Texas Agricultural Experiment Station.

BULLETIN NO. 26.

MARCH 1893.

COST OF COTTON PRODUCTION
AND

PROFIT PER ACRE.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.

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GEO. W. CURTIS, DIRECTOR,
College Station, Brazos Co., Tex.

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COX, "THE NEAT PRINTER."
1893.
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In the production of cotton at high prices the margin has always been wide enough to prevent disaster, and very few have thought it necessary to ascertain the exact cost of its production. For the past few years we have taken special pains to inquire of leading cotton planters in different portions of the state, and in a great majority of cases have found a very decided lack of accurate information respecting cost of producing the staple so extensively grown. Last season a circular letter was issued from the station requesting certain information and substantially as follows:

"Dear Sir: —Desiring information relative to the cultivation and the cost of production of cotton in different sections of the state, we address to you the following, to which we trust you will give your prompt attention and favor us with an early reply. If you have not the exact data at hand please make a close estimate in each case:

Cultivati6n of Cotton and Cost of Production.
1st. Preparation before planting; (a) time of preparation; (b) how prepared? (c) At what cost per acre?

Planting.
(a) Time of planting; (b) what kind of planter used? (c) Cost of planting per acre?

Cultivation.
(a) How many times cultivated; (b) implements used for each cultivation; (c) cost of each cultivation per acre; (d) time of "laying by."

Chopping.
Cost per acre.
Cost per hundred pounds.
Picking.
Yield per Acre.
(a) Yield of seed cotton; (b) yield of lint.
Total cost of producing one bale of cotton, computed on the basis of $1.00 per day per man; $2.25 per day for man and team (double); $1.62 1-2 per day for man and single horse or mule.
The above figures to include the wear and tear on machinery, interest on investment etc.
How do the above figures compare with your prices for labor of man and teams and wear and tear on machinery—are they more or less? state difference, if any,
Total cost of producing and marketing a bale of 500 pounds.
How much does land rent for per acre in your county? How much do you pay field laborers per month? Also day laborers?"

Special pains were taken to place this circular request in the hands of one or more of the best planters in each of the different soil sections of the State; but it is worthy of note that many of these planters, either did not consider the matter of sufficient moment to
warrant a reply, or were unable to furnish intelligent data on the subject as relating to their own crops. Some few opinions were received not claimed to be supported by actual results and these we have not published as we wished facts and facts only.

Some six or eight careful, practical cotton growers in different parts of the state, however, kindly volunteered to furnish records desired, and summaries of their results with extracts from their explanatory letters accompanying are published herewith and form a most interesting and important part of this bulletin. It will be seen that perfect uniformity in the manner of reporting results could not well be secured, and that therefore an exact comparison cannot be made. In the statements from our own records, however, we have aimed to give cost of production under different conditions as to fertility and consequent yield, and the relation which cost of production bears to returns at different prices for cotton; that the line between profit and loss may be easily seen and that the circumstances causing results to vary may be applied with little trouble to suit the peculiar conditions of different individuals.

Mr. W. A. Clark of Temple, Texas, sends the following exact figures—the first (No. 1) showing profit and loss with a “long staple” cotton in 5 foot rows, 15 loads barn yard manure applied in November before plowing, and double cropping by planting English peas for early market in January; the second (No. 2) showing results of Mr. Clark’s enterprising son Homer, on another piece of land, without manure, and with ordinary “short staple” cotton in 3 1-2 foot rows:

**STATION NO. 1.**

*W. A. Clark, Temple, Bell Co., Texas, 1892.*

**ONE ACRE.**

(Long staple cotton after peas.)

Rows 5 feet apart; manure applied in the fall.

<table>
<thead>
<tr>
<th>Cost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent of land</td>
<td>$4.00</td>
</tr>
<tr>
<td>Fifteen loads barn-yard manure at 50c $7.50; allowing 1-2 to benefit peas leaves chargeable to cotton</td>
<td>3.75</td>
</tr>
<tr>
<td>Breaking once</td>
<td>1.50</td>
</tr>
<tr>
<td>Planting cotton</td>
<td>0.20</td>
</tr>
<tr>
<td>One bushel long staple seed</td>
<td>1.00</td>
</tr>
<tr>
<td>Plowing 1st time</td>
<td>0.50</td>
</tr>
<tr>
<td>Plowing 2nd time</td>
<td>0.50</td>
</tr>
<tr>
<td>Plowing 3rd time</td>
<td>0.50</td>
</tr>
<tr>
<td>Plowing 4th time</td>
<td>0.50</td>
</tr>
<tr>
<td>Chopping—after 1st plowing</td>
<td>0.50</td>
</tr>
<tr>
<td>Picking 2100 lbs. seed cotton at 60 cents per cwt.</td>
<td>12.60</td>
</tr>
<tr>
<td>Marketing cotton</td>
<td>1.00</td>
</tr>
<tr>
<td>Ginning, Bagging and ties (omitted by Mr. Clark in estimate) average $3.00 per bale</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Total cost per acre, including rent of land | $30.55 |

**Proceeds.**

| 650 lbs. lint sold at 9c, actual price | $58.50 |
| 40 bushels cotton seed at 10c | 4.00 |

Total proceeds per acre | $62.50 |

**Net profit per acre.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$62.50</td>
<td>$62.50</td>
</tr>
</tbody>
</table>
(Mr. Clark's full statement covering cost and proceeds for an entire year, for one acre including both peas and cotton, and showing to good advantage the net profit in thorough systematic and intensive farming, appears later on—statement No. 8.)

Statement No. 2.

Homer Clark, Temple, Bell Co., Texas, 1892.

One Acre.

(Ordinary short staple cotton.)

Rows 3 1-2 feet apart; no manure applied.

Cost.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent per acre</td>
<td>$4.00</td>
</tr>
<tr>
<td>December breaking</td>
<td>1.50</td>
</tr>
<tr>
<td>February re-breaking</td>
<td>1.25</td>
</tr>
<tr>
<td>Planting May 5th</td>
<td>0.25</td>
</tr>
<tr>
<td>Cotton seed</td>
<td>0.25</td>
</tr>
<tr>
<td>Plowing 1st time</td>
<td>0.50</td>
</tr>
<tr>
<td>Plowing 2nd time</td>
<td>0.50</td>
</tr>
<tr>
<td>Plowing 3rd time</td>
<td>0.50</td>
</tr>
<tr>
<td>Plowing 4th time</td>
<td>0.50</td>
</tr>
<tr>
<td>Chopping after 2nd plowing</td>
<td>0.62</td>
</tr>
<tr>
<td>Hoeing out after chopping</td>
<td>0.50</td>
</tr>
<tr>
<td>Picking 1,450 lbs. seed cotton at 60c per cwt.</td>
<td>8.70</td>
</tr>
<tr>
<td>Marketing</td>
<td>0.75</td>
</tr>
<tr>
<td>Ginning, Bagging and Ties (omitted by Mr. Clark in statement) averaging $3.00 per bale</td>
<td>2.50</td>
</tr>
</tbody>
</table>

Total cost per acre, including rent of land: $22.32

Proceeds.

<table>
<thead>
<tr>
<th>Item</th>
<th>Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>418 lbs. lint at 8 1-2c, actual price</td>
<td>$35.50</td>
</tr>
<tr>
<td>50 bushels cotton seed at 10c</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Total proceeds per acre: $38.50

Net profit per acre: 16.18

In further explanation of the last above (No. 2.) Mr. Clark advises in the letter which accompanied statements, that his son Homer, made a special attempt to beat him in yield of cotton on his pet wide row theory, and that as a matter of fact he actually raised 200 lbs. more seed cotton per acre with his 3 1/2 foot rows than did Mr. Clark, Sr. with his five foot rows—the two patches being side by side and no manure being used in either case. The acre reported by Mr. Clark, Sr., under Statement No. 1, was of a special improved variety and was handled on better land and under manure application—facts which fully explain the large yield reported.
Mr. McCravy explains his methods clearly in a very interesting letter from which we make the following extracts:

"**I would say that the cost of cultivation per acre will vary according to, or on account of season; nearly as much as the yield per acre.**

"Prepare land by breaking (in April or May) with 11 inch steel beam walking plow, with three horses abreast, breaking an average of 2 1-2 acres per day; cost $2.87 per day or $11.16 per acre. Pulverize twice before planting with four horses to six foot Disk harrow, 1-2 lap; six acres per day at $3.50 or 58¢ per acre.

"Plant in last part of May and all through June with one horse Banner cotton and corn planter flat, six acres per day; cost 27¢ per acre, and 1-4 to 1-3 bushel seed .08c.

"Sometimes chop to stand before, and sometimes after plowing around close up to cotton with double shovel stock, with two 12 inch buzzard wing sweeps attached. Chop twice, averaging four acres per day; cost 23 cents per acre each time, total 50c.

"Plow two or three times, owing to season, with double shovel sweep soon after rains when possible; four acres per day, 41¢ each time, average 2 1-4 times, total $1.02 per day. 'Lay by' in August.

"Average yield about 800 lbs. seed cotton, making 250 lbs. lint less bagging and ties.

"Cost of picking about 65¢ per 100 lbs. or about $2.50 per acre.

"Not prepared to say which is the best variety to grow. Have grown the different long limbed varieties 'till last year. The Boll worm and Grass-hoppers were very bad this year, and being over cropped with hay, failed to poison.

"Cost of three men, wagon and team one day to poison 25 acres; including poison, 20¢ per acre.

"Hauling cotton to gin $2.00 per bale or $1.00 per acre. See 1 to pay for ginning, bagging and ties. Hauling to cotton yard and weighing, 35¢ per bale or 17¢ per acre. Total cost of producing one acre of cotton, (including rent of land) $1.68.

"Wages named in circular are about right for an average.

"Total cost of producing one 500 lb. bale, and marketing it (including rent
COST OF COTTON PRODUCTION.

of land) $27.36. ** Good labor $20.00 per month and from 75c to $1.00 per day.

"Land rents for from $2.00 to $5.00 owing to quality, quantity, condition and location; the good sandy land and black land back in county, say ten miles from town and depot, not over $5.00 nor less than $2.00 per acre.

"My farm is of black sticky soil, except about 1-5 which will scour when rather dry, and it seldom gets too dry to plow the whole farm.

"The cost of cultivation is considerably reduced in drouthy years, one chopping and one plowing being sufficient as there is sometimes no rain after planting until in September. **

J. M. McCrory."

STATEMENT No. 4.

G. L. Stone, McGregor, McLennan Co., Texas. 1892.

ONE ACRE.

(Ordinary short staple cotton.)

Rows (?) feet apart; no manure applied.

Cost.

Rent of land—1-4 of lint crop less expense—ginning, bagging and ties, amounting to $3.96

Breaking—four horses to sulky plow $1.75

Pulverizing, four horses to pulverizer 0.40 2.15

Planting 0.25

Cotton seed 0.10 0.35

Plowing—four cultivations, 25c each 1.00

Chopping and hoeing out 1.00

Picking, 800 lbs. seed cotton at 50c per cwt. 4.00

Marketing 250 lbs. lint 0.50

Ginning, bagging and ties at 70c per cwt. of lint 1.75

Total cost per acre including rent of land $14.71

Proceeds.

250 lbs. lint at 7c per lb., actual price $17.50

550 lbs. cotton seed, 16 bushels at 10c per bushel 1.60

Total proceeds per acre $19.10

Net profit per acre 4.39

$19.10

We extract as follows from Mr. Stone's explanatory letter accompanying statement:

"I enclose to you a statement showing the actual cost per acre in this section of the country, or at least what it cost me. You will see from my figures in breaking land, I have charged $1.00 for hand per day and 50c each for four horses, and 50c for wear and tear of sulky plow, making $3.50 for one hand, team, and plow.

"One hand and four horses with a good sulky plow can make very easy an average of two (2) acres per day, making the cost per acre $1.75.

"In regard to time of preparation will say that all enterprising farmers in this black land section break, or prepare their land in the fall or early part of the winter. In the spring land should be well pulverized before planting. This is done with a good pulverizer. One man and four head of horses will pulverize eight acres per day, allowing $1.00 for the hand, 50c each for four horses, $2.00, and 25c for wear and tear of pulverizer, making $3.25 per day; average per acre 40c. In the same proportion all other work throughout the making and gathering the crop. Farm bands can be obtained at $12.00 to $15.00 per month. Labor by the day on the farm, $1.00 per day with the exception of harvesting grain. **

G. L. Stone."
STATEMENT No. 5.
J. F. Myers, Hutto, Williamson Co., Texas, 1892.

ONE ACRE.
(Ordinary short staple cotton.)
Rows (?) feet apart; no manure applied.

Cost.

Rent of land 1-4 share lint and seed .................................................. $7.98
Breaking, walking plow and two horses .................................................. $2.00
Harrowing, two horse harrow ................................................................. .15
Marking rows with marker .................................................................. .15
Laying off rows ....................................................................................... .34
Laying off rows to plant ......................................................................... .34 .2.98
Planting ...................................................................................................... .25
Cotton seed ................................................................................................ .15 .40
Plowing, four times with cultivator, 34c each time ............................... 1.36
Plowing once with sweep ........................................................................ 2.50 .1.61
Chopping and hoeing out, twice 50c each time ........................................ 1.00
Picking 1279 pounds seed cotton at 50c per cwt ................................... 6.39
Marketing 426 pounds lint ...................................................................... 95
Ginning, bagging and ties paid by seed at gin .........................................

Total cost per acre, including rent of land ............................................ $21.31

Proceeds.

423 lbs lint at 7 1-2c per lb., actual price ............................................... $31.92
$33 lbs. cotton seed, allowed for ginning, bagging and ties. ...............

Total proceeds per acre ........................................................................ $31.95

Net profit per acre ................................................................................ 10.64

$31.95 $31.95

Mr. Myers cultivated 26 acres on the farms of Mr. W. H. Farley & Bro. and paid for rent 1-4 of the lint and seed. His figures are not estimated but show exactly what he paid and what he received, average per acre for the 26 acres cultivated.

Mr. Farley, in sending Mr. Myers' statement, gives the following additional data which on account of its interesting character we publish in full; although the latter part is foreign to the subject under discussion:

"Enclosed I hand you Mr. Myers' statement as to cost of cultivating and yield of one acre of cotton. Mr. Myers is a tenant of my brother and had 21-3 acres from me, planted in cotton, upon which he paid me $19.20 in money for 1-4 the cotton and the cotton seed.

"Mr. Myers keeps accurate accounts of all his farm work and has paid larger rent than any other of my tenants—he held some of his cotton and averaged 7 1-2c.

One tenant on 38 acres of cotton has paid an average of $6.10 per acre. One on 15 acres has paid an average of $7.00. My son, F. H. Farley, has 12 bales cotton unsold, but I estimate that upon 80 acres he will pay an average of $7.70 to $7.75 per acre—this includes the seed. I have not made an estimate of all my tenants but this is a fair statement, possibly a little over.

"The cash price of land rental is usually $5.00 per acre, but there is very little land rented for money rent.

"The usual rental here is on shares, viz: 1-4 of the cotton and cotton seed and 1-3 of all other products except a garden patch, which is free of rent.

"The landlord furnishes house and fuel—wood or coal; if wood the tenant gets it in the woods—if coal, he hauls it from the depot. The landlord also furnishes sufficient pasture for work team and milch cows, say 10 to 15 acre pasture to a family. The landlord furnishes material and tenant keeps up the fence around his part of the farm and pasture.
"My Corn rent has been from 13 to 15 bushels per acre. The drought injured the corn after you were here and very little of it yielded 50 bushels per acre.

As I do not cultivate any of my farm, it being all rented, I cannot tell just how much time is devoted to cotton. Forrest can tell precisely what it has cost to cultivate 100 acres but I doubt if he can approximate the cost of the cotton separately. Forrest and I sold nearly 1500 bushels of corn early at 37 1-2 cents per bushel at the pile in our feed pen—party shelling it and leaving us the shucks and cobs, which in addition to our corn tops gives as a good deal of roughness; and we are feeding 70 head of steers, four years old and over on raw cotton seed and run of the pasture which is good yet, and we are reserving the fodder until later and expect to top them off with corn and a run on the alfalfa. The reason that I am thus minute is that corn has gone down, and cotton seed has advanced in price. Can now buy ear corn at 39c, possibly 25c, and can get $10.50 per ton for the seed.

You will confer a favor by sending bulletin containing your experiences as to the relative value as to the raw cotton seed, cotton seed meal and corn as a beef ration, so that we can determine whether the change will justify the handling and extra labor between feeding raw seed and chopping and feeding corn.

My alfalfa meadow is now very fine. I think kerosene oil will counteract the fungus [see Bulletin No. 22.] as it made very little headway after using the kerosene oil. The circle from which you dug the roots, and with what I killed has not extended over two feet at any place, neither has any other circle. I sowed seed on all the dead circles; I say on, because I did not try to cover the seed at all, and I now have a good stand, I think old enough to stand any freeze that we may have this winter.

I will not state positively that I can prevent any injury from the fungus, but can determine next season.

I let my milch cows run on my alfalfa meadow when the weather is dry, so as not to tramp it into the mud, and find that it adds double to the quantity of milk, although my cows are only fed on raw cotton seed, and have run of pasture. As soon as the cows get accustomed to feeding on alfalfa I have no fears of any injury to them from dew or rain on the alfalfa.

We turned our beeves into the alfalfa and corn stalks until the wet weather set in, and I think with great profit.

I would be glad if you would turn one or more cows on your alfalfa meadow, in addition to your regular ration and ascertain actual results. Have not put my hogs on the alfalfa yet—have not had time to make the fence hog proof since the alfalfa was old enough to stand grazing, as it was planted last March. The salt and kerosene oil killed the Johnson grass.

We have about 75 head hogs and shoats that we are feeding corn to, and would let follow the cattle if we were feeding corn.

You may be sure that after reading your cotton seed and hog circular we were very careful not to let the hogs into the cattle pen.** W. H. Farley."
Statement No. 6.
Jeff Wellborn, New Boston, Bowie Co., Texas, 1892.

ONE ACRE.
(Wellborn's Pet Cotton.)

Rows (?) feet apart; no manure applied.

Cost:

- Rent of land .......................................................... $4.00
- Breaking flat with two horse plows in the fall ..................... $1.00
- Harrowing .................................................................. .20  1.20
- Planting .................................................................. .15
- Cotton seed .................................................................. .10  .25
- Plowing—cultivating every ten days or after each rain—say eight times, at 25 cents each time ........................................... 2.00
- Chopping .................................................................. .40
- Picking 1500 lbs. seed cotton by machine (Cunningham Cotton Harvester) including interest on investment or wear and tear on machine—10 cents per cwt ........................................... 1.50
- Marketing 500 lbs. lint .................................................. 1.50
- Ginning, bagging and ties .............................................. 3.00

Total cost per acre, including rent of land .................................. $13.85

Proceeds:
- 500 lbs. lint at 7 cents—actual price .................................. $35.00
- 1000 lbs. cotton seed at $6.50 per ton ................................. 3.25

Total proceeds per acre .......................................................... $38.25

Net profit per acre .............................................................. 24.40

$38.25

$38.25

Mr. Wellborn's Red river bottom farm, his "Pet Cotton," and his own indefatigable energy and progressiveness are well known to the people of this and other states, and need no comment. He is a firm believer in the Cunningham machine for picking cotton, and we are glad to give his actual figures, showing the net profit per acre he has made by using the machine for picking. From his letters accompanying statement we extract:

"* * * This is on red river bottom—without overflow. The hill lands make about half as much as the bottoms, and will cost about one-third more per bale. * * * I include wear and tear of machinery in my estimate. * * *"
COST OF COTTON PRODUCTION.

STATEMENT NO. 7.

W. G. Johnson, Reagan, Falls Co., Texas, 1892.

ONE ACRE.

(Ordinary short staple cotton.)

Rows four feet apart; no manure applied.

Cost.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent of land</td>
<td>$3.50</td>
</tr>
<tr>
<td>Breaking and harrowing, cost of man only (teams and tools not counted)</td>
<td>.57</td>
</tr>
<tr>
<td>Planting, including seed (teams and tools not counted)</td>
<td>.20</td>
</tr>
<tr>
<td>Plowing five times (teams and tools not counted)</td>
<td>.82</td>
</tr>
<tr>
<td>Chopping and hoeing</td>
<td>.56</td>
</tr>
<tr>
<td>Picking 800 pounds of seed cotton at 50 cents per cwt.</td>
<td>4.00</td>
</tr>
<tr>
<td>Marketing 250 lbs. lint</td>
<td>.50</td>
</tr>
<tr>
<td>Teams and tools to cultivate one acre as above</td>
<td>2.50</td>
</tr>
<tr>
<td>Salary of Manager</td>
<td>1.50</td>
</tr>
<tr>
<td>Ginning, bagging and ties paid by seed at gin</td>
<td></td>
</tr>
</tbody>
</table>

Total cost per acre, including rent of land: $14.15

Proceeds:

- 250 lbs. lint at 8½ cents per pound: $21.25
- 350 lbs. cotton seed allowed to go for ginning, bagging and ties

Total proceeds per acre: $21.25

Net profit per acre: 7.10

Mr. Johnson handles his plantation in a closely practical and profitable manner, as indicated by above statement and the following extracts from his letters:

"** I cheerfully comply with your request; and owing to my system of farming I am able to do so with but little difficulty. I work altogether wage labor at 20 per month, they boarding themselves; about 77 cents per day. I pay only for time they put in, so you see I have no difficulty in getting at the expenses, as I keep a strict account of time, and money paid out. Moreover, my farm is in such a state of cultivation and preparation that I can break the whole of it eight inches deep, without striking a root; so you see we can make good time with the plow.

"I started December 1st with a stalk cutter, kept it filed up sharp, so it did its work well; next eight and nine inch clipper plows—rows are four feet. I run a center furrow in the middle of row with a clipper plow, and throw four furrows to that with same plow. I plow about eight inches deep; some may doubt that, but I take my measure and measure on the bar side of the furrow till I get that depth and hold it there. This completes preparation until planting time. Cost per acre 57 cents.

"Beds thrown up in December and January by planting time are so firm that a drag will not lower them sufficiently, so I ran on top of the bed a heel sweep, follow that with a railroad bar drag, and that with a Champion planter. I planted thirty acres March 13th; balance April 1st to 10th. Cost per acre, 2½ cents. Mind you I am only estimating cost of labor.

"As soon as my cotton is fairly up, or as soon thereafter as the weather or condition of the land will permit, I run around it with a sixteen inch winged sweep set flat on a cultivator; with tinders rightly adjusted there will be no reason to stop to uncover cotton, and a good team and hand will go over nine or ten acres per day—cost 8 cents per acre.

"The next thing to do is to put cotton to a stand; and it is ready for that when it has three or four leaves. What I mean by a stand is one stalk in a place two feet apart. By reference to my account book I find that chopping my cotton last spring cost me net 41 cents per acre. The cultivator follows close behind the hoes with the same sixteen inch winged sweep; with the fen-
ders on, which dirts up the young plants so completely and so rapidly that if you never witnessed the operation it would delight you to stand and watch it for hours. I followed the cultivator with a thirty-four inch sweep, set so the loose soil flows back over it, leaving no naked land beneath it. This is the most tasteful, complete and economical mode of cultivation I have ever tried. Cost of second plowing 16 cents per acre.

"The third and fourth plowings were exactly similar to the second, and they cost a little less from the fact that there was no stopping to uncover little plants; say the two plowings cost 32 cents.

"The last and fifth plowing was in July. Early in July we had a fine shower. My cotton was then too large for the cultivators. I ran round with a twenty inch sweep, run out middles with thirty-inch sweep. Cost 24 cents per acre, hoeing after first chopping estimated at 15 cents per acre. Thus we have a total cost per acre of $2.15.

"The above is almost the exact cost of labor exclusive of the pay of my manager. ** You will note I paid 77 cents per day for labor. ** I was fortunate last spring in getting what day labor I needed, for the same I paid my regular hands.

"My crop will turn out one-half bale per acre, one-third more than the average in this section.

"I estimate the total cost of producing and marketing 500 lbs. of cotton on my farm as follows:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivating two acres</td>
<td>(including team and tool)</td>
<td>$9.30</td>
</tr>
<tr>
<td>Picking</td>
<td></td>
<td>8.00</td>
</tr>
<tr>
<td>Teamster for hauling</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td>3.00</td>
</tr>
</tbody>
</table>

21.30

"Seed pays ginning, bagging and ties. **

"The varieties planted here are Hefley and Storm Proof. Bare'y thirds itself at gin. The big yields I read about, I never realize at home. The most common rent here is a bale to ten acres. ** Remember this is a history of my work for this year only, and it has been a remarkably favorable one for such work. Another year I may be found to do my work in a different way and at greater cost. In the spring of 1890, for instance, it rained so much that I was not able to get a plow in my corn until it was waist high. Then there was such a growth of grass and weeds that it was impossible to plow it otherwise than with large turn plows, throwing up high beds about the stalk, and that was all the plowing it ever got. Still I made fairly good corn and a magnificent crab grass pasture, which kept my stock till frost. The same year before I could reach my cotton, the grass and weeds had assumed such proportions that I had to use turn plows, wrap it up in middles and smother it out; and I was only able to give that cotton two plowings, beside barring off. So you see the mere book farmer who makes all his calculations in advance and expects to work up to them is always liable to disappointment as well as failure.

In the year 1890, instead of chopping to a stand, costing 41 cents per acre as this year, it cost over $1.00. I will add, cultivate with sweeps when practicable, and never deep enough to disturb the main lateral roots; and remember soil thrown up around the stalk is taken away from the roots and can do no possible good. **

W. G. Johnson."

From the above statements may be gathered something of the different conditions which are liable to confront the cotton planter in Texas. The lowest actual price at which any one submitting statements sold, was 7 cts per pound, average, as noted by Mr. Stone in statement No. 4 and also by Mr. Wellborn in statement No. 6. The actual cost of production, it is noticed, varies according to the price of labor, the method of preparation, kind and quantity of fertilizers used, and the manner and frequency of cultivation. In the case of Mr. Wellborn (statement No. 6) the machine picking reduced his cost of production at least $6.00 per acre. We have no recommendations to
make on this point: If the machine does as is claimed, it certainly should prove a paying investment for any plantation of large size; but the fact cannot be over-looked that a good many draw-backs have been found in practical operation, not all of which have yet been successfully remedied.

Mr. Clark's full statement covering an acre under his double crop forcing system—planted to English peas in January and put in cotton as soon as the peas were off—is of a profitably interesting character, so much so, that we have thought best to insert in full:

**STATEMENT No. 8.**

*W. A. Clark, Temple, Bell Co., Texas, 1892.*

**ONE ACRE.**

(English peas followed by Long Staple cotton same year.)

<table>
<thead>
<tr>
<th>Cost</th>
<th>Rent of land per acre</th>
<th>$4.00</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15 loads barn yard manure at 50c</td>
<td>7.50</td>
</tr>
<tr>
<td></td>
<td>Breaking in December per acre</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>2 bushels English peas at $4.00</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td>Plowing one fourth day</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Planting peas 1 1-2 days, beginning January 30th</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td>Picking 65 bushels peas</td>
<td>20.00</td>
</tr>
<tr>
<td></td>
<td>Planting cotton one hour</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>One bushel long staple cotton seed</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Plowing cotton four times at 50c each</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Chopping cotton</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td>Picking 2100 pounds seed cotton at 60c per cwt.</td>
<td>12.60</td>
</tr>
<tr>
<td></td>
<td>Marketing six hundred and fifty pounds lint</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Ginning, bagging and ties (omitted by Mr. Clark) at $3.00 per bale, average</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td><strong>Total cost per acre, including rent of land</strong></td>
<td><strong>$65.05</strong></td>
</tr>
<tr>
<td>Proceeds</td>
<td>65 bushels peas sold</td>
<td>$85.00</td>
</tr>
<tr>
<td></td>
<td>650 pounds lint at 9c, actual price</td>
<td>$58.50</td>
</tr>
<tr>
<td></td>
<td>40 bushels cotton seed at 10c per bushel</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td><strong>Total proceeds per acre</strong></td>
<td><strong>$147.50</strong></td>
</tr>
<tr>
<td><strong>Net profit per acre</strong></td>
<td>82.45</td>
<td></td>
</tr>
</tbody>
</table>

$147.50 $147.50

It will be seen that we have charged up the manure in full, as if it were all used by the crop the first year; when as a matter of fact it is well known that its effects will continue for a number of years with more or less decrease. As no charge was made for hauling out and spreading the manure, however, we have thought it fair to charge up the whole cost of manure in this one year. Mr. Clark asks the question, "did the manure pay?" In view of the profit made per acre not only on the peas but also on the cotton, as shown by statement No. 1, it is hardly necessary to answer that it certainly paid.

Without further comment on the statements of cost and proceeds per acre under the varying conditions of different sections, different prices and different individual methods, we present the following exact figures from our own results for 1892.

It must be remembered that our tests are not based on any unsatisfactory system of small plat culture, but are based on our prac-
tical work covering a field of 18 acres of post-oak upland soil, in which one third bale per acre is considered a fairly good crop, and from which 18 acres we made, and sold at the average price given on the following statements, fifteen bales, not one of which weighed less than 500 pounds and some as heavy as 600—a total weight of 8001 pounds of lint. Cost of labor is based on the following prices which are about an average of what we have had to pay for the last ten years, for hands and team labor, and include interest on investment, or wear and tear of machinery: $1.00 per day for man; $1.62 1-2 per day for man and one horse or mule, with cultivator or other one horse implement; $2.25 per day for man and two horses or mules, with plow, cultivator or other double team implement.

The yield for last year was the best average we have yet made, and this we find is the experience of nearly every planter who has kept yearly records. Our yield the preceding year, 1891, was also large, but not so much as last year by nearly ten per cent. The year preceding that, 1890, it was six or seven per cent less than in 1891. The percentage difference in yield just explained refers to the un-manured land as well as that which was fertilized—a fact which goes to show that our system of cultivation has tended gradually to improve the land and render heavier crops possible each succeeding year:
STATEMENT No. 9.
Texas Agricultural Experiment Station, College Station, Brazos County, Texas, 1892.

ONE ACRE.

("Bohemian" Short Staple Cotton.)

Rows four feet apart; 650 lbs. fertilizer mixture applied at planting time.

Cost of land, average price cash rent, for same quality of land per acre.................................................. $3.00

Fertilizer—300 lbs. cotton seed meal; 300 lbs. Acid Phosphate; 50 lbs. Kainit, 650 total—cost per acre........... $7.14

Mixing and spreading fertilizer per acre.......................... .45 ........ $7.50

Breaking March 3rd. to 10th.

Center furrow with bull tongue following in the same furrow with subsoil plow deep as team could pull it.

Cost per acre.................................................. 32

Bedding up; throwing two deep furrows with turning plow splitting middles deep, also with turning plow. Cost per acre.................................................. 1.55

Harrowing with smoothing harrow, March 11th to 12th.

Cost per acre.................................................. .19 ........ 2.06

Planting April 4th to 6th with Eclipse corn and cotton planter. Cost per acre.............................................. .27

Cotton seed, short staple. Cost of seed per acre.............. .08 ........ .35

1st cultivation, April 20th to 22nd, with Ford one horse cultivator.......................... .36

2nd cultivation, May 4th to 7th, same cultivator, after chopping.......................... .30

3rd cultivation, May 19th to 21st, same cultivator............... .38

4th cultivation, June 8th to 9th, with 16 inch sweep twice to the row, splitting middles with 22 inch sweep once to the row. Cost per acre.......................... .60

5th cultivation with 22 inch sweep twice to the row, first week in July. Cost per acre.......................... .38 ........ 2.11

Chopping, April 27th to May 4th. Cost per acre................ .70

Hoeing out, May 25th to 26th. Cost per acre.......................... .46 ........ 1.16

Ficking 1634 lbs. seed cotton at 65c per cwt.......................... $10.62

Ginning 544 lbs. lint at 60cts. per cwt., of lint, bagging and ties included.......................... 3.26

Hauling to gin and back with seed.......................... 1.00

Marketing:

Freight paid per bale to Houston, Texas.......................... 2.25

Commis-ion, handling etc., paid per bale.......................... 1.50 ........ 3.75

Total cost per acre including rent of land.......................... $34.90

Proceeds:

544 lbs. lint at 95-8c, average price at which cotton was sold 52.36

1080 lbs. cotton seed (17 lbs. lost in weight at gin) at $6.50

per ton (seed not sold, but price given same as price paid for seed purchased by us at time of ginning).......................... 3.50

Total proceeds per acre.......................... $55.86

Net profit per acre.......................... 20.96

$55.86 $55.86

The above statement shows exactly what was done last year on post-oak upland soil with very heavy application of fertilizer mixture as noted. In order to give a clear view of the difference between heavy and light application of manures, we present the following, showing results for 1892 with a trifle less than half (1-2) as much fertilizer (300 lbs. per acre), mixed in almost the same proportion, as will be seen by consulting statements herewith:
TEXAS AGRICULTURAL EXPERIMENT STATION.

STATEMENT No. 10.

Texas Agricultural Experiment Station, College Station, Brazos Co., Texas, 1892.

ONE ACRE.

("Bohemian" short staple cotton.)

Rows four feet apart; 300 lbs. fertilizer mixture applied at time of planting.

<table>
<thead>
<tr>
<th>Cost.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent of land per acre ................................................................................................................. $ 3.00</td>
</tr>
<tr>
<td>Fertilizer—125 lbs. cotton seed meal; 125 lbs. Acid Phosphate; 50 lbs. cotton seed hull ashes; total 300 lbs.; cost per acre .................................................................................................. $ 3.12</td>
</tr>
<tr>
<td>Mixing and spreading fertilizer per acre ...................................................................................... .45... 3.57</td>
</tr>
<tr>
<td>Breaking, same as statement No. 9. Center furrow and subsoiling ............................................. .82</td>
</tr>
<tr>
<td>Bedding up ...................................................................................................................................... 1.55</td>
</tr>
<tr>
<td>Harrowing, same as statement No. 9. ............................................................................................... .19... 2.06</td>
</tr>
<tr>
<td>Planting .......................................................................................................................................... .27</td>
</tr>
<tr>
<td>-Cotton seed .................................................................................................................................. .08... .35</td>
</tr>
<tr>
<td>-Peeling—five cultivations—same as in statement No. 9. ............................................................... 2.11</td>
</tr>
<tr>
<td>-Chopping and hoeing out, same as statement No. 9. .................................................................. 1.16</td>
</tr>
<tr>
<td>-Picking 1452 lbs. seed cotton at 65 cents per cwt. ...................................................................... 9.44</td>
</tr>
<tr>
<td>-Ginning 484 lbs. lint at 60c per cwt. of lint, bagging and ties included .................................. 2.92</td>
</tr>
<tr>
<td>Hauling to gin and back, with seed .............................................................................................. 1.00</td>
</tr>
<tr>
<td>Marketing: .......................................................................................................................................</td>
</tr>
<tr>
<td>-Freight paid per bale to Houston, Texas ....................................................................................... 2.25</td>
</tr>
<tr>
<td>-Commission, handling etc., paid per bale ................................................................................... 1.50... 3.75</td>
</tr>
</tbody>
</table>

Total cost per acre including rent of land.................................................................................. $29.36

Proceeds.

| 484 lbs. lint at 9 5-8c per lb. actual price .................................................................................. $46.58 |
| 960 lbs. cotton seed at $6.50 per ton .......................................................................................... 3.12 |

Total proceeds per acre ............................................................................................................... $49.70

Net profit per acre ...................................................................................................................... 20.34

$49.70 $49.70

As illustrating the different effects of different fertilizers we submit statement from another acre of the same character of land, on which a mixture of bone meal and cotton seed hull ashes was applied in moderate quantity (300 lbs.) per acre:
Statement No. 11.

Texas Agricultural Experiment Station, College Station, Brazos County, Texas, 1892.

One Acre.

("Bohemian" Short Staple Cotton.)

Rows 4 feet apart; 300 lbs. fertilizer mixture applied at planting time.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (per acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent of land per acre</td>
<td>3.00</td>
</tr>
<tr>
<td>Fertilizer: 150 lbs. bone meal; 150 lbs. cotton seed hull ashes: Total 300 lbs. Cost per acre.</td>
<td>$3.42</td>
</tr>
<tr>
<td>Mixing and spreading fertilizer. Cost per acre.</td>
<td>$0.45</td>
</tr>
<tr>
<td>Breaking same as statement No. 9.</td>
<td></td>
</tr>
<tr>
<td>Center furrow and subsoiling.</td>
<td>$0.32</td>
</tr>
<tr>
<td>Bedding up</td>
<td>$1.55</td>
</tr>
<tr>
<td>Harrowing, same as statement No. 9.</td>
<td>$0.19 ... $2.06</td>
</tr>
<tr>
<td>Planting</td>
<td>$0.27</td>
</tr>
<tr>
<td>Cotton seed</td>
<td>$0.08 ... $0.35</td>
</tr>
<tr>
<td>Plowing, five cultivations same as statement No. 9.</td>
<td>$2.31</td>
</tr>
<tr>
<td>Chopping and hoeing out, same as statement No. 9</td>
<td>$1.16</td>
</tr>
<tr>
<td>Picking 1268 lbs. seed cotton at 65c per cwt.</td>
<td>$8.24</td>
</tr>
<tr>
<td>Ginning 423 lbs. lint at 60c per cwt of lint, bagging and ties included</td>
<td>$2.53</td>
</tr>
<tr>
<td>Hauling to gin and back with seed.</td>
<td>$0.85</td>
</tr>
<tr>
<td>Marketing:</td>
<td></td>
</tr>
<tr>
<td>Freight paid to Houston, Texas, at $2.25 per bale</td>
<td>$1.80 ... $3.00</td>
</tr>
<tr>
<td>Commission, handling etc. at 1.50 per bale</td>
<td></td>
</tr>
<tr>
<td>Total cost per acre including rent of land</td>
<td>$27.17</td>
</tr>
</tbody>
</table>

Total proceeds per acre: $43.42

Net profit per acre: 16.25

The last three preceding statements, numbers 9, 10 and 11, are selected from our tests with commercial fertilizers as furnishing an approximate basis for cost comparison with barn yard manure, as given in the following:
STATEMENT No. 12.

Texas Agricultural Experiment Station, College Station, Brazos Co., Texas, 1892.

ONE ACRE.

("Bohemian" Short Staple Cotton.)

Rows 4 feet apart; 5 tons rich barn yard manure applied just before breaking.

Cost.

Rent of land per acre ........................................ 3.00
Fertilizer: 5 tons of barn yard manure at $1.00 per ton, including cost of hauling and spreading .......................................... 5.00
Breaking, same as statement number 9.
  Center furrow and subsoiling .................................. .32
  Bedding up ............................................. 1.55
Harrowing, same as statement 9 .................................. .19 ...... 2.06
Planting ..................................................... .27
Cotton seed ................................................... .08 ...... 35
Plowing, 5 cultivations, same as statement No. 9 .............. 2.11
Chopping and hoeing out, same as statement No. 9 ............. 1.16
Picking 1507 lbs. seed cotton at 65c per cwt. ................. 9.79
Ginning 502 lbs. lint at 60c per cwt of lint, bagging and ties included ......................................................... 3.01
Hauling to gin and back, with seed ................................ 1.60
Marketing:
  Freight paid per bale to Houston Texas ........................ 2.25
  Commission, handling etc., paid per bale ........................ 1.50 ...... 3.75
Total cost per acre including rent of land ........................ $31.23

Proceeds.

502 lbs. lint at 95-5c, actual price ................................ $48.31
980 lbs. cotton seed at $6.50 per ton ............................ 3.22
Total proceeds per acre ........................................ $51.53

Net profit per acre ............................................ 20.30

$51.53 $51.53

As a basis for comparison we submit the statement immediately following, showing actual figures for one acre, and being a fair average for all of the unmanured land we had in cotton last season:
COST OF COTTON PRODUCTION.

STATEMENT No. 13.

Texas Agricultural Experiment Station, College Station, Brazos Co., Texas, 1892.

ONE ACRE.

(“Bohemian” short staple cotton.)

Rows four feet apart; no manure applied in any form.

Rent of land per acre ............................................................... 3.00

Breaking, same as statement No. 9. Center furrow and subsoiling .......... 32

Bedding up ............................................................ 1.55

Harrowing, same as statement No. 9 ........................................... 1.19

Planting ................................................................. 0.27

Cotton seed ................................................................. 0.88

Flowing—five cultivations, same as statement No. 9 ....................... 2.11

Chopping and hoeing out, same as statement No. 9 ......................... 1.16

Picking 848 lbs. seed cotton at 65c per cwt. ............................... 5.51

Ginning 283 lbs. lint at 60c per cwt., bagging and ties included ......... 1.80

Hauling to gin and back, with seed ............................................ 0.65

Marketing:

Freight paid to Houston at $2.25 per bale ................................ 1.35

Commission, Handling etc., at $1.50 per bale .............................. 0.90

Total cost per acre including rent of land .................................... $19.84

Proceeds.

283 lbs. lint at 95-8c actual price ........................................... $26.23

500 lbs. cotton seed at $6.50 per ton ................................ ...... 1.82

Total proceeds per acre ........................................................... $28.05

Net profit per acre ............................................................. 9.21

$28.05 $28.05

The relative profit per acre at different prices for cotton and the lowest limit at which cotton could have been sold to save cost of production in each statement as submitted, furnish a most interesting study, and we have therefore prepared the following condensed summary setting forth the points noted for each statement:

Cotton sold at home or local market, and no charge made for shipping or handling and commission; all hand picked except statement No. 6, in which the machine was used.

Statement No. 1, W. A. Clark, Bell Co.; 7 1-2 tons barn yard manure used, lowest limit in price to save cost of production 4.09 cents per lb.

Statement No. 2, Homer Clark, Bell Co.; lowest limit in price to save cost of production 4.62 cents per lb.

Statement No. 3, J. M. McCrady, Comanche Co.; lowest limit in price to save cost of production 5.47 cents per lb.

Statement No. 4, G. L. Stone, McLennan Co.; lowest limit in price to save cost of production 5.24 cents per lb.

Statement No. 5, J. F. Myers, Williamson Co., lowest limit in price to save cost of production 5 cents per lb.

Statement No. 6, Jeff Welborn, Bowie Co.; lowest limit in price to save cost of production 2.12 cents per lb.

Statement No. 7, W. G. Johnson, Falls Co.; lowest limit in price to save cost of production 5.66 cents per lb.

Cotton sold in Houston, Texas; charge for freight, handling and commission included in cost of production; all hand picked.
Statement No. 9, Texas Agricultural Experiment Station, Brazos Co.; 650 lbs. fertilizer mixture used; lowest limit in price at Houston, Texas, to save cost of production \$5.77 cents per lb.

Statement No. 10, Texas Agricultural Experiment Station, Brazos Co.; 300 lbs. fertilizer mixture used; lowest limit in price at Houston, Texas, to save cost of production \$5.42 cents per lb.

Statement No. 11, Texas Agricultural experiment Station, Brazos Co.; 300 lbs. fertilizer used; lowest limit in price, at Houston, Texas, to save cost of production \$6.78 cents per lb.

Statement No. 12, Texas Agricultural Experiment Station, Brazos Co.; 5 tons barn yard manure used; lowest limit in price at Houston, Texas, to save cost of production \$5.57 cents per lb.

Statement No. 13 Texas Agricultural Experiment Station, Brazos Co.; no manure used in any form; lowest limit in price, at Houston, Texas, to save cost of production \$6.02 cents per lb.

If it be desired to compare the price limit for cotton sold in Houston, with that sold in local or home markets, it is simply necessary to deduct 3-4 cents per pound of lint (\$3.75 per bale) which we actually paid to cover freight, handling and commission, leaving the lowest limit to save cost of production when sold at the home market as follows:

Statement No. 9, 5.02 cents per pound.
Statement No. 10, 4.67 cents per pound.
Statement No. 11, 5.03 cents per pound.
Statement No. 12, 4.82 cents per pound.
Statement No. 13, 5.37 cents per pound.

The lowest limit in price to save cost of production per acre under hand picking, and when sold on home or local market, is thus seen to vary from about 4 1-16 (4.09) as shown by Mr. Clark’s figures in statement No. 1, to about 5 2-3 (5.66) cents per pound as shown by Mr. Johnson in statement No. 7. In statement No. 6 where machine picking was practiced, Mr. Welborn was able to sell at a limit of about 2 1-8 (2.12) cents per pound and still save cost of production.

The difference in price for some of the items noted in each statement can be explained by natural situation. Hauling to gin and back and marketing, at home or local market is regulated largely by the distance. Rent of land is usually based on yield per acre and on market nearness. Cost of hand picking is, of course, determined by the scarcity or abundance of labor at the time when cotton must be picked. In the main, the figures given in the different statements do not vary widely, and the profit made per acre thus is shown to follow, almost in direct proportion, yield per acre due to natural or made fertility, and the price received for cotton when placed on the market.

We may now devote more particular attention to the query pronounced by Mr. Clark—“did the manure pay?”

Given the same conditions of soil, climate, seed and cultivation; manured land will pay a profit per acre over that without manure exactly in proportion to the increased yield resulting, and showing stronger as the price received for cotton rises. That this is true may be readily seen from the following tabular statement: Column “A” showing profit per acre on each of the 5 acres for which statements are submitted from this station at a supposed price of 6 1-2c per pound;
COST OF COTTON PRODUCTION.

-column "B" showing profit per acre at 9 5-8c per pound, the actual price received on last year’s sales, and column “C” showing profit per acre at a supposed higher price of 10 1-2c per pound—all prices based on delivery at Houston, Texas, where our last year’s cotton was sold:

<table>
<thead>
<tr>
<th>Statement No. 9. 650 pounds fertilizer mixture</th>
<th>Profit per acre at 6 1-2 cts.</th>
<th>Profit per acre at 9 5-8 cts.</th>
<th>Profit per acre at 10 1-2 cts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 pounds cotton seed meal</td>
<td>$3.96</td>
<td>$20.96</td>
<td>$25.92</td>
</tr>
<tr>
<td>300 pounds Acid Phosphate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 pounds Kainit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>650 pounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement No. 10. 300 pounds fertilizer mixture</td>
<td>$5.22</td>
<td>$20.34</td>
<td>$24.58</td>
</tr>
<tr>
<td>125 pounds cotton seed meal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125 pounds Acid Phosphate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 pounds cotton seed hull ashes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 pounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement No. 11. 300 pounds fertilizer mixture</td>
<td>$3.03</td>
<td>$16.25</td>
<td>$19.95</td>
</tr>
<tr>
<td>150 pounds Bone meal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150 pounds cotton seed hull ashes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 pounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement No. 12. 5 tons barn yard manure</td>
<td>$4.62</td>
<td>$20.30</td>
<td>$24.70</td>
</tr>
<tr>
<td>Statement No. 13. No manure in any form</td>
<td>$1.37</td>
<td>$9.21</td>
<td>$12.69</td>
</tr>
</tbody>
</table>

The value of manure in cotton planting, as in other forms of farming, lies in the fact that we are able to increase the yield without materially increasing cost of cultivation. The same rent of land or interest on investment; the same cost for breaking, harrowing, planting, seed and cultivation as with unmanured land; the only increase showing in the cost of what manure is applied, together with the extra cost of picking, ginning and marketing the increased yield resulting from manure application. Not all manures prove equally effective, nor does any one manure show a constant fixed effect regardless of the soil or season. Time and mode of application; climate, especially moisture conditions, and time and mode of cultivation, all affect the action of manures and make the outcome more or less uncertain. As a rule, heavy applications of manure will not pay so well as lighter doses unless in seasons exceptionally favorable. It should be remembered also that the figures we have given from our tests, represent the profit made per acre with manure application all charged up to one year’s crop. We have made this single-charge without allowing for accumulation of manure in the soil, for the simple reason that we wished to make our statements cover every item which might possibly be charged against the crop, and that the profit made per acre should be clear of all appearance of inflation. For sometime there has existed a popular belief among those not well informed that the staple crop of
this section, at anything less than 9 or 10c cotton, is a necessarily losing business. That this view is incorrect the statements herewith submitted show conclusively; but, while this is true, it must also be remembered that in farming, as in other forms of business, failures sometimes come, and often when we least expect them. Root Rot, insect pests, excessive moisture, drouth and bottom prices may result disastrously to calculated profits. Labor cannot always be obtained when needed, nor is that we can obtain always efficient.

For a renter especially, cotton planting presents an intricate problem. He cannot afford to fertilize the land on short-time lease, and long time leases for a term of years, so common in other countries, are here scarcely known. As a result of this the renter must depend on thorough preparation, careful planting, persistent, proper cultivation and intelligent diversity of crops to insure a reasonable profit on the land he cultivates. For the independent homestead planter, who depends on brain and muscle to insure success, the problem takes a wider range and admits of easier demonstration. For all such the proper use of fertilizers and the combination of such other crops, with cotton, as will best economize labor by permitting steady employment throughout the year, will furnish a key to the situation. As usual, in nearly all matters of importance, the average ability will find middle ground the safest. Contrary to a very prevalent belief, there is still money to be made in cotton growing; but it follows careful work, and intelligent judgment and will never come without an effort. The man who can and does diversify his farming interests, without discarding cotton as so many would advise, is the one who finds a profit in the staple; one year with another.