the lamb. The divinity was then and is now the lamb, mutton, and wool. The divinity does not apply to any other farm animal.

Sheep seem to be perfectly at home on Willis's farm. In fact, his farm is eminently suited to sheep. The climate is good, there is plenty of range, and plenty of pure water, and good grass. He says that sheep can be raised as well on a level

plain as they can be kept in a rocky, hilly country. Everything is favorable to sheep raising in Mississippi except the cur dog. The cur dog is the great curse of the South.

The sheep raised by Willis are a cross between Cotswold and South-Down. He claims that they are less liable to disease, more prolific, better nursers and less liable to lose their lambs. He says that they have lambs that are hardier and more vigorous and can be put on the market earlier than the fine wool breeds.

Willis gives his little flock of sheep constant care and attention. It is necessary for him to do so. Wandering curs must be kept away from them, disease must be warded off, and many other things require attention. But the laborer is worthy of his hire, in return he gets money off his lambs and wool.

He breeds his sheep at two years old. He usually places his bucks with the ewes the fall after the ewes are one year old. He never breeds a ewe after she is eight years old. His best lambs are produced by his ewes that are from three to seven years old. He considers one buck sufficient for fifty lambs.

He keeps a record of the breeding of each ewe. That is a record of the date that the buck covered her and the name of the buck Ewes carry their

young on an average 152 days from successful service. The shortest period is 146 days, and the longest period is 161 days. Willis never permits a ewe to go out of his barn enclosure after she has been carrying her young for 146 days.

The rams are not permitted to run with the ewes. They are kept in a separate pasture. They are trained to be led and handled. They are given extra care and feed for at least six weeks before tupping time. They are not permitted to serve more than two or three ewes at the beginning of the season, the number being increased to five or even to ten if necessity demands it. At the close of the season the rams are again restricted to a small number for an exhausted ram cannot get strong progeny. The reproductive organs are kept in full vigor by daily exercise.

It is useless to discuss the pastures for the sheep for a lengthy talk on that subject will be found in another chapter.

Willis has always been told that sheep require no water when in a pasture, but he has never heeded such nonsense. His sheep can get pure water whenever they want it. He knows that sheep require a large amount of water especially during suckling time.

Willis has two pens in his barn 30 by 10 feet for his sheep to stay in during the cold, rainy weather

of the winter. They are allowed to run in the barnyard the larger part of the year.

He feeds his sheep on cotton seed, peas, hay, potatoes, and other farm products during the winter. They never suffer for something to eat.

The ewes are given special care at or near lambing time. They are kept in a warm place and given plenty of laxative food. During unusually cold weather they are given plenty of warm water to drink.

The lambs are well cared for especially while young. They are castrated at from two to four days old, and weaned in the early fall. When weaned they are placed out of the hearing of the dams and well fed and cared for. A large number of them are shipped to the markets in early spring.

Willis never washes his sheep before shearing them, and no unskilled person is allowed to shear them. He does not want their skin cut and torn in shearing. He shears them evenly and smoothly, and reasonably close, but he does not leave their skin naked.

A discussion as to how he treats his sheep will be found in the chapter on Veterinary.

DAIRYING

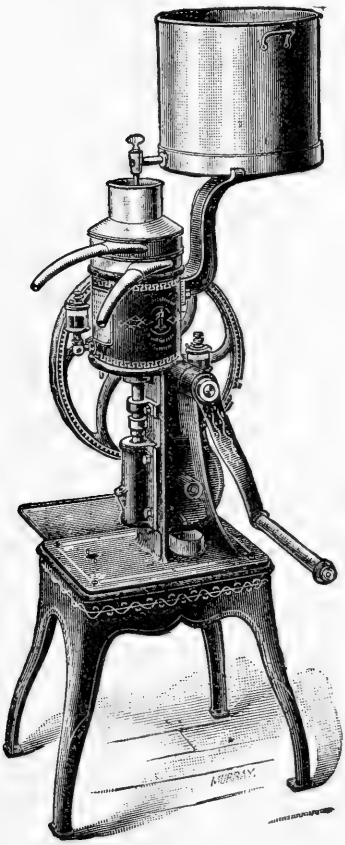
MARY has charge of the milk. I will tell in as few words as possible how she manages it.

As soon as milked it is strained through a wire gauze and two thicknesses of cheese cloth. It is then poured from one vessel to another several times to allow the animal odor to escape. It is then skimmed by means of a separator. The warm skimmed milk from the separator is fed to chickens, hogs, and calves.

As soon as the cream is separated from the milk it is put into a refrigerator where the temperature is 45 degrees. Churning is done every two days, so four sets of cream are mixed. It is mixed immediately after separating each time. The mixing is done by thoroughly stirring it after the fresh cream has been added. The mixed cream remains in the refrigerator until it is partly sour. It is then ready for churning.

The vessel that contains the cream is placed in water at about 60 degrees F. The cream is stirred slowly until it is of the same temperature as the water. It is then strained through a wire-gauze

strainer into an eight-gallon barrel churn. During the winter while the cream is extra thick about one



gallon of water to three of cream is mixed in. Sufficient coloring is added to give the butter a nice straw color. The churn is never filled over one-

third full. The temperature of the cream in the churn is about 56 degrees in the summer and about

60 degrees in the winter when the churning begins. A dairy thermometer is used at all times.

The churn crank is revolved just fast enough to cause the cream to fall from one side of the churn to the other with full force. The churning is continued until the butter particles are about as large as wheat kernels. The churning is then stopped. The butter milk is drawn off and the butter washed first in cold brine water and then in clear, cold water.

It is removed from the churn to the worker where three-fourths of an ounce of salt is added to every pound of butter. The butter is worked until the salt is evenly distributed through it. It is then put up in one-half pound prints.

Mary knows that "cleanliness is next to Godliness," so she keeps every dairy utensil perfectly clean. She washes the churn, butter worker, buck-

ets, and everything else in hot and cold water. Cleanliness is her watchword.

She sells every pound of her butter in the local market for twenty-five cents per pound. She could sell several hundred pounds per month at the same price, but she is dairying to enjoy life as well as to make money. They are making a good living and saving $1,000 per year. That is sufficient.

INSECT PESTS

A GREAT change has come over this land since the days of our forefathers. Insects are here to destroy the farmer's live stock and farm produce. The day when luscious apples free from the apple maggot; plums unscarred by the curculid; and pears that knew nothing of the blight, is past and gone.

Willis does all that he can to save what he produces. In the following paragraphs I will tell you how he deals with the commonest insect pests.

Cleanliness is his first remedy for stock. It is his best remedy. Fertility of land, clean farming, and rotation of crops are the main remedies, or rather preventives of infested plants. The first insect pest that I will discuss is the

SCREW WORM

The fly is much larger than the common house fly, and can be distinguished from it by three, black longitudinal lines that are on that portion of the body just back of the head. The eggs hatch in a few hours into small maggots which remain in the wound for about eight days, or until they are

grown. The maggots then drop to the ground where they lie buried one inch deep for eight days when they come out as flies.

Remedy: Crude carbolic acid. It should be applied directly to the wound where it will not only kill the worms but also remove all the dead matter.

THE OX WARBLE

This insect is known as the "wolves" that are found just under the skin of cattle during the spring. The eggs are laid by a fly around the mouth or about the forequarters of the animal. The eggs hatch and the animal gets the worms into its mouth by biting itself. The worms are swallowed and bore upwards through the digestive track until they reach the skin. They remain under the skin for about three months when they bore their way out and fall to the ground; there they remain for about one month when they reappear as flies to lay eggs for another brood.

Remedy: Press the wolves out by means of the thumb during the month of February. Crush every one of the wolves under foot.

THE HORSE BOT FLY

A fly lays the eggs during the summer on the legs and about the mouth, and the worms are taken

into the stomach. They attach themselves to the walls of the stomach and remain there until sometime during the following spring, when they pass out of the body with the undigested food. They go into the ground and soon come out as flies. As a rule they do no damage.

THE HORN FLY

These flies attack cattle and cause iujury by sucking blood. The flies are much smaller than the house fly and when upon the cattle always have their heads toward the head of the animal. The eggs are laid in fresh manure and hatch within twenty-four hours into small maggots which remain in the manure for a week and then go into the ground to form pupæ and come forth as mature flies.

Remedy: The flies can be kept off the animal by applying two parts of any cheap oil, one part of thin tar, and one part of crude carbolic acid to their backs and sides every five days by means of a brush. If a spray pump can be obtained the cattle should be sprayed with a mixture composed of three parts of kerosene and ten of water. This mixture kills the flies, therefore the cattle should be sprayed every day when the most flies are on them, until the flies begin to decrease in number.

HOG LICE

They need no description.

Remedy: Kerosene emulsion, strong tobacco decoction, strong soapsuds, or kerosene, one part to three or four parts of lard.

CHICKEN PESTS

Every farmer should know the difference between chicken mitre and chicken lice. The mitres are large and redder than the lice. The mitres are very active and will get on a person and crawl very rapidly. The lice are not active and will get only on the body of the fowl.

Remedy: Cleanliness. Pyrethrum powder should be sprinkled on every part of the chicken house plentifully and frequently.

INSECTS INJURIOUS TO STORED GRAIN

The three principal insects that are injurious to stored grain are the Angumois grain moth, the black weevil, and the red grain beettle.

Remedy: Bi-sulphide of carbon. It evaporates very rapidly when left exposed, and the fumes are heavier than the air and therefore sink. The amount that should be applied depends on the tightness or closeness of the bin or vessel in which the grain is

stored. As a rule one ounce to 100 pounds of grain is sufficient. DANGER.— It is a violent explosive, so that lights, cigars, and the like should be kept away until the odor has passed away.

HOUSE FLIES

Eggs are laid in fresh horse manure. A single female lays about fifty eggs.

Remedy : Have the stables a good distance from the house. Leave pyrenthrum exposed in the house and the flies will leave.

CLOTHES MOTHS

Are too well known to need any description. If clothing, etc., can be enclosed in perfectly tight paper bags before moths begin to fly and lay their eggs the clothes will be safe.

ANTS

Remedy : Find their bed and pour a tablespoonful of carbon bi-sulphide in the hole and close it up.

Farmers do as Willis does; the insects cannot stand him!

HIS PASTURE

WILLIS has ten acres in a pasture. He knows that stock cannot be made profitable unless they are grown on cheap feed. He knows that grass is the cheapest feed that can be grown in Mississippi, so he has green pastures all the year round.

The pasture is changed every five years,—this is done to restore the fertility of the soil by the different methods that Willis uses for that purpose.

Willis prepares his pasture land thoroughly by deep plowing, subsoiling, and harrowing. In some instances he does not subsoil every part of the land for pasture, but in most cases he follows the plow by a subsoil plow. The plow cuts about four inches deep and the subsoil plow cuts about six inches. So the land is well broken for ten inches down. A steel harrow is run over the land just before it is seeded.

He keeps five acres of his pasture in Bermuda grass, for he thinks that is the best that he can grow on his farm. It is one of the most nutritious grasses grown in the South, and is relished by all kinds of

stock. The hog, cow, sheep, and mule will all leave a pasture of other grass for one of Bermuda.

After the land is well prepared he takes a narrow shovel plow and opens rows about two feet apart. The sod that he has obtained from the other Bermuda pasture is then broken into small pieces and dropped two feet apart in the rows. The roller is then run over the soil, and this makes the soil firm about the Bermuda sod as well as levelling the ground.

It does not matter if the pieces of Bermuda sod are not entirely covered, if there is sufficient moisture in the ground the roots will take hold and grow rapidly. If the grass is well set in March, it will furnish good grazing about the last of May. From the first of June to the middle of November, it furnishes excellent grazing. This grass sod is not interfered with until it is five years old.

Carpet grass grows on every roadside, in every old field, and around every stream of water in the country, so it is not necessary for Willis to have a pasture of that. Lespideza also grows in the open parts of the woods, and among the other grasses in his pasture.

The woods furnish excellent grazing during several months of the year, but during the winter his stock cannot secure green feed any place but in his pasture. However, they do not suffer for green

feed. He plants about twenty acres of hairy vetch and winter turf oats during the months of September and October. Just after his cotton is picked over he scatters oat and vetch seed broadcast over the cotton field and runs a cultivator through the cotton. The coldest freezes that ever occur in Mississippi never injure the oats and vetch. His stock grazes on the Bermuda grass, and eats potatoes, and pindars until the first of January. By that time the oats and vetch give good grazing. The stock is taken off the oat and vetch field by the last of March ; the oats and vetch then grow into an excellent crop by the first of June.

I could discuss his pasture at greater length, but I have in other chapters talked about the different grasses, and for that reason it will be unnecessary for me to discuss it at greater length here. I deem it sufficient to say that Willis has a green pasture on his farm all the year round.

Every farmer in the South can do the same.

HIS FEEDING

IN ORDER that every reader may understand why Willis feeds as he does, I will give a few scientific facts upon which his feeding is based.

An animal's body is made up of water and dry matter. A young animal contains more water than an old one. The new born animal contains about sixty-five per cent. of water while an old one contains about fifty per cent. As the animal's body is fully one-half water, we can see why Willis takes care to give his stock plenty of pure water.

The dry matter in the animal's body is composed of fats, nitrogenous materials, and ash. Fats are distributed throughout the body in varying quantities and are used by the body as fuel for heat and force. Nitrogenous materials, or protein, form the basis of blood, lean meat, tendons, ligaments, sinews, horns, hoofs, hair, skin, and in fact, all the wearing parts of the body. Protein is converted into fats in the body when a sufficient amount of fat is not contained in the food given to the animals, that is when the ration is not narrow

enough. But neither fats nor corbohydrates can take the place of protein in the animals body.

Carbohydrates do not exist in the animal's body as such but are changed into fats. Fats and carbohydrates are the heat and energy producing compounds. A pound of fat produces about 2.25 times as much heat as a pound of carbohydrates. Now since we find water, ash, fats, and protein compounds in the animal's body we at once realize the fact that the food given to the animal must contain the compounds. The animal does not build up compounds but tears up the compound that is built up by the plants.

The object of giving food to the animal is to supply ash, carbohydrates, fats, and protein. Most all food stuffs contain ash so it need not be considered in feeding. Now every feed given to an animal should contain a certain amount of protein, or muscle-producing compounds, a certain per cent. of fats, and a certain quantity of carbohydrates. That is a certain ratio should exist between the muscle-producing and the fat-producing compounds given to an animal in his feed. This is known as balancing rations. When the ratio is correct the food is called a "balanced ration." That is a ration on which an animal will do best; a milk cow will give the most milk, a hog fatten quickest, a race horse run swiftest, and a dray horse pull

the heaviest load. It may seem on first thought that when we know the composition and digestibility of food stuffs and the composition of animals in "good fix" we can feed the animal just what it needs. But this is not the case. The same animal will require a larger per cent. of muscle-producing compound at one time than it will at another. When an animal works it requires more muscle-forming compound than it does when idle. An animal requires more heat-producing food in the winter than it does in the summer.

Milk is very rich in nitrogenous matter so an animal giving milk should be fed on food stuffs rich in nitrogenous materials.

Thousands of experiments have been conducted by the best feeders in America and Europe to find out the exact number of pounds of fats and protein that should be fed daily to different animals under different conditions. It has been found that different animals require from one-half to two and one-half pounds of protein per day; from twelve to one hundred and seventy-one pounds of carbohydrates; and from one-half to one pound of fats.

The food given to animals must not only contain these compounds in sufficient quantities, but it is also necessary for it to have bulk. It must not be too concentrated.

The following table gives the composition of foods used by Willis:

DIGESTIBLE NUTRIENTS — POUNDS PER 100 POUNDS OF FEED

	Protein.	Carbo-Hydts.	Fats.
Corn	7.8	64.8	1.6
Oats	9.3	48.3	4.2
Fodder	5.34	43.34	1.96
Corn schucks	.96	64.73	.28
Oat straw		44.56	.88
Sweet potatoes	.90	22.90	
Cotton seed	9.83	27.92	16.88
Cotton seed meal			
Cotton seed hulls	.24	32.32	2.32
Hay			
Peas			

Willis feeds his calves on a ratio of 1 to 4; his milk cows 1 to 5.4; his fattening animals 1 to 12; his stock when at rest 1 to 15; his stock at hard work 1 to 6.

The ratio of a food stuff or of feed is found by dividing the weight of the fat-producing compound contained in it by the weight of the muscle-producing compound in it. Take the analysis of corn in the above table. It contains 1.6 pounds of fat in 100 pounds. Since fats produce $2\frac{1}{4}$ times as much heat as carbohydrates, this must be multiplied by $2\frac{1}{4}$, $1.6 \times 2\frac{1}{4} = 3\frac{3}{5}$. Adding $3\frac{3}{5}$ to 64.8 carbohydrates we have 68.4 pounds of fat-producing compounds in 100 pounds of corn. Dividing 68.4 by 7.8 we have 8.76+. So the ratio of corn is

1 to 8.76+. The ratio of any other food stuff can be found as easily.

His stock have good pastures to graze in at all seasons of the year, so they get all the green feed and all the bulk that they need in the fields. However he gives them such feed as hay, shucks, and oat straw during several months of the year. The basis of the feed for the milk and beef cattle is cotton seed. He gives them about five pounds of cotton seed per day. The ratio of cotton seed is 1 to 7. This ratio is a little too narrow for beef cattle and a little too wide for milk cows, so he gives his milk cows cowpeas in the hull to make the ratio narrow enough. He also gives them sweet potatoes and such like as appetizers.

His mules and horses are fed mostly on corn, oats, and fodder. They are given on an average of ten pounds of corn, ten pounds of oats, and ten pounds of fodder per day. When at real hard work they are fed less corn and more oats. During the winter months more corn and less oats and fodder are given. During the summer only about five pounds of corn are fed to them per day. When idle they run in the pasture and are fed on corn and fodder.

He feeds his hogs and sheep a well-balanced ration at all times. That is, he gives them feed to make up for the deficiency of compounds in the feed they obtain in the pasture. The hogs and

sheep require very little feed as they are kept in the pasture at all times. The sheep are given a few cotton seed during the winter and dry months of the summer. The hogs are given about one pound of corn apiece per day.

Any man who knows how to add, subtract, multiply, and divide can take the analysis of food stuffs and make a balanced ration. Take the feed that Willis gives his horses and mules on an average. We find that 100 pounds of corn contains 7.8 pounds of protein. Then 10 pounds contains $\frac{1}{10}$ of 7.8, or .78 pounds. The same is true of the different compounds in the three foodstuffs. Solving we find:

	Protein.	Carbo. Hydts.	Fats.
10 lbs. corn	.78	6.48	.16
10 lbs. oats	.93	4.83	.42
10 lbs. fodder	.534	4.334	.196
Total	2.244	15.644	.776

$(.776\times2\frac{1}{4})+15.644=17.636$, the number of pounds of carbohydrates or fat-producing compounds in the feed. Now since the ratio of a food stuff is found by dividing the carbohydrates and fats combined by the protein or muscle-producing compounds, we have $17.636\div2.244=7.8+$. Therefore the ratio of the feed is 1 to 7.8.

The ratio can easily be made wider or narrower by giving less protein feed and more carbonaceous

feed, or by giving less carbonaceous feed and more protein feed, as the case may demand.

Every farmer should not only study this chapter, but he should also get books on the subject and study them.

HIS BARN

His barn is all under one shed. When he enters his barn he is not forced to leave it until he is through feeding all his stock. It is true that if fire burns his barn he will have nothing left. His stock and forage will all be gone. But hardly one barn in a thousand burns during the average man's life. So he can afford to take the risk. He cannot afford to waste his time by walking over a five-acre barnyard every time he feeds his stock. Life is too short to waste time.

They have what are called "log rollings" and "house raisings" in Mississippi. That is the neighbors assist each other in clearing their land of fallen timber and in building their houses. Willis cut the logs, hauled them home and removed the bark from them. He also had the boards, blocks, and everything else ready for the great day,—the house raising. On the appointed day the neighbors came from far and near. In two days the barn was completed.

DRAWING

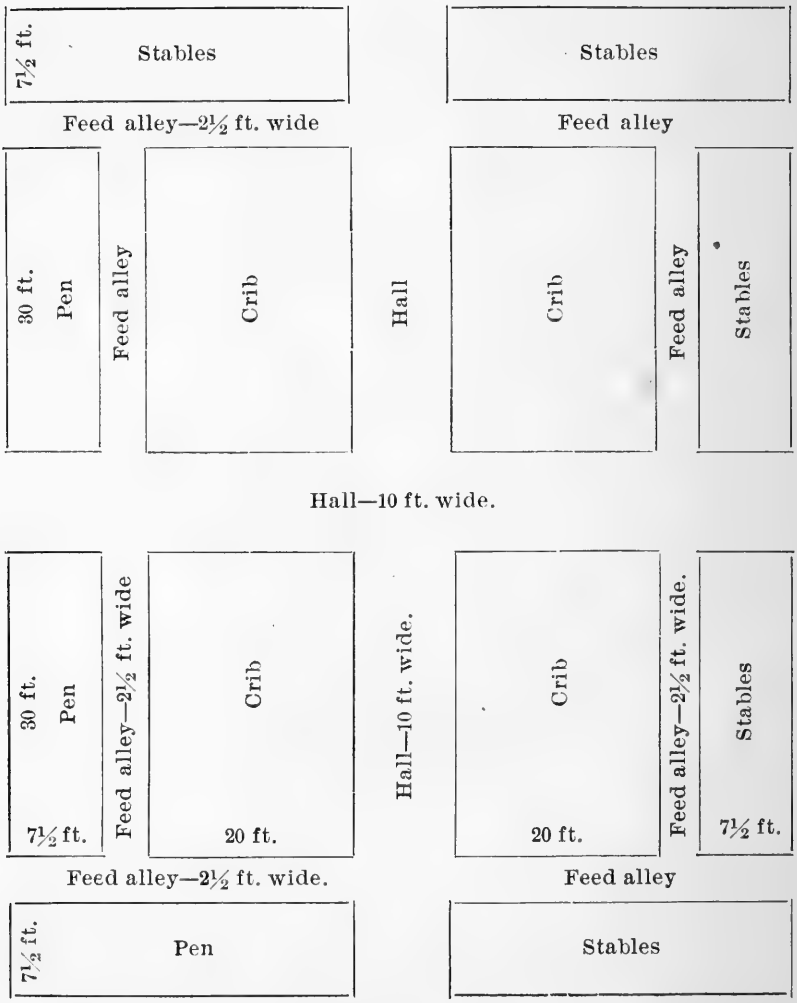
The main body of the building is constructed of pine logs about one foot in diameter. They are cheaper than lumber and make a great deal more durable building. It is covered with good heart pine boards. The roof is sufficiently steep to cause the boards to serve a long time.

It is true that the winters are mild in Mississippi, but there comes days and nights when all stock should be housed well. It costs very little money to build a barn that will last two or three generations. The thousands of head of cattle that it will protect during that time will gain enough in size to pay for it a thousand times. The housing of farm products requires a building, and it is best to have a building that is sufficiently large to hold everything raised on the farm.

It is unnecessary to describe the building. A careful study of the plan of the ground floor will show every department in the building except the upstairs. The second story is used for hay, fodder, grass, oats, and other crops of that kind.

It is ten feet from the ground to the floor of the second story. A loaded wagon can be driven through the alleys and be unloaded in either of the rooms or in the second story. The second story has a door in the center of its floor that can be

HIS BARN


7½ ft.
Stables
Stables
Feed alley—2½ ft. wide
Feed alley
30 ft.
Pen
Feed alley
Crib
Hall
Crib
Feed alley
Stables
Hall—10 ft. wide.
30 ft.
Pen
7½ ft.
Feed alley—2½ ft. wide
Crib
20 ft.
Hall—10 ft. wide.
Crib
20 ft.
Feed alley—2½ ft. wide.
Stables
7½ ft.
Feed alley—2½ ft. wide.
Feed alley
7½ ft.
Pen
Stables

opened whenever it is necessary to put anything in the second story.

Willis never allows any man to smoke in his barnyard and he never carries a torch into his barn; instead he uses two lard-oil lanterns. He trusts in Providence but he does not think that a sensible man will apply fire to powder and then trust in Providence to keep it from igniting.

The barn is closed so that no man can enter it except through one of the double doors. Each of the four double doors has a combination lock on it and when the night comes the doors are all securely locked. Willis has no fear that any man will enter and take anything out of his barn at night. So he sleeps peacefully.

HIS BOOK-KEEPING

WILLIS knows exactly what he is making. He not only knows what he is making on the whole but he knows what each department of his farm is making. He is not farming blindly, he keeps accounts with every department on his farm.

It is true that but very few farmers keep accounts, they do not know what they are doing. They do not know whether they are losing or gaining. They do not know whether every department is losing or whether every department is gaining. They are acting imprudently in not keeping accounts.

Every farmer should keep accounts. Farming is not a kind of business that a man can pursue successfully in the dark.

Some crops pay a farmer and some do not, but how can he know which is which unless he keeps accounts? It is simply impossible. He will find out his mistake sometime, but it may be too late.

The farmer who does not keep accounts may be a good neighbor, a moral man, and a good citizen, but he is not doing his whole duty to his God and to himself. He does not cultivate all the talents

that God has given to him. He does not farm in a business-like way. He does not exalt his calling as other business men exalt theirs. He does not make the money that he would make if he knew just what he was doing. He cannot supply himself and his family with luxuries and comforts. He is in one sense a failure. He should use the lead pencil and paper. Muscle is not the only requisite to successful farming.

Much unnecessary trouble and many lawsuits are caused by farmers not keeping accounts. Accounts that have been payed are presented for repayment. Farmers pay for things that they never bought,— merchants and all other business men keep accounts but farmers do not. When a farmer dies, no one knows just how his affairs are; men can collect accounts never made by him and they can collect accounts that were probably paid years before his death. All such wrong doing should be prevented, by following Willis's example.

Willis keeps a note book in his pocket all the time and in it he writes a list of the things to be done. The book is divided into two parts,— in one part is a list of the things to be done soon, in the other part, a list of the things to be done in spare moments. By this means he does not overlook anything that needs to be done. Whenever he sees anything on his farm that needs to be done he makes a

note of it in the proper place in his book. He does not tax his mind with trying to remember things,—paper and pencils are cheap.

He has a memorandum of everything that has to be done, so that on a rainy day he has only to look over his little book in order to find something to do. In this way he gets the little odd jobs done with greater ease than he would without the use of his little book. Willis is thoroughly familiar with book-keeping, but he does not use any complicated system. He keeps a cash account and a separate account for each department. He did until this year keep an account with each field. He will not do so any longer however. He will also stop keeping accounts with each department, for he understands his business so well that it has become unnecessary. He knows which branches pay best and he fully realizes the importance of reducing the cost of production as much as possible. However he will keep a cash account as long as he lives.

The accounts which follow will show how he keeps his books as well as the profit on his farm in 1899.

ACCOUNTS

The accounts are not itemized here as they are on his books. The butter account for each month is recorded as one sale in this account, but his book

shows from whom he bought everything and to whom he made the most important sales. The account shows to whom he paid every cent that went out of his pocket-book.

He also keeps what he calls an exchange account. This account shows how many gallons of syrup, bushels of potatoes, and all other farm produce that he sold and "took out in trade." The account names every article received into the household for which produce instead of money was paid. Among the list of articles we find clothing, household goods, farm machines, and other things used on the farm. In fact he exchanges produce for nearly everything that he gets. The things that are paid cash for are usually bought direct from the factory. He is forced to pay out a great deal of money for farm laborers.

The above cash account shows that he made a clear profit of $1,013. He has not failed to clear one thousand in five years. On the first of every January he puts one thousand dollars in the bank. He obtains four per cent. interest on it.

Reader, look over the account, and you will find that you can improve your condition by following the example set by Willis. Why not do so now?

1899.	Cash Taken In.		1899.	Cash Paid Out.	
January 10	Seed Corn	$ 3.50	Year	Wage Hands	$210.00
January 12	Young Mule	90.00	Year	Fertilizer	120.00
January 15	Pork	6.00	Year	Pea Picking	42.50
January 15	Syrup	8.00	Year	Cotton Picking	123.25
January 25	Chickens (s.)	5.00	Year	Making Syrup	32.50
January 30	Butter for Month	5.25	Year	Farm Tools, etc.	45.00
January 30	Sweet Potatoes	6.25	Year	Digging Potatoes	6.25
February 15	10 Bushels Seed Corn	10.00	Year	Poultry Supplies	3.30
February 15	Pork	6.30	Year	Church	25.00
February 15	Lard	11.00	Year	School	16.00
February 20	Syrup (s.)	40.00	Year	Charity	7.00
February 25	20 Bushels Seed Corn	20 00	Year	Doctor Bill	8.00
February 30	Butter for Month	6.50	Year	Ice	18.00
March 5	Seed Peas (s.)	45.00	Year	R. R. Fare	11.20
March 10	Milk Cow	60.00	Year	Extra Day Labor	12.50
March 15	Pork	7.20	Year	Children Spent	5.25
March 20	Syrup (s.)	30.00			
March 25	Sweet Potatoes	12.50			$665.75
March 30	Butter for Month	7.00			
April 10	Wool	35.00			
April 15	Lambs (s.)	64.00			
April 25	Seed Peas (s.)	72.00			
April 30	Pigs (2), s	10.00			
April 30	Butter for Month	7.25			
May 5	2 Beef Cattle	125.00			
May 15	Syrup (s.)	75.00			
May 20	Seed Potatoes	5.00			
May 30	Butter for Month	7.50			
July 25	Chickens (s.)	15.00			
July 25	Sweet Potatoes	40.50			
July 30	Butter (Month)	6.50			
August 30	Butter (Month)	7.00			

1899.	Cash Taken In.		1899.	Cash Paid Out.	
September 15.	Cotton	$125.75			
September 30.	Butter (Month)	8.00			
October 10	Chickens (s.)	20.00			
October 30	Butter (Month)	7.75			
November 25	Turkeys	9.00			
November 25	Cotton	130.50			
November 30	Butter (Month)	7.25			
December 5.	Beef Yearlings	125.00			
December 10.	Syrup (s.)	80.00			
December 10.	Syrup	35.00			
December 20.	Turkeys	12.00			
December 20.	Cotton	260.25			
December 30.	Butter (Month)	9.00			
		$1678.75			

The following is the account of his cotton crop:

Preparation of Land	$15.00		
Fertilizer	30.00		
Planting	5.00		
Plowing	30.00		
Hoeing	25.00	Sold	$516.50
Picking	123.25	Seed Value	120.00
Ginning	40.00		
Marketing	12.50		
	$380.75		$636.50

HIS CARE OF STOCK

THE live stock owned by Willis are as well treated and as well cared for as the members of his own family. And they should be. They have served him faithfully. They have assisted him in making a comfortable home and in placing several thousand dollars in the bank. So it is his duty to make their lives pleasant for them.

Breed is of great importance in handling stock, but feed and care are of much greater importance. A farmer who engages in stock-breeding, I care not what kind of stock he has, will not succeed unless he gives he gives his stock proper care. A man cannot expect to get money for nothing.

Willis never uses a whip or club among his stock. It makes no difference how badly wearied he becomes, he never abuses his stock. He says, "The devil never visits the man who abuses his stock; such a man belongs to the devil." If he rides a horse or drives a cow to water, he does not try to force the animal to drink. He will not act foolishly under any conditions. He, like Job of

old, is a patient man. And his success on the farm is due largely to his kind treatment of the stock.

He knows that an animal's body is composed largely of water, that eighty-seven per cent. of milk is water; so he gives his animals plenty of pure water to drink. He knows that it is a great sin for animals to be forced to drink muddy water or thirst. Live stock have tastes as well as human beings and should not be forced to drink water unfit for humans. The farmer who does not furnish his stock with plenty of fresh water is far from being a model farmer.

His pastures have shade in them for the cattle during the hottest part of the day in the summer time. So his stock does not suffer from standing all day long in the hot sun. In the winter his stock have good stalls and warm houses to remain in at night and during the coldest weather. They know nothing about remaining out in the cold rain or wind all day long with their backs humped up. They are kept warm and comfortable in their stalls and houses. If a farmer will not care for his stock for righteousness' sake he should do so for his pocket-book's sake.

The temperature of an animal's body should be kept up to about ninety-eight degrees. The heart is maintained by food being burned in the body. If the animal is exposed to cold the food will be

burned faster to keep the heat of the body up to the normal. So we see that an animal exposed to cold requires more food than one kept in a warm stable. The average farmer does not seem to realize that it is a great deal cheaper to keep up the heat of the body by keeping the animals in a warm place than it is by feeding more.

How seldom do we find a farmer who gives his stock plenty to eat! But few stock know what it is to have plenty to eat. The stock are placed in pastures where they get sufficient grass for a month or two out of the year, and half starve the remainder of the year. No man who treats his stock in such a manner will ever get any profit out of them. It takes a certain amount of food to replace the different parts of the body as they wear out. The milk, wool, and increase in size of an animal are made out of the food eaten in excess of the amount required to keep the body up to a normal condition. Animals cannot work, fatten, and give milk unless they are given more food than is necessary to keep the body in repair.

"A curry-comb when well used is equal to half feed." This may not be quite true, but Willis acts as if he believed it. He has two or three good curry-combs and hair brushes. He curries and brushes his milk cows at least once a day; his horses and mules are curried and brushed twice a

day. And his cows, horses, and mules show what such treatment will do.

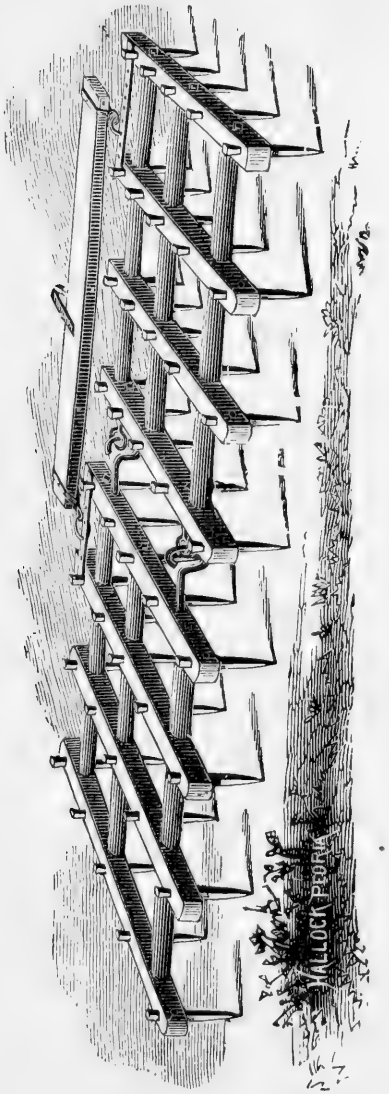
Many times when at church, in town, or at some other place away from home, he is forced to leave his horses or mules out in the rain or cold. On that account he bought three good blankets with straps for his mules and horses. When they are left standing in the cold or rain the blankets are put over them, and when exposed to the latter, three pieces of oilcloth are used in connection with the three blankets. He shows the same respect for their feelings as he does for his own.

His wagon and plow harness exactly fit his mules. The trace chains do not rub the hair from their sides; and the back bands do not hurt their backs; the collars do not bruise their shoulders; nor do the bits tear their mouths. He is merciful to his stock, he knows that only the merciful will obtain mercy.

HIS CARE OF FARM IMPLEMENTS

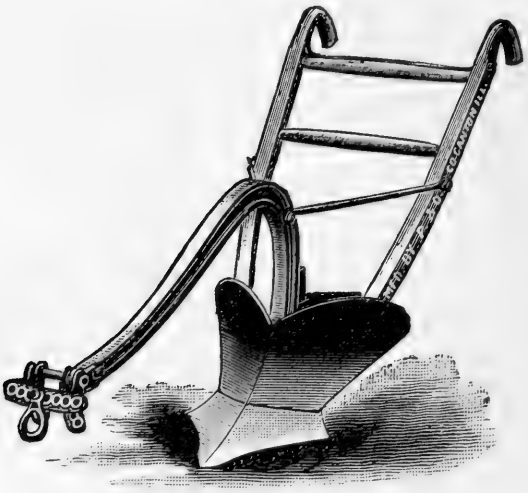
THE implements used by Willis are labor saving and in most instances cost him a great deal of money. He says that it is nonsense to try to make farming profitable without labor-saving implements. Labor-saving machinery is now used in every branch of industry. Why should thousands of farmers continue to use the implements used by their great-grandfathers? Human labor is the most costly thing used in producing crops, therefore there should be no more used than is positively necessary.

The farmers who live near Willis say, "We are not able to buy good tools." They say, "We will wait until we save up the money to buy them with." They are in the same box with the farmers who are selling cotton for five cents when it costs them seven cents to produce it. He cannot afford to quit loosing money. So the average farmer says, "I cannot afford to break two acres of land per day instead of one; or to cut five acres of grass instead of one-half. I will continue to be poor.


WALLOCK PEORIA

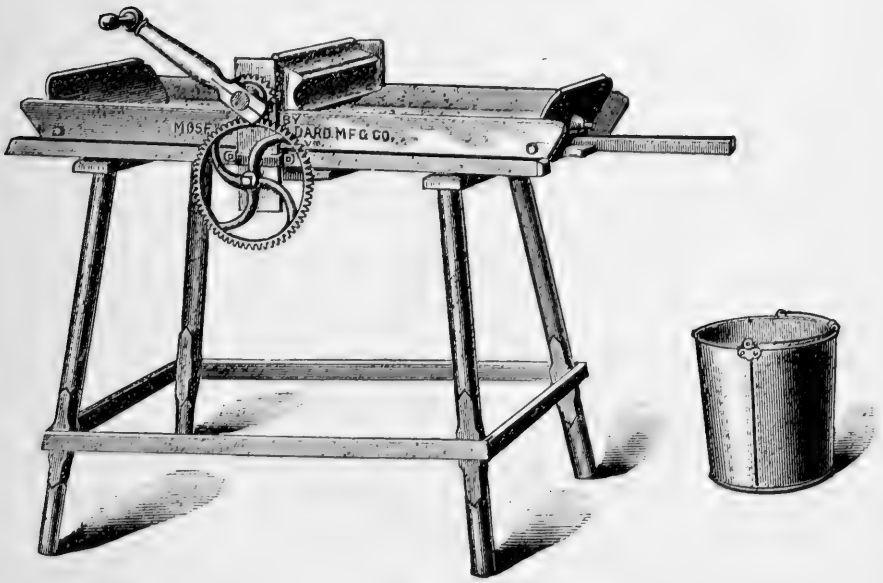
I am satisfied with hard times. I cannot afford to better my condition."

It is true that the average farmer cannot afford to use costly labor-saving implements. But why is it true? Because he does not care for the implements. He lets his tools remain out in the rain

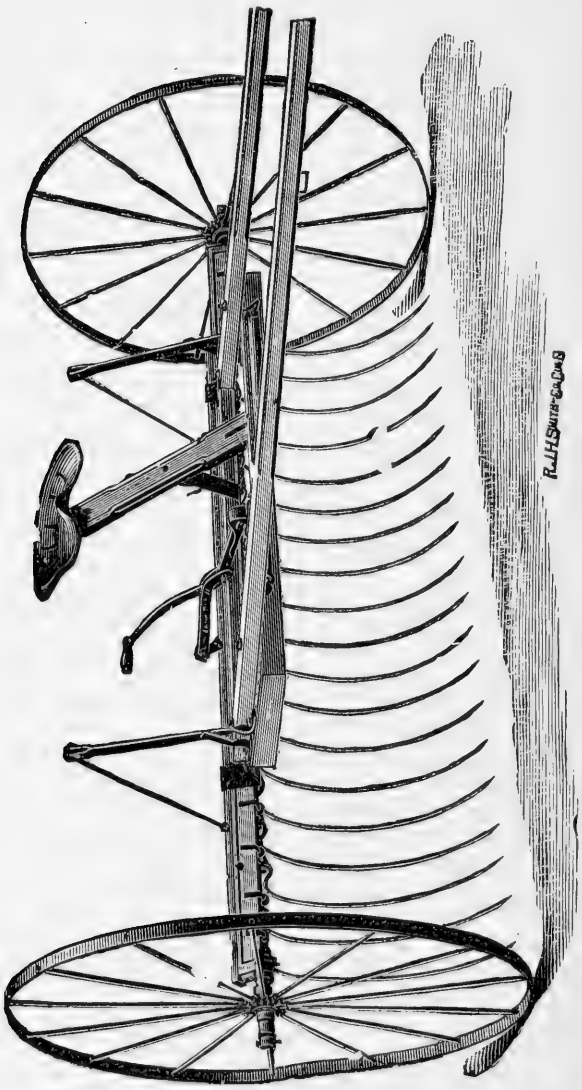


and sunshine from one year s end to another. The tools under such treatment will not last more than two or three years. Of course he cannot afford to spend several hundred dollars every two or three years for a new set of tools. If he does not care for his implements, he cannot afford to use them. If he does not use them he cannot afford to farm.

A farmer will not be truly successful, I care not how he farms, if he cares not for the machinery of his farm. If he leaves his wagon, buggy, plow, or other farm tools out in the weather, it will take all the profit made on his farm to replace them.



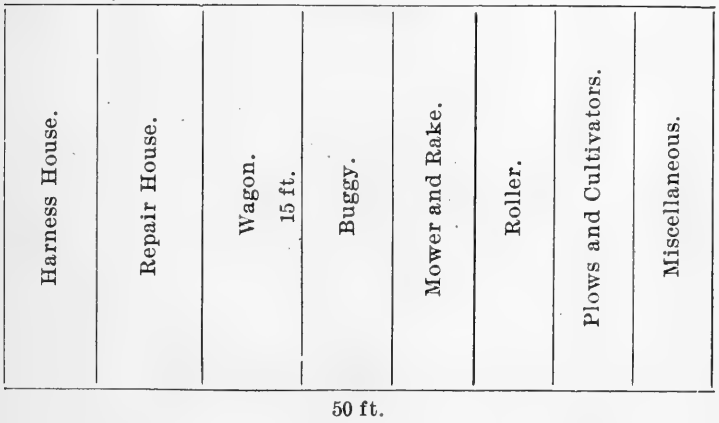
Willlis uses common sense; he keeps his tools in a tool house when he is not using them. He does not believe in working hard for money to buy tools to decay in fence corners. His tools last four or five times as long as the average farmer's tools and are always in good running order.


R.J.H. SMITH & CO. CINCINNATI

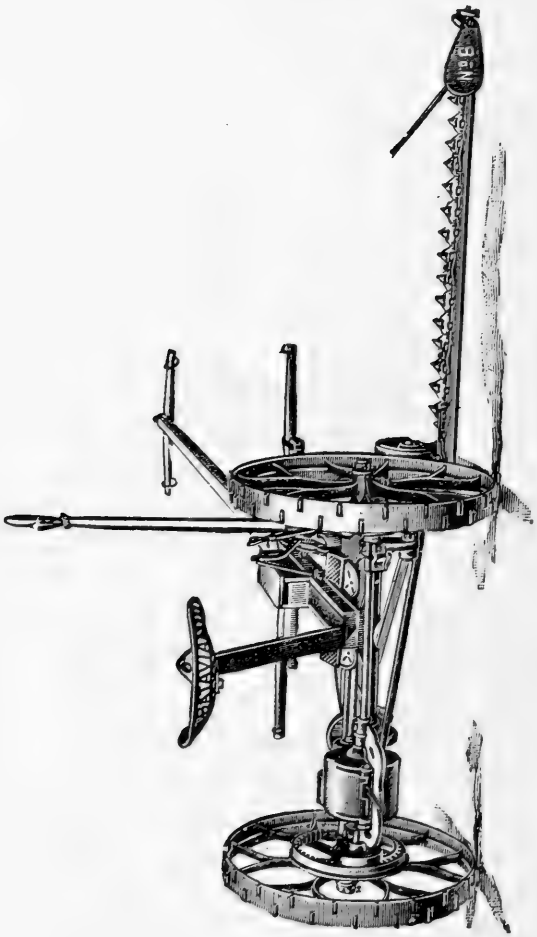
The saw cuts fast, the wagon is not a mule killer, and the mowing machine runs easily. This is the main reason why he can afford to have good tools. A scrub farmer should own scrub stock and shabby tools.

When Willis began to farm he did not have sufficient shelter to cover his wagon, buggy, roller, plow, and other tools. So he used a stable for his plows until he could build a tool house. That he did as soon as possible. The following drawing shows the ground plan.

DRAWING



The roof is ten feet high in front and seven feet high in back. The ground is used for a floor. The different tool rooms have swinging doors.



The harness and repair rooms have average-sized doors.

Willis spends many hours in the repair rooms. He keeps a harness-repair outfit. He makes his bridles, back bands, and light harness. He also

repairs the shoes for the family and does other little repair work. He knows that a stitch in time saves nine, so he keeps his harness, saddles, bridles, etc., in good shape.

This tool house is so handy that it is as easy for Willis to put his tools away as it is for him to leave them out. The house is so constructed that it is not necessary to move a dozen things in order to get one out. In this house the tools can all be kept snugly where they will be clean and unexposed to the weather.

Willis believes that every word in the Bible is true. He tries to follow its teachings but he does not obey one command. He does not lend his tools to every man who wants to borrow them. He did when he began farming. He was young and green then but he is a wiser man to-day. The farmers who lived near him were always wanting to try his plows, cultivators, saws, harrows, mowing machine, and other tools. He turned none away until he saw that his doom would soon be sealed. His tools were always away from home or broken; when he needed an improved tool he was forced to go to his neighbors after some of his own. People seldom return borrowed tools.

He has ceased to lend his tools; his tools are no longer left out of doors for days and nights and banged around by men who are too ignorant to

appreciate them. Some of his neighbors think it is real mean of him not to furnish them with tools to use on their farms. They seem to think that he should assist them to make a living. Willis knows that he must provide for his own household. So he does not lend his implements; he takes care of his own.

HIS POLITICS

WILLIS has never failed to cast a vote on election day since he was twenty-one years old. Other than that he has taken but little part in politics.

The following talk made before an audience of farmers during that memorable campaign of 1896, expresses his views on the main questions before the country:—

FELLOW FARMERS; — It is with pleasure that I respond to your call to make a few remarks on the political questions now agitating our people.

On the third of November we will be called upon to vote either for William J. Bryan or William McKinley for the president of the United States. Therefore it is well for us who feed the Nation to study this question that we may vote intelligently. On that account we have for to-day laid aside the plow and the hoe and assembled here.

It is true that farmers have no business in politics, that they should not hold political meetings, according to the ideas of some people. But how-

ever others may think of it, I claim that farmers of all men should vote. They form the only class of any importance that wants honest legislation. They demand nothing but their rights. They have no lobbyists at the National capital to buy the votes of dishonest men. Consequently, it is necessary for them to cast their votes for the right kind of men. We are told that our interests are being looked after. And when the farmers complain of hard times the statement is made by some man who knows nothing about the facts in the case, that the farmers are in as good a condition financially as they were twenty-five or thirty years ago. Let us see about that statement.

Since 1873 the price of farm products has been steadily decreasing. We now get on an average hardly half what we did then. Why is this true? The lawmakers tell us that the law of supply and demand has caused the fall in prices.

If I can explode anything, it is the "over production theory." Our main money crop is cotton, so I will discuss that first. Cotton can be traced from its production to its consumption better than anything else. Every pound of cotton that is produced goes into the market and affects the price. The production has greatly increased since 1873, but the demand has also greatly increased, so that the supply as compared with the demand is to-day

less than it was in 1873. The surplus cotton in the factories is less now than it was in 1873. The price of cotton in 1873 was 16 cents per pound. The present price is about 6 cents per pound. According to the law of supply and demand the price should be at least 20 cents per pound.

Now let us take wheat. The price of wheat in 1873 was $1.24, the present price is about 70 cents. The supply has doubled, but the population has also doubled, so there is no change in the relation of supply and demand at home. The foreign demand has increased, however, and it is more than twice as much as it was in 1873. Therefore the price of wheat should be at least $1.50 per bushel.

I could go on and discuss many other products and show that what is true of cotton and wheat is also true of most, if not all, of the others, but I think I have explained the subject enough, or to such an extent, that any ten-year-old boy that thinks at all on the subject will call any lawmaker a fool who talks about the law of supply and demand being the cause of the decrease in prices of farm products.

We are also told, "The price of every article that we use has fallen in as great a proportion as those that we produce." While that statement is not strictly true, I will admit it. But the farmer is called upon to pay taxes, doctors' bills, church

bills, and other bills that are larger than they were in 1873. These are the main bills that call for the farmers' cash.

We have shown that the farmers of this country do not get half as much for their produce as they did in 1873. But how is it with those that follow other pursuits? The wage earning employees in the mill, factory, and workshop received on an average of $1.25 per day in 1873. The wages paid to them have increased forty per cent. since 1873. The farmers' wages have been decreased over one hundred per cent. What is true of the factory hands is also true of lawyers, doctors, preachers, and other consumers. Therefore we see that the farmer is losing ground in this country.

I will now discuss two or three questions that if solved aright will restore to the farmers of this country the prosperity that they enjoyed in days past and gone.

First, I will discuss the "Tariff for revenue vs. the tariff for protection."

The main products of this country are cotton, corn, wheat, and live stock. Now do the farmers get any better prices for these products under the protective tariff then they did under the revenue tariff? They do not. Are they not forced to pay more for wheat they buy under the protective tariff than they were under the revenue tariff? They pay

on an average about fifty per cent. more. So we see that the way is so plain that a wayfaring man cannot err when he goes to vote.

I will next discuss Bimetallism vs. Monometallism. Those that believe in bimetallism claim that we need more basic money in circulation; that the amount of money in circulation affects the prices of commodities. Those who believe in monometallism claim that there is sufficient money in circulation; that the prices of commodities is regulated entirely by the law of supply and demand for commodities. Let us examine first the claims of the bimetallists. There is not a single instance in the history of the whole world where there has been suffering and hardship on account of having too much money in circulation; but we all know of the times of distress on account of the scarcity of money. The working people were suffering for the necessities of life in the United States of Columbia in 1885, and a law was passed putting gold and silver on a parity. What was the result? The products of the farm rose 100 per cent. or more and prosperity was restored. And immediately after the discovery of gold in California and Australia the products of the farm rose in price, on average, 25 per cent. So we see that the claims of the bimetallists are just.

Let us consider the claims of the monometallists.

I have shown you that the law of supply and demand does not account for the fall in price of farm products. I have shown you that according to this law the price of farm products should be higher than it was in 1873. I have shown you by history that the amount of money in circulation does have an effect on the prices of farm products, so the claims of the monometallists are false.

We must admit that the price of farm products will rise if bimetallism becomes a law in the country. But we are told that every article that the farmer buys will increase in value just as fast as the articles he produces increase in value. That is also false. The law will not permit the doctor or railroad to charge any more; taxes and postage bills will not be any greater; and the preachers will not charge any more for their preaching. His farm implements will not cost one cent more than they do now. Because the manufacturers now charge every cent for them that the protective tariff will allow.

Therefore every farmer should be a bimetallist, or what is known as "a free silver man."

I will now discuss government ownership of railroads, telegraph, and telephone systems, and of the express. In nearly every country in Europe the government owns these enterprises.

In Germany the roads are owned by the government. What is the result? Passengers can

ride four miles for one cent, and freight rates are in proportion. Yet the government's net profits on these roads are $125,000,000 per year.

In Hungary, the government owns all the railroads. The passenger rates are half a cent a mile, the freight rates not as high as they are in Germany. The railroad employees are paid such wages that strikes are unknown. The government is making thousands of dollars per year. Switzerland has the same system as Germany and it pays the country well.

Belgium bought its railroads, reduced the fare to one cent a mile, doubled the wages of the employees and is yet making money.

In India, Australia, New Zealand, and other countries the same is true. Why should not the United States do likewise ?

Under the present system the rich and influential people are given free passage on the railroads but the farmer is forced to pay four or five times as much as the people of other countries.

The price of the farmer's products is governed largely by the freight rates. Under the present system, he is charged four or five times as much as the wealthy men of this country.

What I have said of the government ownership of railroads is true of the government ownership of the telegraph, telephone, and express systems.

Then should not every farmer vote for the government ownership of these things? CERTAINLY.

Now fellow farmers, I have tried to show you how we should vote. I will say that I am not a partisan and never will be. I will in every case study the platforms of the different parties and vote that ticket which shall be for the party that looks after my interests.

After studying the Democratic, Republican, and Populites platforms, I have found that the Democratic and Populites platforms are for the interests of the farmers of this country. Therefore on the third of next November, I will cast a vote for WILLIAM J. BRYAN for President.

A SHORT SERMON

I INHERITED a tendency to preach, and I have tried very hard indeed to keep from preaching. Ministers of the Gospel are called to preach, and therefore it is not my duty to preach Scriptural sermons, but I will preach an agricultural sermon to the readers of this little volume. My text will be found in Hebrews 12: 1. It reads as follows: "Let us lay aside every weight, and the sin which does so easily beset us, and let us run with patience the race that is set before us."

The text informs us that we are burdened with weights and that we are beset with sins. The farmer should lay aside the weights and the sins which does so easily beset him. The victory will be won by the farmer who lays aside the weights carried by the average farmer, and who ceases to commit the sins committed by him.

Now, let us discuss the text under the heads: 1st, weights—2d, sins. The average farmer has many heavy weights hanging to him but I will only discuss the three which I consider the most important.

The man who is ignorant of the principles upon which success in his calling is founded has a heavy weight hanging to him. He may be a learned man in the other professions but he must know all about his own if he would succeed. The farmer must know something about the science of agriculture if he would succeed on his farm. The day for ignorant men has passed. So every farmer should lay aside the weight of ignorance. Take good agricultural journals, get the bulletins issued by the State and United States experiment stations, attend farmers' institutes and gain information in many other ways and the weight of ignorance will soon disappear.

No man can farm successfully on poor land. But few men can buy fertile land to farm on. Nearly every farmer must hang the weight of poor land around his neck. But he can easily lay it aside. Read the chapters on Tillage, Rotation of Crops, Cowpeas, and Fertilizers and you will find out how Willis laid this weight aside. You can do likewise.

The scrub things have passed. The word scrub in connection with stock makes a successful breeder shudder. Well does he remember the many poverty stricken farmers who kept scrub stock during the dark ages of agriculture. This weight has been holding farmers down to poverty since Adam

and Eve kept the Garden, and there is no reason however why farmers should act so unwisely. They should give heed to the words which they hear.

I consider under-production the greatest sin a farmer can be guilty of. The farmer who does not provide for his family is despised in this world and will burn in the next. He is worse than an infidel. A man must make use of the talents which God has entrusted to him. If he does not gain other talents he will be cast into the pit where there is wailing and gnashing of teeth. Every farmer can follow the example set by Willis. By so doing the acre that formerly produced one-third of a bale of cotton will be made to grow one whole bale; prosperity will reign in the home instead of poverty; the family will be happy instead of miserable.

The farmer should not always be buying,—I use the word buying in the sense of the exchange of money for something else. He should exchange surplus farm produce for a great many of the things that are needed on the farm. Many farmers go to town with an empty wagon and return with a full wagon,—such men will soon lose the home which their fathers gave to them. Then they will have to go to live at a sawmill where they will have to work like slaves. The farmers who follow the example of Willis will always have happy homes.

Those who till the soil should have good tools to till it with. It is true that a forked limb was used to plow with in days past and gone, but no sane man attempts such foolishness to-day. The vilest sinner uses implements with which he can do many times as much work as he can with a forked limb. But there is as much difference in the results secured by Willis and those secured by the average farmer as there is difference between the results obtained by the average farmer and those of the men who used forked limbs. The average farmer to-day is just about half way on the road of progress from the forked limb to the latest riding plow. He should continue to grow in the knowledge and use of his farm implements. A man cannot be converted until he is made aware of his sins. The average farmer will never be converted until he is shown the sinfulness of the implements he is now using.

The next great sin that I will mention is "robbing the soil." The soil was given to man in a fertile condition, but he has starved millions of acres of it to death. He has robbed it as the thief robs a bank. He has put it in such a condition that it will not yield bread for the inhabitants of the earth. He has robbed the soil that God has entrusted to him instead of enriching it. The iniquity of the fathers will be visited upon the children unto the

third and fourth generation. Willis keeps his soil fat and the soil keeps Willis fat.

Willis treats his stock as he desires to be treated by the world. He does not abuse them, and the sparing of the rod does not spoil them. He furnishes them with warm stables so that they do not suffer from the cold winds. They sleep as comfortably in their warm stables as Willis does in his bed. They never suffer for something to eat. All day long they stand knee deep in grass, and at night their troughs are filled with cotton seed and hay. Farmers should treat their stock as Willis treats his. By so doing they will lay aside the sins that do so easily beset them.

In conclusion, let me say, keep ever in mind the words of the text.

A WORD TO YOUNG MEN AND WOMEN

WILLIS did hard studying on the subject of "The Choice of a Profession." He also wrote an excellent composition on that subject. His friends advised him to be a doctor or a lawyer, but he decided that question for himself. He decided to be a farmer. He has never regretted that decision. He never will.

The reason why most of the intelligent men of this country leave the farm is that they desire to be honored. They do not think that a man who farms will ever be honored. They judge from the amount of honor bestowed upon the average farmer. But the average farmer is a failure, and no man who fails in his line of business is ever honored. The lawyer who knows nothing about law will never succeed as a lawyer. He will never be honored. The farmer who knows nothing about the science of agriculture will never succeed, and he will never be honored. The successful men in any calling are honored.

Willis is one of the most highly-honored men in Mississippi. He is a well-educated man, a good

writer, and an eloquent speaker. He honors his profession. He knows that a profession is considered honorable because honorable men follow it. He is doing what he can to make farming the most honorable profession followed by man. Willis is an honor to his profession and he is honored.

Hundreds of other young men leave the farm because there is but little chance of ever becoming rich in farming. I will admit that there is no chance to accumulate a fortune on a farm, so the young man who desires to be a millionaire should never be a farmer. But few farmers ever accumulate as much as $50,000. Farming is necessarily a small business. It cannot be spread out so that thousands of acres will be under cultivation. "The farmer must do a thing himself, or have his shadow fall on the man who does it, if he wants to succeed." A man cannot cultivate a large farm nor can his shadow fall on every part of it at one time. Therefore the ideal farm is a small one. Profits are small on such a small business, but the farmer is happy.

Why should a man work for wealth and property to leave behind him when he dies ? A good living is all that any man can get out of this world. The farmer can get a better living and live a happier life than any other professional man. He cannot hoard up banks of gold, but he and his family can have a comfortable home, plenty to eat, and good

clothing to wear. Young man and young lady, what more do you want?

The farmer breathes pure air; he is not compelled to breathe the contaminated air of the cities. The contagious diseases that spread in the cities never affect him. In fact, he is a healthy man. He enjoys his meals and sleeps sweetly at night. He raises a healthy family. A healthy body means a healthy brain. Brainy men and women are needed.

The farmer is his own boss. He can work as he pleases, talk as he pleases, and vote as he pleases. It makes no difference what opinion he expresses, his land will yield just the same. He is not a slave like the thousands of poor laborers, who live in the cities.

He can spend much more time with his family than the merchant, banker, doctor, or lawyer. He is not tied up. He can take much more time for pleasure than the other professional men. He is not rushed as they are. He can take time to enjoy life.

It does not cost much to live on a farm. Nearly every food stuff used is grown. Surplus farm products are exchanged for clothing, etc. There is no house rent, no gas, no water, nor no fuel bills to settle. Taxes do not amount to much. The expense of keeping a horse for driving is very slight. In fact, $500 on a farm will go as far as $2,000 in a city.

Now I will say to the young ladies, I do not think that you can do better than to marry a young farmer who is well educated. I do not think that you can spend your lives in a better way than in making happy homes for successful farmers. Go into partnership with a young man who is farming on the platform adopted by Mary and Willis and you will never regret your act.

PARTING WORDS

READER, I have given you a few facts in regard to the life and farming of Willis. I have not discussed hundreds of subjects that I should have discussed. I have mentioned only a few of what I considered the most important facts under the subject being discussed. It would require volumes and volumes to hold a detailed account of the work of this model farmer.

I am inclined to believe that a better day will soon dawn upon the agricultural class of this country if they will only follow the example set by Willis. It is true that if every farmer should do as Willis does farmers would in many respects be no better off. There would be no demand for the great amount of produce. But every farmer will not do as Willis is doing. Not one reader of this sketch in one thousand will set out on the right road and stick to it until the desired end is accomplished. So no farmer may be afraid to do the right thing, for he will have few rivals. Do not fear to grow twice as much per acre as you are now grow-

ing. You will never regret it. By doing so, hard times will soon bid you adieu.

It is true that I have advised you to do your best. Now you may think that I have not done my best in writing this little book. But reader you are mistaken. I had the evenings of only three months to spare. I have worked hard all day and wielded the pen at night long after your eyes were closed in sleep. I could have done better if I could have spent my whole time for a year on it; but it was impossible.

The work is not satisfactory to me but I trust that the reader will remember the conditions under which it was written and be kind enough to overlook the many blunders.

Wishing every reader a long and truly successful life,

I am your true friend,

G. H. Alford.