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**Sans Bois Route**

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.. THE ..

# Fort Smith & Western Magazine

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A "DOG ON" GOOD ROAD

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*Exploiting the resources and advantages of Oklahoma, tributary to Fort Smith & Western R. R.*

# Fort Smith & Western Railroad

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The Fort Smith & Western Railroad has no land for sale. It is interested in the development of its territory, and to that end will assist you in locating.

We will place you in direct communication with the local land dealers, if you will write a letter telling us what kind of a farm you want. We will also send our booklet, showing the advantages and resources of the old Indian Territory section of Oklahoma, with copy of bulletin which gives a fair idea as to land values.

**J. J. GIBSON, G. P. A., Ft. S. & W. R. R., Fort Smith, Ark.**



## To Our Farmer Friends and Patrons

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The growing season of 1913 is over. It only remains to finish the gathering and marketing, now well advanced, of the yield the year has realized. Late in June and even early in July the prospect along our road for an abundant yield of cotton, corn and all kinds of crops, was never better. Then came a long period of extreme heat, drought and hot winds, covering a wide area, which lasted well into September. Under these trying conditions the corn in this territory to a large extent was speedily practically destroyed and even cotton, splendid drought resister though it is, seemed about to dry up and blow away. Along in August our cotton estimates went to zero. It seemed scarcely possible to count on anything at all. Finally the rains came, bringing cooler weather, and picking began much earlier than usual. As has been quite usually the case in the past, notwithstanding the scorching ordeal through which it has come, the yield of cotton has proven much better than was expected, and, thanks to the excellent prices prevailing, despite the damaging effect of too much rain, the farmers are coming out after all in pretty fair shape. In quite a per cent of our territory where there was relatively a greater rainfall, the cotton crop is unexpectedly good. On fair land with good cultivation, 800, 1,000 and even 1,200 pounds of seed cotton per

acre is being realized. Around Dustin, Weleetka and Okemah, however, where the drought was severest, 300 to 800 pounds of seed cotton is the rule.

The Fort Smith & Western Railway wants you, our farmer friends, to understand that your enduring welfare is this Company's welfare. Future prosperity for us both depends chiefly upon the successful production of cotton. Whatever in the past may have challenged the supremacy of cotton, present conditions of soil, climate and market both foreign and domestic, point to cotton as the chief money crop of this section. Not only will you farmers be impelled therefore more or less, to specialize on cotton, but our road also must look to its cotton tonnage chiefly to bless it with a much desired balance on the right side of the ledger. We expect, therefore, to continue to aid you, by every means in our power, especially to improve and develop the production of cotton.

This road would not be understood, however, as advocating by any means the exclusive production of cotton. A wise diversity of crops is absolutely essential to good farming, and in a reasonable and judicious way, two strings to one's bow are better than one. But let us here especially invite your attention to the very timely query: Can the farmers of Oklahoma, through better methods of seed selection, soil preparation, cultivation



and farm management generally, largely overcome the destructive effects of even such extreme heat, drought and hot winds as we have so recently experienced? Our answer to this query, based upon careful investigation would be decidedly *yes*. Take corn, for instance. No farmer who carries as many as a dozen head of cattle and horses, should raise corn in Oklahoma without a silo. With silos in readiness last July, when the hot winds began to injure the corn, the farmers could have saved in the shape of silage, one-half million dollars' worth of corn which has been, in default of silos,, entirely wasted, in the 20-mile-wide strip from Fort Smith to ElReno, along our railway alone. We know that it takes both money and experience to build and successfully operate silos; but a good silo, like a good barn, is a permanent investment, and the cutter and power to chop up and convey the corn into the silo could be provided and operated as steam threshers now are, a reasonable charge of so much per ton being paid for the work. It must be conceded that the natural range once so abundant is now gone. Thousands upon thousands of acres fenced for pasture, are practically barren wastes given over to the growth of a bitter weed that no animal will eat. Such areas hardly make sufficient return in suitable grazing to justify the repair of the wire fencing. Thus a natural change unavoidably produced by the settlement of the country demands and will compel a revolution of methods. Successful stock raising, even for domestic purposes alone, requires a sufficient supply of forage at a

reasonable cost. Alfalfa and bermuda grass are proving valuable aids to the solution of this problem; but ensilage either of corn, kafir corn or sorghum, perhaps chiefly the last named, must become the corner stone of future stock raising and feeding in Oklahoma.

By the use of the silo the farmer can snap his fingers at the tassel-cooking hot winds and convert the entire corn plant, stalk and blades as well as ear (the stalk and blades say 60 per cent of the plant where the ear matures are practically wasted), into a succulent and very superior quality of feed.

As for the cotton plant, this season proves that even with the most ordinary culture and care cotton can be relied upon to make something of a yield under the most extremely unfavorable conditions of drought and heat. With any cultivation at all cotton never entirely fails.

But a quiet, earnest, thorough and systematic development both along our line and over the state at large, through the efforts of the farm demonstration system of the Department of Agriculture is being brought about which is realizing, wherever its methods are accepted and instructions faithfully followed, a marked improvement both in the yield and quality of Oklahoma crops.

In order to fully appreciate the great merit of this demonstration work, one should visit the farms and talk to the farmers where this valuable instruction has found acceptance. Investigators would be speedily convinced that the deep early plowing; level, frequent, extended cultivation and careful seed



selection, uniformly advised by the demonstrators, has this season, where faithfully practiced, largely overcome the otherwise deadly effect of prolonged drought and extreme heat. Especially are these gratifying results secured where the votaries of this better farming have used the Mebane cotton seed recommended by the demonstrators. Fifteen hundred and fifteen pounds of seed cotton grown from this seed and taken just as it was picked, produced this season 590 pounds of seed cotton; while the ordinary run of cotton, ginned at the same time, realized but thirty pounds of lint to the 100 pounds of seed cotton, and the Mebane fiber was longer, stronger and more uniform than the ordinary fiber. This superior lint yield has uniformly followed the use of the Mebane seed and has to our knowledge saved a large number of our farmer friends from hopeless debt and discouragement in this, to many less progressive farmers, very disastrous year. Indeed, this fine demonstration work, though as yet in its infancy along our line, affords the principal reason why we found ourselves able to answer the query so readily in the affirmative, we put to you.

Representatives of this magazine have seen this season, almost within sight of our track, forty-five acres in cotton that is making a bale to the acre. Wide rows (the soil was Canadian bottom), Mebane seed, deep breaking and level cultivation kept up until the last of August, did it. Another part of the same field has produced this season 50 to 60 bushels of corn. Another upland prairie field within rifle shot of our track pro-

duced 1,200 pounds of Mebane seed cotton to the acre, which is equivalent to at least 450 pounds of lint, and a section of the same field exhibited 50 bushels to the acre of the most beautiful and uniform white corn the eye ever gazed upon. Don't you think that we are justified then from this array of facts, in holding the intelligence and skill of man, even as applied to the cultivation of the soil, superior to the worst dry spell Oklahoma prairies ever experienced? And the moral of this story, gentlemen, is: Be sure to get acquainted with your farm demonstrator and learn what he has to teach you. Above all things, plant pure, reliable Mebane seed for your cotton crop next season, upon land that you are going to break, say 8 inches deep, this fall. Think of the snow and rain this land will drink in for the use of that Mebane cotton when the time of trial comes again, as it is quite likely to do next July!

Suppose that all of you cotton raisers along the line of this road had used Mebane seed and followed the demonstrator's instructions? this season? That 8 or 9 pounds of extra lint from the 100 pounds of seed would have well nigh offset the loss inflicted by drought and hot winds, would it not? And this considerable benefit to each of you individually would have meant an increased cotton tonnage to us of nearly 20,000 bales, enough, perhaps, to convert our anticipated deficit into a surplus. Do you wonder that we earnestly desire to aid you in every way to enjoy the full benefits of the government instruction? And do you not also agree with us that the general use of the



better methods which we have enumerated would have lifted you to a great extent above the losses of even such an extreme season of drought and heat as the one just passed? Indeed, we think that you must agree that when we answered yes to our query we were right.

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## "Business is Good" It Can Be Done

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*Author Unknown.*

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Somebody said that it couldn't be done,  
But he, with a chuckle, replied,  
That "maybe it couldn't" but he wouldn't be one  
Who would say so till he tried.  
So he buckled right in with the trace of a grin  
On his face. If he worried, he hid it.  
He started to sing as he tackled the thing  
That couldn't be done, and he did it.

Somebody scoffed: "Oh! you'll never do that,"  
At least, no one ever has done it;  
But he took off his coat, and he took off his hat,  
And the first thing we knew he'd begun it.  
With the lift of his chin and a bit of a grin,  
Without any doubting of quiddit;  
He started to sing as he tackled the thing  
That couldn't be done, and he did it.

There are thousands to tell you it couldn't be done,  
There are thousands to prophesy failure;  
There are thousands to point out to you one by one  
The dangers that wait to assail you;  
But just buckle in, with a bit of a grin,  
Then take off your coat and go to it;  
Just start in to sing as you tackle the thing  
That "cannot be done," and you'll do it.





*Oklahoma Boys' and Girls' Corn, Cotton and Canning Clubs.*

## The Boys' and Girls' Club Work

Some thoughtful soul says: "Truth is stranger than fiction." Whether it is stranger or not, truth is certainly quite usually very much more entertaining and instructive, than the most brilliant flight of the imagination. This fact finds especial corroboration in the very interesting details of the farm demonstration work carried on in our midst by the United States Department of Agriculture, and especially in the boys' and girls' club work.

Decidedly the most interesting exhibit of the recent Arkansas-Oklahoma Interstate Fair at Fort Smith was afforded by the very generous display of this character of work, chiefly from the state of Oklahoma. Three hundred and sixty individual exhibits of cotton, corn and kafir corn, ten exhibits

from each of thirty-six Oklahoma counties, represented the work of the boys; and eighty individual exhibits of five girls from each of fifteen Oklahoma counties, consisting of a wide variety of fruits and vegetables, canned and in glass jars, represented the work of the girls. A new and very interesting branch of the boys' work, recently introduced, is the boys' pig club, which was not represented at this fair, but is sure to prove a popular feature and to find a conspicuous place in the exhibits of future fairs. In all a total of forty-eight hundred Oklahoma boys and girls have already become active and enthusiastic members of these clubs, through a process of careful selection based upon the essentials of interest in and faithfulness to the work. The boys' clubs have



been in operation to some extent for six or seven years; the girls' clubs are enjoying but their second season of activity. We trust that these wonderfully interesting exhibits, now that they have finished their round of public display at the Tulsa Dry Farming Congress, may find a permanent location convenient for the perpetual study and interest of the public.

These exhibits speak for themselves. They tell a fascinating story of method and intelligence applied to a very interesting field, through the medium of youthful enthusiasm and adaptability. Neither is one surprised to learn that the boy farmer in this line of work invariably beats the old man, lays it on, as it were, to his own father in the parent's accustomed occupation of raising cotton and corn. Many instances have occurred where fathers have thrown up their hands and frankly confessed, "The boy knows and I don't." As one studies the boys' exhibits particularly, one is impressed with the fact that has been scientifically instilled into the minds of these youthful students, that the science of agriculture consists of *two* great essentials, *seed selection and the preparation and cultivation of the soil*. To realize true success in farming, both these essentials must be scientifically mastered.

Weather reports and common experience alike informed us that there was a severe and prolonged drouth in the state of Oklahoma during the past summer. It was, however, scarcely possible to realize that this was the fact as we gazed upon these wonderful exhibits. Beautiful, long, gracefully tapering and well filled out ears of corn,

red, yellow, and white, large fleece like snowy bolls of cotton picked and unpicked, the picked as downy and soft as the best samples of the ginned lint, and more than two hundred different preparations of fruits and vegetables canned and in jars, offering the very pleasing and attractive variation of their natural colors, told an eloquent story of the bounty of Nature at its unstinted best. We noted at random the exhibit of one girl which comprised one hundred preparations of fruits and seventy-two preparations of vegetables. Another exhibit—a prize winner, by the way—included 236 preparations of fruits and vegetables. And they all made you hungry to look at them, they were so natural, luscious and appetising.

The cotton exhibits consisted exclusively of the improved Mebane variety because uniform experience has demonstrated that this variety produces a greater proportion of lint to the 100 pounds of seed cotton than any other. This excess of lint yield over ordinary cotton is seven to nine pounds (say 25 to 30 per cent) in 100 pounds of seed cotton, and the fiber is longer, more uniform and stronger than the fiber of ordinary cotton. When it is remembered that a pound of such lint is worth at least 12 cents on the present market, while a pound of seed is worth but a cent to a cent and a half, the great value of this development of lint at the expense of seed may be realized. We discovered with regret that the per cent of lint to seed in these fine exhibits would not be ascertained until after the round of public display had been concluded. One very important



feature of this cotton training these young club members are receiving, which we think worthy of especial mention, is the practical knowledge acquired of how to ascertain and classify the relative grade of the lint. The farmer of the near future will know, therefore, both how to select seed to produce a uniform and desired staple and to classify his own staple as he offers it for sale, as suggested by a recent bulletin of the Department of Agriculture. Then the farmer will no longer be, as he is now, at the mercy of the classification of the buyer.

But we cannot refrain from some mention of the human agency through whose efforts this very encouraging development of the young is being accomplished. We refer especially to State Agent Bently of Oklahoma and his corps of assistants, district agents and county demonstrators, both women and men. These men and women love their work. They manifest the true missionary spirit and illustrate strikingly the truth of the Master's statement, "For where your treasure is there will your heart be also."

This magazine must acknowledge itself as especially indebted to both State Agent Bently and Assistant State Agent Jeffords for courteous consideration, and especially to Mr. Jeffords, for a very full and interesting outline of the club work. Nearly fifty Oklahoma boy exhibitors and about thirty Arkansas boy exhibitors attended the Arkansas-Oklahoma Interstate Fair. Thanks to the timely activity of Mr. Gaffin, secretary of the Fort Smith Y. M. C. A., tents were

furnished these boys free and space allotted them to camp upon the fair ground, while they were fed at the expense of the fair management with warm food cooked adjoining their tents. The boys were also given the benefit of lectures each morning of their stay, delivered by representatives of the Arkansas experiment station upon various interesting and important phases of Agriculture. It is confidently anticipated this will prove the beginning of a very interesting and popular feature of future fairs.



*Wild Turkey, King of all Birds.*

Wild turkeys are becoming rapidly extinct in Oklahoma and can now be found only in the wild mountainous section in the southeastern part of the state.





*Scene of Experiment Farm Sub-Station, Mena, Ark., showing the effect of proper and poor cultivation. The two patches of corn were planted under the same conditions and the difference in cultivation is evidenced by a glance at the results in the field.*

## Farm Demonstration Work in the Vicinity of Okemah, Okla.

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The representative of the Fort Smith & Western Farm Magazine was riding down the street of Okemah the other day with Mr. Nunn, the local farm demonstrator, when a farmer was encountered hauling a load of Mebane seed cotton to the gin. Mr. Nunn remarked that to witness the ginning and weighing of this cotton would afford some interesting information; so the pair turned and followed the farmer, Mr. J. J. Minton, to the gin. The load of seed cotton weighed 1,515 pounds by the gin weights, the bale of lint turned out by this amount of seed cotton weighed 590 pounds. There was quite a per cent of hulls in

the cotton, and Mr. Minton in his zeal to get all the seed, which were worth \$1 per bushel, did not wait for the lint to be worked out of the pack around the saws as the bale was finished up. Making reasonable allowance for these two factors, the yield from this bale was 40 pounds of lint to every 100 pounds of seed cotton. For the purpose of comparison, figures were obtained as to the lint yield of nine ordinary bales ginned the same day, with an average result of 30½ pounds of lint to 100 of seed cotton.

The Fort Smith & Western man was interested at once. He enquired eagerly the reason why the



one bale showed an excess of 30 per cent of lint over the lint yield of the nine other bales. The demonstrator informed him that the difference in favor of the Mebane seed was mainly due to careful seed selection; in other words, Mebane seed are differentiated from ordinary seed and their lint capacity greatly increased, by special selection through a series of years, of the seed from the plants manifesting the best desired development. Mr. Nunn explained that the development in this manner of a superior sample of cotton included quite a number of elements which the grower must keep in mind and seek to both develop and perpetuate. The plant must be thrifty, branching low and well limbed; sufficiently provided with protecting foliage, the bolls large and well developed and inclined to hang down. The lint must grow a thick fleece like growth; must be standard length, say 1 1-16 to 1 1-8 inch and the seed must be relatively small.

"There is no profit," said Mr. Nunn, "in growing seed, the profit is in the lint. The grower usually pays as much for picking as he gets for his seed. On that portion of his crop, therefore, represented by the weight of his seed, the farmer makes no profit. He, at best, only swaps dollars. Again, the seed is the only element of the cotton plant that exhausts the soil. Stalk and leaves are altogether returned to the soil, while the growth of lint does not make an appreciable drain upon the soil. Hence the great value of a variety of cotton that would develop lint at the expense of unnecessary size and weight in the seed. The De-

partment of Agriculture especially through its demonstration work, became impressed a number of years ago with the great possibilities along these lines for increased yields of lint, and proceeded to experiment, through both plant hybridizing and seed selection, towards securing the desired results. Mr. Mebane was himself a pupil of the farm demonstrator. He proved the right man for the work and has attained good results through selection, both in developing a superior variety of cotton and in realizing a substantial financial reward for his labors.

But in plant development, especially in this process of individual selection, eternal vigilance is the price of success. There is a marked tendency in plants apparently to resent efforts at improving them, by a disposition to return immediately to inferior types, whenever efforts at careful selection are neglected. On the other hand, it is hard to estimate or limit the good results that persistent, careful and skilled seed selection may gradually bring about. There is a limit, of course, and progress with so many essentials to keep in view, must necessarily be slow; but it is certain that this limit has not as yet been attained, especially in securing a field of plants uniformly possessing the desired qualities. In this work of selection, however, care must be taken not to over emphasize a desired quality at the expense of the others."

It is interesting indeed to talk with a man like Mr. Nunn and to observe his deep and constant interest in this great dominant idea of improving the cotton plant,



backed as it is by many practical illustrations among those he is instructing as to the demonstrated success of the principle. Just suppose all the cotton farmers in Oklahoma could have the benefit of this 30 per cent increase of lint yield! It would mean 300,000 bales added to the state's usual crop without a cent of additional cost to the producer for picking or otherwise. In like manner a national crop of 15,000,000 bales would expand without extra cost into 20,000,000 bales.

Besides this, every cotton farmer could very profitably develop himself into making his own seed selection. He would have to acquire the art, but the very fact of his cultivating such an interest would have a marked tendency to develop him as well as his cotton in the right direction. But it is not to be understood that the farm demonstration work at Okemah concerns itself exclusively with cotton seed selection. It urges by precept and proves by practice as well the great value of preparation and cultivation of the soil. Farmers who follow the instruction of the demon-

strator no longer think of listing unbroken cotton land just before planting. These lands are now thoroughly broken seven to nine inches deep, if not in the fall then as early in the winter as possible, and again listed, if at all, just before planting, while the culture is uniformly frequent shallow and level.

The Fort Smith & Western representative had occasion to submit the foregoing remarks to Mr. Bently, the Oklahoma state agent in this demonstration work. Mr. Bently, though modest and unassuming of manner, is evidently thoroughly equipped by natural ability, study and experience for the work he has in hand. At his suggestion we conclude with the caution that beyond a certain point, already perhaps attained by the more perfect plants of the Mebane variety, in the effort to specialize on lint at the expense of seed, the quality of the lint begins to deteriorate. Present effort should therefore concern itself chiefly in bringing all the plants of a crop up to the standard already attained by the most perfect individual specimens.

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Farmers should encourage their boys and girls to enroll in the Boys' and Girls' U. S. Agricultural Clubs, so that they can immediately prepare their land for the 1914 crop.

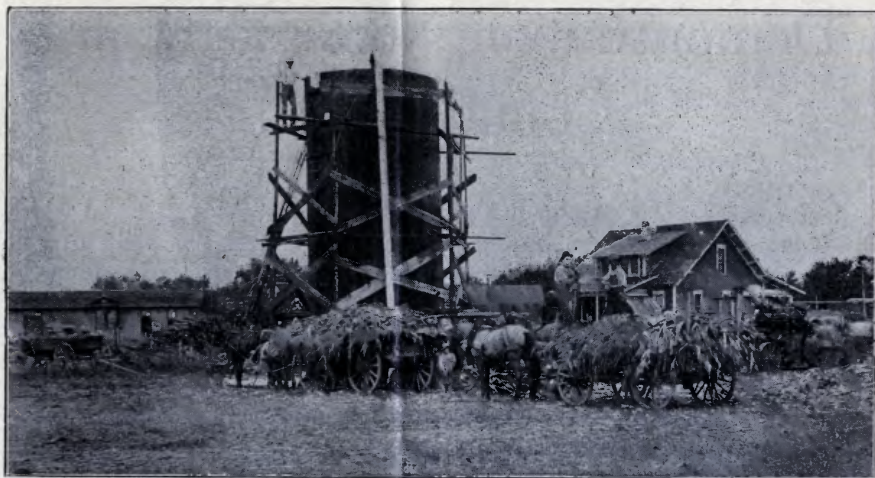
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The experience of Eastern Oklahoma farmers in 1912-13 with chinch bugs should emphasize the importance of ridding their farms of all refuse where these pests are likely to pass the winter, and then plow the land to a good depth.

#### GRAFTED PECANS.

Money-maker, Schley and Stewart are at the present time considered the best varieties of pecans for planting in Arkansas. Don't make the mistake of planting ungrafted trees or seedlings. They are irregular about coming into bearing and the nuts vary greatly, while grafted trees come into bearing early, and at nearly a uniform age, and produce a uniform grade of nuts.—*Ozark Produce Journal.*





## The Silo, the Biggest Factor in Feeding Live Stock

*By Dean Martin Nelson, College of Agriculture, Fayetteville.*

The silo is effectively solving for the farmer the problem of high price for feed. With the present high prices of cattle and the price of hay simply soaring there is a great temptation to sell cattle for the attractive figure they bring and to sell hay instead of feeding it out on the farm. This may be good business management for the immediate present, but what about the future? Just at this time when every farmer should be raising more live stock, cattle are being sold off until the number of breeding stock in the country is greatly reduced. At the present rate of decrease there will soon be very little to sell and the high price, that will surely rise still higher, will mean nothing to the farmer unless he changes his method. If hay

shifts into the class of money or cash crops on the farm this does not prevent economical raising of cattle.

One acre of corn will, when made into silage, supply practically all the roughage and much of the grain that is required to keep a good dairy cow for six months. The same amount will supply feed for several young cattle, depending upon age, for the same period, and this too means much better keep than cattle get as a rule. Why not then profit by the means at hand? Build a silo, raise plenty of cattle and come in for a goodly portion of the high prices that are going still higher.

Notwithstanding the high price of feed there never was a time when one could so safely and surely and profitably raise cattle and that by the aid of the silo.—*Ozark Produce Journal.*



## Demonstration Notes, Pittsburg County, Okla.

J. W. Foster, Crowder City, Pittsburg county. Broke his land in December, 1912. Planted mebane seed cotton. Cultivation level. Yield 900 pounds of seed cotton per acre, 1,460 pounds of seed cotton made 530-pound bale, or about 36.3 lint to 100 pounds seed cotton. His 900-pound seed cotton yield was therefore equivalent to 326.7 pounds of lint per acre. At an average selling price of 12 cents, the cash yield per acre was 39.20. Seventeen bushels of cotton seed per acre were worth 75 cents per bushel and in good demand at that price to furnish Mebane seed to others; which adds 12.75 to his cash revenue per acre, making a total cash value of cotton yield per acre of \$51.95.

Mr. Foster's yield of corn per acre was 35 bushels. At suggestion of Mr. J. M. White, the farm demonstrator, Mr. Foster sowed his cotton acreage in rye and winter oats. Result, a fine winter pasture at nominal cost. Soil rather thin upland prairie.

D. M. Surber, Pittsburg county. Rich Canadian bottom land; 45 acres planted in cotton of Mebane variety. Rows 5 to 7 feet apart; cultivation level and continued late in August. Yield, at least 500 pounds, perhaps 550 pounds, of lint, a bale and more per acre. Quality of sample good. Little waste, though pickers scarce and less than half field picked over. Mr. Surber had cultivated same land in

cotton four seasons at usual width of  $3\frac{1}{2}$  feet, securing yield of but 800 to 900 pounds seed cotton per acre. Farm demonstrator White advised 6 to 7-foot middles. Result, yield doubled despite unfavorable season. Mr. Surber confident that yield in a normal season would have exceeded 2,000 pounds. He proposes next year to follow another suggestion of demonstrator to plant Bliss Triumph Irish potatoes in 7-foot cotton middles. Potatoes out of the way in June furnish profitable extra crop at small cost.

Another portion of same field planted in corn yielded 50 to 60 bushels per acre.

Surber household blessed with twelve living children. Let Mr. Roosevelt take courage; race suicide a rule at least sometimes honored in the breach rather than in the observance. Mr. Surber, although but a tenant, a man of iron energy. His kind the most valuable of Oklahoma's assets. Small Surbers aged 12 and 14 respectively, members of boys' corn and cotton clubs. Two acres of upland cotton, 1,200 pounds seed cotton per acre.

W. D. Hightower, Crowder City, Pittsburg county. Flat broke, his cotton land did not list at all. Planted part of cotton crop with Mebane seed; cultivated cotton land six times, shallow level culture. Cotton from Mebane seed made 35 to 38 pounds of lint to



100 pounds seed cotton. Ordinary cotton made 27 to 30 pounds.

Corn from selected seed made 30 bushels per acre.

Soil rather thin upland prairie.

W. M. Tate, near Crowder City, Pittsburg county. Member of boys' club, 16 years of age, made 55 bushels of corn on selected acre from Boone County White improved seed. Grown brother with ordinary seed made but 30 bushels same character of land on same place.

Thomas Tate, 14 years of age, same family and farm, also member of boys' club, with Mebane seed on two selected acres made yield of 1,250 pounds seed cotton per acre; 1,450 pounds seed cotton made 510 pounds lint; 1,250 pounds of seed cotton equalled 537½ pounds of lint as this boy's lint yield per acre, which at 12 cents per pound gives \$52.50 as his cash yield per acre, not to mention 12 bushels of seed per acre worth \$9.00.

Mr. Moncrief, P. O. Chandler, Pittsburg county. Has fine, for the most part, level upland prairie field, some of which has been in cultivation 44 years. Mr. Moncrief's father was a pioneer in this section. A humble log cabin, where the present Mr. Moncrief was born, still standing 50 feet to the rear of the handsome modern residence, affords eloquent evidence of the progressive evolution of near half a century. Mr. Moncrief is a progressive, intelligent, up to date farmer. Four years ago, starting with a reliable sample of Boone County White, Mr. Moncrieff began raising a high quality of corn for seed, as a business. When the last season, partly at the instiga-

tion of our road, State Agent Bently assigned J. M. White, farm demonstrator, to Pittsburg county with headquarters at Crowder City. Mr. White soon made the acquaintance of Mr. Moncrief and quickly grasped the great value of the exceptionally fine seed corn Mr. Moncrief was producing, especially with a view to distribution among the boys' corn clubs Mr. White was organizing in the county. A banker at McAlester was induced to purchase enough of this fine seed corn to supply the young club members with seed. Result, the corn exhibit of the Pittsburg county team of ten boy exhibitors has taken prizes at Oklahoma City, at Muskogee, at Fort Smith where they captured first prize, and last at the Tulsa Dry Farming Congress where they also captured first prize especially upon the ground of uniformity of quality. So much for the opportunity afforded by Mr. Moncrief's progressive enterprise and Mr. White's genius to take prompt advantage of it.

Incidentally, the human eye never gazed upon a more uniform and perfect corn crop than is presented by the 20-acre plat of seed corn raised by Mr. Moncrief this season. Yield, 50 bushels to the acre and not a nubbin in it. Long, tapering, compact, well-grained ears with small cobs are the uniform rule. This farm was broken in December and January, 9 to 10 inches deep and the methods of the demonstration work carefully followed in the cultivation of the crop. Bulk of the cotton crop is from Mebane seed, but plats are planted also in long staple and double jointed cotton for purposes of comparison and experiment. Yield



of Mebane, 1,200 pounds of seed cotton per acre, indicating equivalent of 410 to 425 pounds of lint. Surprisingly small per cent of waste or other injury from wet weather on part of Mebane cotton. It is practically storm proof.

In 1912 Mr. Moncrief selected a prize bale of Mebane cotton which ginned 41.8 pounds of lint to the 100 pounds of seed cotton. This bale captured the premium for which it competed.

T. B. Young, Crowder City, Pittsburg county. Broke land 8 inches deep in March. Soil is upland, but pretty good. Planted Mebane cotton seed. Yield 1,000 pounds seed cotton per acre, although stand but 60 per cent. Crop not yet ginned. Planted beans in skips. Gathered, cleaned and sold \$9.00 worth of beans from one acre. One lock of this Mebane cotton strung out 14 inches. One lock of Rowdon cotton also grown by Mr. Young strung out in the same manner but 8 inches. Planted improved variety of yellow corn; very prolific. A few stalks made 4 good ears to stalk. Ears from these stalks carefully selected for seed. Ears large and uniform, deep grain, well filled out; no evidence of drought. Yield, despite 10 per cent damage from chinch bug, 60 bushels per acre. Corn cultivated eleven times; also cotton cultivated until late in August.

Has one-half dozen plants of "Himalayer Vine," a large and very prolific species of dew berry. Sends out runners 30 feet long. Runners carefully trained by Mr. Young on smooth wire frames. One plant, it is said, has furnished berries enough for an ordinary

family for preserving and otherwise.

A promising crop of youngsters, including 2-year-old twins, furnish another interesting feature of Mr. Young's productive energy of which he seemed especially proud. Mr. Young's cotton and corn both bordered the Fort Smith & Western right of way.

## **Fort Smith & Western R. R.**

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Oklahoma  
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Texas**





*An Orchard scene in Logan County, Oklahoma, on the Ft. S. & W. R. R.*

Mr. J. A. Farquahrson of Guthrie has held position of farm demonstrator for Logan county for one season. A representative of the Fort Smith & Western Magazine took a short round with Mr. Farquahrson recently over a small portion of his territory. After a few miles' travel north from Guthrie along valley of the Cimarrone, a home was approached beautifully located on a gentle elevation bordering the river bottom. Imagine the visitors' very agreeable surprise to behold a giant pile of shiny red apples—four thousand bushels of them, all in one heap in the open air right there on the brow of the elevation! A gorgeous sentinel, as it were, guarding approach to the home some fifty feet to the rear.

"Whose place is this? queried the visitor.

"It is mine," modestly replied the demonstrator.

And then the fact developed that this canny Scott had patiently solved, after the fashion of his kind, the problem of producing the perfect apple, torrid heat and rain-denying skies to the contrary notwithstanding. But how did he do it? It seems that here, as in everything else, it is all in the knowing how. First the trees were given ample room, then there was deep plowing in the middles to within six feet of the trees. Lateral roots, too near the surface that far out were torn up by the breaking and the new lateral roots were thus compelled to penetrate deeper in the soil. Thus the wide middles became a deep trough of loose moisture-laden soil, to which the trees could resort freely in times of dry weather. There must be something in this method since the proof of the pudding is conceded to be in the eating of it. Mr. Farquahrson has the apples



in perfection and abundance, while others are lacking.

Guthrie is the only market necessary to the consumption of this shining mass of fruit. This appreciative town is now busily engaged eating 50 to 75 bushels of this fruit a day, and pays for the toothsome privilege a dollar for each bushel consumed. It is to be understood, of course, that the care of these trees included thorough

spraying whenever needed during the season. "What about the rain," inquired the visitor, gazing upon the mountain of fruit, with a scant covering of alfalfa over the top. "At this season of the year the cool water percolating through the apples will help, rather than injure them," responded Mr. Farquarhson. The water will keep the apples from shriveling up. If it were warm, however, the water would, of course, greatly encourage rot."

## Farm Demonstration Notes, Logan County, Okla.

J. E. Oliver, Guthrie, Logan county, Oklahoma. Cultivated 135 acres of Mebane cotton season of 1913; lint yield per acre, 200 pounds; 35 pounds average of lint to 100 pounds seed cotton. This crop profited by the use of good Mebane seed as compared with common cotton, about 4,500 pounds of lint for the 135 acres; say \$540.00 in cash, a considerable difference to be realized without a cent of additional cost. Mr. Oliver finds Mebane also practically storm proof, very little waste in spite of general rain and changeable weather.

Guthrie Cotton Oil Company, Guthrie, Okla. Reports lint yield, common run of cotton, Logan county, 28 to 29 pounds lint to 100 pounds seed cotton. Yield for Mebane cotton, 34 to 35 pounds of lint to 100 pounds seed cotton.

Mr. Henry of this place states lint yield of Logan county not so good by 2 to 3 pounds in 100 pounds of seed cotton, as is obtained further east.

T. S. Smith, R. 1, Guthrie, Okla. Raises Mebane cotton; 2 acres Cimarrone bottom, 4 to 5-foot middles, yield estimated at 6,000 pounds. Next season will make middles 6 to 7-foot, same land, and plant early Irish potatoes between.

Miss Catherine Smith, daughter of above, woman demonstrator for Logan county, had 65 pupils. Miss Smith's county exhibits took first prize at various fairs. Maximum number varieties (preparation), fruits and vegetables, 236.

I. Bearden, R. 1, Guthrie, Okla. Thin prairie upland, broke land in January 8 inches deep. Level cultivation. Cotton laid by late in August. Raised Mebane cotton; yield 500 pounds seed cotton per acre. About 36 pounds lint, 100 pounds seed cotton. Raised and fattened six March pigs, Poland China, now 7 months old; gross weight 250 pounds each; 1,500 pounds for the six, worth 7 cents gross, market value \$105.00.





*Seventy bushels to the acre was made possible on this washed hillside soil, by breaking eight inches deep, sub-soiling to fourteen inches and continuing to cultivate until the ears began to harden. Southern Beauty corn grown at the Mena Sub-Station of the University of Arkansas.*

## Farmers' Co-operative Demonstration Work

U. S. DEPARTMENT OF AGRICULTURE

J. M. DAILY, *District Agent, Muskogee, Okla.*

Approved: W. D. BENTLEY, *State Agent.*

### EXTRACTS FROM DEMONSTRATION AGENTS' EXAMINATION.

Q. What are the fundamental principles of good farming?

A. 1. Prepare a deep and thoroughly pulverized seed bed, well drained; break in the fall to a depth of 8, 10 or 12 inches, according to soil, with implements that will not bring too much of the subsoil to the surface. (If a disc plow is used it is safe to break to the above depths at once; otherwise, depths should be reached gradually.) 2. Use seed of best variety, intelligently selected, carefully stored. 3. In cultivated crops give the rows and plants in the rows space suited to the plant, the soil, and the climate. 4. Use intensive tillage during the growing period of the crop. 5. secure a high content of humus in the soil by the use of legumes, barnyard manure and farm refuse. 6. Carry out a systematic crop rotation with a winter cover crop. 7. Accomplish more work in a day by using more horse power and better implements. 8. Increase the farm stock to the extent of utilizing all the coarse food and idle lands of the farm. 9. Produce all the food required for the men and animals on the farm. 10. Keep an account of each farm product, in order to know from which the gain or loss arises.

Q. The capacity of a given soil to hold moisture depends upon what?

A. How finely pulverized, and the amount of humus.



Q. How may the conditions and fertility of soils be improved?

A. Deep breaking; thoroughly pulverized; drainage; lime; humus.

Q. What is humus? What of its relative moisture-holding capacity?

A. Decayed or decaying organic matter that has passed the most active stage of decomposition and has lost its physical structure of the materials from which it is made, and as a rule becomes thoroughly mixed with the soil. Humus stores moisture, increases temperature, furnishes plant food, stimulates chemical action, promotes bacterial life. Sand absorbs 25 per cent of weight; clay 45 per cent; humus 119 per cent.

Q. What about commercial fertilizer?

A. Beneficial effects depend upon moisture, humus and physical condition. Does not add vegetable matter; does not promote bacterial life; does not correct mechanical defects.

Q. What of farm manure?

A. Farming without the use of manure is a waste of energy and results in the exhaustion of soils. Neglect in procuring and increasing the quantity of farm manures has been a great drain on the natural resources of the American farm. Lack of intelligent care of waste products and the convenient form of commercial fertilizers have jointly been responsible for the almost general neglect of farm manures. Manure furnishes humus, plant food, promotes bacterial life. Contains, per ton:

	Nitrogen	Phos. Acid	Potash	Value	Ton	Per Year
Horse -----	9.8	5.2	9.6	\$2.70		\$25.00
Cow -----	8.6	5.8	8.8	2.45		32.30
Sheep -----	15.4	7.8	11.8	4.06		25.29
Pig -----	16.8	7.8	6.4	4.07		62.05

Q. What about deep breaking?

A. Heat, air and moisture are essential to chemical and germ action in preparation of plant food in soil. The depth these penetrate depends on depth of breaking. Roots feed deeper in 8 to 10 inches deep plowing. Prevents washing.

Q. Give suggestions about fall and winter breaking.

A. 1. Break before winter rains set in. Renders more plant food ready for use and saves work in spring. 2. Never plow below the line of standing water in the soil, because the subsoil cannot be pulverized in water. The water level must first be lowered by drainage. 3. Do no deep fall plowing on deep, light, sandy land, especially elevated sandy table-lands which drift in windy weather. Such lands can be helped by adding humus, and, except in semi-arid regions, by using a winter cover crop. 4. There are some soils that for the production of cotton better not be deep fall broken, such as very rich and moist river bottoms and the virgin black-land prairies, for the evident reason that too much plant food for cotton is already available in the soil, with abundant moisture—conditions that make for an excessive growth of cotton stalks and a consequent decrease in fruitage. For cotton on such lands it is



better to plow very shallow in the spring. 5. Do not plow deeply or subsoil in the spring. The subsoil is generally too full of water, and it is too late for much effective action of the air upon the soil and for the winter rains to firm the subsoil before planting cotton. 6. Where land is level, with stiff subsoil, it should be broken into ridges from 5 to 10 feet wide, with deep water furrows having a good outlet for drainage. This will reduce washing and deepen the loose soil so that air and warmth may better do their work of preparation for plant growth.

Q. What constitutes a good seed bed?

A. Land deeply broken, thoroughly pulverized, full of humus and fertilizing elements. Has the following advantages: Increases chemical action and multiplies bacterial life, thus providing more food. Stores more moisture and loses it less rapidly. Increases number of roots a plant will throw out, and allows plant to root deeper and find permanent moisture.

Q. What can you say about corn roots?

A. Tap root of corn short; corn roots extend into soil to depth in proportion to amount of moisture and depth of breaking; feed roots near surface; extend several feet; do not disturb.

Q. In what respect do cotton roots differ?

A. Tap root long; other qualities similar to corn roots.

Q. What suggestions are given relative to procuring good seed corn? 2. Testing seed corn?

A. Select in field, on own farm, etc. 2. Box made of sawdust or sand; high germinating power, strong system of roots.

Q. What are six items to be emphasized in making a corn crop?

A. Breaking, fertilizing, good seed, cultivating, planting, spacing.

Q. What about early planting of cotton? 2. Depth of planting corn and cotton?

A. Wait until danger of frost is gone, but as early as possible. 2. Early spring, shallow; late spring, deeper. One-half to  $1\frac{1}{2}$  inches deep.

Q. How much cotton seed to an acre, and why?

A. One peck to one bushel, depending on mechanical condition of soil moisture, and how cotton seed are planted; also kind of implement used in planting.

Q. What are instructions as to width of rows, and distance in drill of cotton?

A. Rows about one foot wider than cotton grows high; distance in drill depending on moisture and fertility.

Q. Why plant alternate rows of corn and cowpeas and peanuts?

A. Use as a form of rotation, and for semi-arid sections and poor soils.

Q. What is meant by shallow cultivation? 2. Late cultivation? 3. Timely cultivation?

A. 1. Not more than 1 to 4 inches, depending on nature of soil. 2. Until crop is about mature. 3. After each rain and whenever conditions demand it.



Q. What is meant by dust or earth mulch? 2. How deep should mulch be?

A. A layer of loose soil that is made on the surface to prevent evaporation. 2. One to four inches deep, depending on soil and locality.

Q. What is said about section harrows in the cultivation of crops?

A. Use before and after planting. Run across rows several times.

Q. What crops should be planted on thin poor soil, and why?

A. Peanuts, peas, or other legume; rye, oats and sorghum to turn under for humus and fertilizer.

Q. Define legumes; name three best for Oklahoma conditions. Why?

A. Plants that collect free nitrogen from the air and store it in nodules on their roots. Bears its seed in pods, hence the name. Peas, peanuts, and alfalfa. Drouth risistant.

Q. What of winter cover crops?

A. Rye, oats and vetch, or clover; prevent leaching and washing; furnish fertilizing materials.

Q. Give best methods of preventing erosion of hill lands.

A. Deep breaking and terracing.

### **A Word to the Wise is Sufficient**

You look at the label on a  
package, but eat the contents

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## Good Roads

The moment one mentions the word "Roads" the reader is quite likely to call to mind the one which has made the most vivid impression on his mind. A railroad man is apt to think of some particular piece of track; an automobile enthusiast is quite likely to think of some particularly fine pavement, or perhaps if he has even been stuck he will recall with disgust his experience.

The farmer is likely, however, to think of the particular road he uses to haul his products from his farm or plantation to market. So far as he is concerned that particular road is the most important road on earth.

It is utterly impossible for the average community to prosper if

they must transport the results of their labor over very bad roads. A learned man once said: "The degree of civilization, progress and education of any community can be well judged by the number and condition of its highways."

Even a poor farm so located that by virtue of a good road, a market for its products can be reached, is worth more money than a fine piece of land out of reach of a road to a market.

In Oklahoma, particularly along the Fort Smith & Western railroad, conditions for good wagon roads or highways are such that any community can, with reasonable expense, have not only serviceable but excellent roads.

This condition can not be at-



tained without some care. Most farmers can, with a small amount of work, make and maintain a good road along their farms, if the correct principle is pursued. Any one who has ever driven a team over country roads can recall places that are nearly always bad and other places that are perfectly firm in even the wettest seasons.

If you will notice carefully these good places you will find that they are so located that they drain themselves perfectly and at no time during the year do they become wet over "skin deep," even in the hardest rains. You will also notice these places have never been much disturbed. The farmer cultivates his soil that it may receive moisture, and continues to cultivate it so that it will retain moisture. You want just the reverse condition on your road, so remember and *do not* plow and scrape a lot of loose dirt onto your road when you are trying to "improve" it. This loose dirt usually resembles a hog wallow directly after a good soaking rain.

To make and maintain a good road that will be serviceable under light traffic at all times, four things are necessary. First comes *general drainage*. Culverts and bridges must be provided to permit the flow of water from one side of the road to the other. The road must be graded up where necessary to get it above water in the low places, and down in cuts sufficiently to make the handling of a fair load possible. Local conditions will govern the above requirements.

Second, *side drainage*. Ditches must be provided to carry away all water along each side of the road

sufficiently deep to thoroughly drain the sub-grade. If conditions are such that ditches will not do this thoroughly, then drain tile should be used in addition.

Third, *surface, or top drainage*. This is of great importance and is accomplished by sloping the road from the center down to each side steep enough to carry off rain water rapidly. Your road should *not* have a *flat* top, but should resemble the roof of a house.

Fourth, *maintenance*. This is best accomplished by use of a *King drag*.

The King drag should be used after every rain (at least for a while) just before the ground has become dry, at the time when it will crumble readily. A few trials at this will teach you more than a volume of instructions.

What you must keep in mind is that you want to smooth down as little dirt as possible, and still enough so that no water can remain on your road at any point.

The slightest depression on the surface of your road will retain a little water and this will soften the dirt so it will wear away rapidly. This is the way holes in the surface are started and these in time will become ugly ruts. However, if just enough fine dirt is put into these depressions to fill them, traffic will smooth and pack it so that water cannot remain. The best and simplest way to do this is by the frequent use of a King split log drag. Readers not familiar with this drag can make one by following these simple directions:

Get a log about ten inches or a foot in diameter and about six feet long; split it in two, making both



parts equal. Set these pieces one behind the other on edge so that the round part of both pieces will be in the same direction, that is, to the rear. The front part of the log, the split face, should stand vertically. Place the two pieces about four feet apart and keep them parallel. Nail a 2x6 from the front end to the back one at each end, square across the top side. Then put one 2x6 piece across from one split piece to the other between these two. Now nail a brace diagonally across the top from one corner to the opposite corner. This is your King split log drag complete. Put a chain on the right end about five feet long and one on the left end that can be made longer or shorter as desired. Fasten the loose end of each chain in your double-tree clevis.

Now you will see you are all ready to hitch up to a first class road scraper. One that is just heavy enough to smooth your road nicely and still handle a minimum amount of dirt. If you will drag over the road along your property at the proper time once or twice each way, gradually sloping it up towards the center, it will not be very long before you get a good road. You can cause the drag to work at any angle by changing the length of chain which reaches from the clevis to either end of your drag.

You may ride on the drag, and your weight on either end will help in regulating the action of leveling and scraping the dirt towards the center.—B. F. Beckman.

# W. J. ECHOLS & Co.



WHOLESALE  
GROCERS



Fort Smith, Arkansas





## Fall Plowing

*By Dean Martin Nelson, College of Agriculture, University of Arkansas, in Ozark Produce Journal.*

Is fall plowing better than spring plowing? Let us see. Why do we plow (break) the land at all. We plow the land for several reasons, although we usually think of one chief reason and that is to put the soil in loose condition for planting seed. Now, when we look deeper into the question, we find several other important reasons for plowing. The most important of which is to open up the soil and expose all parts of it as far as possible to the air. This is really the fundamental principle in all soil tillage.

There are countless millions of organisms in the soil at work for the farmer and these organisms must have plenty of air. There are chemical changes that go on in all

good soil and to make these changes possible, air must be supplied. Now the work of soil organisms and the chemical changes in the soil are not done in a day. And when we plow land a few days before planting, we do not allow time for these changes to take place. Right here is where fall plowing meets this need by allowing all winter for the changes to go on in the soil. The freezing and weathering of soil is a very effective means of improving the physical condition of heavy packed and hardened soils and unlocking stores of plant food. Fall plowing makes this possible.

Another reason for plowing is to turn under grass, weeds, stubble, stalks and manure and this is best



done in the fall to decay or rot all such matter earlier in order that it becomes available for the plants early in the growing season. Then, too, when such matter is partially decayed, it will not cause trouble by catching on to planting and cultivation implements. Fall plowing largely reduces that difficulty.

We have come to know the value of moisture stored in the soil for use of the growing crop. The season just closing has driven this lesson home to us. The time to store this moisture is during the winter and spring. Moisture cannot be stored in a packed soil. It must be opened up good and deep to let the rain fall in. Here, again, fall plowing does the work.

Good farm management demands that we do fall plowing. To defer plowing until near seeding time does not distribute labor well. It means a rush and over-work of the farmer and his horses for a season,

else delay in planting and frequently all planting is so late that the farmer can not hope for anything but an inferior yield. Do the plowing early when you can take time to do it right and seeding does not have to wait for the plowing.

How shall the plowing (breaking) be done? Thorough and complete; not bedding, leaving portions untouched. The plowing should be deep; if necessary, turn up a couple inches of subsoil. It will weather during winter and become productive. But better still, plow deep and subsoil in addition. Then you have a volume of loose soil in which plant roots will grow and feed. Then you have a reservoir for storing moisture to carry crops through drouth. But first and last, you have a productive soil. You have made it so by making it possible for natural changes above mentioned to take place. You see the chief benefits from good tillage are lost in spring plowing.

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## Demonstration Notes, Okemah, Okfuskee County, Okla.

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L. H. Niells, Route 2, Okemah. Has accepted benefit of demonstration teaching for two seasons. Breaks land from November to February 9 inches deep. Used Mebane seed cotton. Devoted especial care to five-acre demonstration plat in cotton. Yield 4,500 pounds seed cotton, equivalent to an average yield of 36 pounds of lint in the 100 pounds seed cotton, say 1,600 pounds of lint for the five acres. Twelve hundred and

eighty pounds of seed cotton from this plat, carefully selected for seed, gave yield of 495 pounds of lint about 39 pounds of lint to the 100 pounds of seed cotton. Chinch bugs practically destroyed his corn. Mr. Neills is a tenant and when he began with the demonstration work two years ago he was in debt, discouraged and playing what he knew to be a losing game in the system of farming he was then following. Now he is getting ahead,



feels decidedly encouraged and these results have followed from better methods of farming, despite the fact that practically no rain fell upon Mr. Neill's farm, or anywhere in the vicinity of Okemah from the 20th of May to the 10th of September, a period of 113 days. This is an excellent proof that right methods not only can but do overcome the most extreme effects of drouth and heat. One especially cheering feature of the prosperity now enjoyed by this progressive young farmer is a band of healthy, bright-eyed, comely and well-dressed children, the youngest of whom was but a few days old when these facts were obtained.

W. J. Ely, Route 2, Okemah, Okfuskee County, whose farm adjoins that of Mr. Niells, had also demonstration plat of five acres in Mebane cotton. Yield 4,000 pounds of lint on the plat. Lint yield 37 pounds from 100 pounds seed cotton. Very evident hot winds have little power to injure where moisture is carefully retained in the soil.

J. J. Minton, Okemah, Okfuskee County, obtained about 40 pounds of lint from 100 pounds seed cotton on demonstration plat planted with Mebane seed. Much pleased with results obtained and will continue to benefit from the instruction.

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## Organic Matter and Humus

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Humus is animal or vegetable matter in a nearly complete stage of decay. Well rotted compost closely resembles humus. It is a black, waxy, plastic substance around soil particles.

The benefits of humus are both physical and chemical. In sandy soils its plastic nature enables it to bind the grains together and make the soil more compact and at the same time increase the water-holding capacity of the soil. But humus is less plastic than clay and has a tendency to separate its fine particles, producing a crumb-like structure. Here also the water-holding capacity is increased, this time by separating the too closely crowded particles so as to offer greater space between them. Again unless the soil be saturated with

water, the aeration of clay is much improved.

Both sandy and clay soils work much easier when well supplied with humus for they keep more moist and do not become too light, nor too stiff and lumpy. The better aeration and darker in color make the clay soils warmer and much earlier.

Chemically humus is beneficial to the soil, first because in its gradual decay it furnishes nitrogen, phosphorous and potash in those forms most readily used by plants. In addition it is beneficial because in its decay acids are formed which make soluble the mineral food bound up in the insoluble rock particles.

The presence of humus in the soil supports the growth of many kinds of bacteria. These bacteria



require air so that continuous cultivation, by getting more air into the soil greatly hastens the humus loss. Hot weather and bare soils also favor this.

No opportunity to increase the humus supply or to save the products of its decay should be lost. All manure from farm stock should be hauled and spread upon the fields. This is one important source of profit from live stock.

All corn and cotton stalks, straw or any other refuse from crops should be turned under at breaking time. Such stalks as crimson clover, cow peas, rye, buckwheat, etc., should be used as cover crops in the fall and turned under in the spring to furnish green manure. These cover crops also prevent leaching of nitrogen freed during the warm days, and store it for the next season's crop.

Every farmer should adopt and

follow a definite crop rotation best suited to his surroundings. This rotation should provide for two or more cover crops to be pastured and later turned under as green manure. For example, on some farms a three-year system of cotton with rye at last cultivation, corn with cowpeas at last cultivation, and oats followed by cow peas may be recommended. The rye following the cotton and the cow peas following the corn should be turned under to furnish nitrogen and humus for the crops that follow. These crops also enable the soil to recover from the effects of the last cotton or corn crop and put it into condition for the next. Unless barnyard manure is available in large quantities this is the only way in which a field can be kept in good cropping condition. — *Experiment Station, Fayetteville, Arkansas, in Ozark Produce Journal.*

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### A LAST WORD.

We have in this little publication tried to furnish, for the benefit of all the farmers who patronize the Fort Smith and Western Railroad, proof of the great practical benefits to be obtained from the methods and instruction of the United States farm demonstration work. In order to aid the realization of this object we propose to maintain at our expense, one or more demonstration plats adjoining our right of way, that those who travel on our road may see the good work our United States Department of Agriculture is freely offering on equal terms to all those who in good faith will avail themselves of its benefits.

The interest we have in the general acceptance of this teaching has been clearly explained in a foregoing article of this publication and should require no further argument for its justification. Suffice it to say that the acreage now devoted to cotton growing, tributary to our road, is sufficient we are earnestly convinced, despite the risks of the seasons, to yield us a good profit in cotton tonnage, if generally cultivated as the government instructors advise.

It is our purpose therefore to endeavor to place a copy of this publication in the hands of every farmer along our line. Moreover, we propose to spare neither trouble



nor expense to freely advertise the character and methods of this much-needed instruction. Take the boys' and girls' club work, for instance. No one can measure the *all around* influence for good this instruction is sure to have upon the young. The human mind is so constituted that it demands and must have an interest, good or bad. The young do not, as some unjustly suppose, naturally prefer evil to good. Nature abhors a vacuum. Left without right influences, the young usually follow the

lines of least resistance, heed the nearest suggestion, good or bad, and drift with the current. A wise modern philosopher has said, "Labor is Worship." In other words, useful labor always affords a right influence. Burbanks and Edisons are now in the making, be assured, in this valuable school of methodical training with its host of more than 5,000 earnest young Oklahomans already enrolled and at work, not to mention the many thousands of equally earnest recruits the near future is sure to bring forth.

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#### DEPT. OF AGRICULTURE IS READY TO AID COMMUNIT- TIES OR INDIVIDUALS IN ROAD BUILDING.

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So far has the government advanced in the problems connected with road construction that efforts are now being made to teach the country that the expenditure of large sums of money on certain types of roads may result almost in a total waste. A road built of materials which would be ideal in one locality may not serve the purpose at all elsewhere and the money expended may bring scarcely any result in reducing the cost of hauling or making it easier for the farmer to get to the shipping point with his crops.

In order to aid farmers who want to build their own roads and to assist various communities that desire to improve the roads nearby, the Office of Public Roads of the Department of Agriculture has em-

ployed experts to test all materials and study their usefulness on roads subjected to certain traffic conditions. The Office of Public Roads is now acting in an advisory capacity to many states and counties, giving a most practical form of national aid.

On roads where there is a very heavy traffic, it has been found that certain kind of materials are better than others, and that while one kind of binder may not serve the purpose at all, another kind is ideal and preserves the road indefinitely. Millions of dollars doubtless have been wasted in the past because of the absence of the scientific knowledge which is now being obtained. There is no longer any excuse for any community building the wrong kind of road, as the Office of Public Roads stands ready to furnish any information that may be desired as to the course that should be pursued.

Address Office of Public Roads of the Department of Agriculture.





*Community Road Work in Oklahoma.*

#### DEMONSTRATION CORRESPONDENCE AND NOTES.

Guthrie, Okla., Nov. 20, 1913.

Mr. W. M. Bushnell,  
Fort Smith, Ark.

Dear Sir: I am sending you some additional data on crops from what you got the day you were here. I am also sending you some photographs. I suppose you will recognize the one of the apple pile—it was taken the next day after you were here. I will say, however, that I added a thousand bushels to the pile the next day after the picture was taken. We are marketing them now at the rate of about one hundred bushels per day.

I had hoped to hear from the Oklahoma City and Muskogee fairs before this, as I am confident Logan county will make a good showing there, but the prizes have not been awarded yet.

I am enclosing you a copy of a letter from one of my boys in the

clubs. I had it typewritten just as he wrote it. I get quite a number of letters similar to this one, and I tell you I appreciate them. This is a great work we are engaged in.

Mr. T. S. Smith finished the first picking and got, all told, 4450 pounds on the two acres. This is the field we inspected.

Mrs. Wild has a yield of 666 pounds per acre with a lintage of 35 per cent.

Mr. Fleet Stevens' yield was 553 pounds of Mebane that ginned out 35½ per cent of lint.

Mr. Ephrim Brown ginned 1440 pounds of Mebane that made 503 pounds baled.

Mrs. Mable Suit says her thirty acres of Mebane cotton averaged 800 pounds seed cotton per acre and turned out 34 per cent lint.

Mr. August Tisher reports a yield of over fifty bushels of corn per acre on twenty-seven acres.

These parties are all on my list as demonstrators. I have a boy in the kafir-corn club that made a



yield of ninety bushels and twenty-seven pounds on his acre.

William Howland, a club member, reports a yield of one thousand pounds of Mebane cotton per acre in the seed with a lintage of 34 per cent which sold at  $13\frac{3}{4}$  cents per pound, at a cost of \$6.92 per hundred pounds to produce it.

Clarence Howland, a club member, reports a yield of nine hundred and eighty-five pounds of Mebane cotton per acre in the seed. Lintage 34 per cent. Sold for  $13\frac{3}{4}$  cents per pounds; seed sold for \$8.45 per acre. Expense \$23.15 per acre. Net profit \$30.40 per acre.

Yours very truly,

J. A. FARQUHARSON,  
County Agent.

Mr. Farquharson,  
Special Agent,  
Guthrie, Okla.

Dear Sir: I am glad to be a

member of the cotton club, for I like to raise and pick cotton. I plowed my land December 21, 1912, and I plowed it about six inches deep or deeper, and then I harrowed it several times and then planted my cotton May 21, 1913, and then harrowed it two times and then I began to cultivate my cotton. I cultivated it four times and the hot winds blew in August, but it did not hurt my cotton much and my cotton grewed fine. I picked my first picking the first part of September and finished picking my cotton November 1, 1913, and have picked out about 1000 pounds to an acre and got the highest prices, as I had pure Mebane cotton and ginned out 34 per cent and sold some as high as  $13\frac{3}{4}$  cents a pound for lint. Hoping that Logan county wins first at the State Fair and I will be ready to join the B. C. C. again next year,

Very respectfully,

WILLIAM HOWLAND.

## Attention

The Fort Smith & Western Magazine is published quarterly and is devoted to the interests of the farmer and merchant.

If you will acknowledge receipt of this copy, giving your name and address, we will mail you, free of charge, future issues of this magazine.