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Pam. 42

COTTON

ARIZONA- EGYPTIAN



GROWN ONLY IN THE
Salt River Valley

*Further Information Regarding Cotton in the
Salt River Valley May Be Had by Writing to*

*Chamber of Commerce at Chandler, at Glen-
dale, or at Tempe, Arizona*

*The Commercial Club, or the Cotton Asso-
ciation, Mesa, Arizona, or to*

*The Phoenix and Maricopa County Board of
Trade, Phoenix, Arizona*

Issued By THE BOARD OF TRADE, Phoenix, Arizona

PRESS OF R. A. WATKINS PRINTING CO., PHOENIX, ARIZ.

COTTON

EGYPTIAN LONG STAPLE

GROWN IN THE SALT RIVER VALLEY

The following data on cotton growing has been prepared by the Board of Trade for the information of those persons who are interested in growing Egyptian cotton in the Salt River Valley, Arizona.

On account of the high value and commercial importance of Egyptian cotton the United States department of agriculture began making extensive experiments in its production about eight years ago at its station operated in conjunction with the Pima Indian school at Sacaton, Arizona, which is about fifty miles southeast of Phoenix.

The first year the methods used in growing Upland cotton were followed with the result that only about 250 pounds of lint to the acre were produced. That yield however was not profitless but was not satisfactory, and since that time the station has been working to increase it, by carefully selecting seed and changing and improving cultural methods with very gratifying results. Last year the ground that yielded 250 pounds of lint per acre eight years ago produced approximately 700 pounds, which sold at from 20.1 to 21.35 cents per pound on board cars. The station has given out the following figures covering this operation:

COST PER ACRE

Farming operations to time of picking	\$15.00
Seed	1.00
Picking	50.40
Ginning	12.00
Total cost	\$78.40

RETURNS PER ACRE

Lint cotton, 700 pounds	\$140.00
Seed	18.00
Total returns	\$158.00
Less cost to produce	78.40
Net returns	\$79.60

In the spring of 1912 the farmers of this valley planted this crop for the first time. In all about 350 acres were put in and the results were so successful that this year over 4000 acres have been planted. The following figures show results obtained and what can be expected from good farming:

O. A. Warner,	666 lbs. of lint cotton per acre
George Rogers,	675 lbs. of lint cotton per acre
M. C. Phelps,	794 lbs. of lint cotton per acre
J. Valenzuela,	442 lbs. of lint cotton per acre
Robert Bowen,	548 lbs. of lint cotton per acre
Imel & Ruse,	674 lbs. of lint cotton per acre
Laib Brothers,	497 lbs. of lint cotton per acre
E. Birch,	610 lbs. of lint cotton per acre
O. C. Bullock,	866 lbs. of lint cotton per acre
E. E. Hill,	675 lbs. of lint cotton per acre

This cotton ordinarily sells at twice the price of Upland or Southern cotton and heretofore has only been grown successfully in Egypt. The land on which it can be grown in that country has for the past twenty years constantly risen in value and today sells for between \$500 and \$1000 per acre depending upon its relative fertility and location, and it commands such prices notwithstanding that the average yield is only from 300 to 400 pounds of lint per acre.

The following is the government's advice as to production and cultivation:

PLANTING

Planting should be done between March 10 and April 10, or as soon as possible after danger of frost is over. Either a one or two-horse planter may be used, though the latter will be found more satisfactory. In soil that has strong tendency to bake or run together it is best to use a planter with an open rim press wheel that packs the soil down on both sides of the seed rather than directly above it, though in ordinary soil the solid press wheel may be used with equally good results.

Land very rich from previous crops of alfalfa and Bermuda grass should be planted in rows $4\frac{1}{2}$ feet apart. New land, desert land, or grain land that never produced alfalfa should be planted in rows $3\frac{1}{2}$ feet apart.

Under normal conditions seed should not be planted less than one inch nor more than two inches deep. If the soil is in perfect condition, 1 to $1\frac{1}{4}$ inches is sufficient depth to plant, but one should always bear in mind that the seed must be planted deep enough to guarantee sufficient moisture to germinate it and bring the young plants above the ground. It is inadvisable to flood the land after planting in order to germinate the seed, since the young plants are unable to push through the crust formed by flooding. However, land which it was found necessary to bed may be irrigated in the furrows to germinate the seed.

To guarantee a perfect stand, which is of the utmost importance, from 25 to 36 pounds of seed to the acre should be planted. This amount will give a thick drill of seed. This drill of seed germinating together will greatly aid in breaking any crust and thus do much to insure a good stand. Heavy soil should, as a rule, have more seed per acre than light sandy soil.

CULTIVATION

As soon as the plants are visible in the rows, cultivation should begin. It is very important to cultivate as soon as possible, to break any crust that may have formed and to check evaporation. By shallow cultivation at regular intervals of from ten to fifteen days during the early growing season, the root system will develop better, the soil will be aerated, weeds and Bermuda grass kept down, and less water will be required.

IRRIGATION

If the land is level and contains the proper amount of moisture when the seed is planted, and intensive cultivation is practiced, the crop will not require an irrigation for six weeks or two months after planting. At the end of this time it should be given a light furrough irrigation, followed by cultivation as soon as the ground is dry enough to work. In some instances one cultivation after irrigation will be sufficient to mulch the surface thoroughly. If one cultivation does not put the field in proper condition, it should be gone over a second time.

Under ordinary conditions it will not be necessary to irrigate again for three or four weeks, when the field should be given another light irrigation followed by thorough cultivation. This should be sufficient irrigation to last until about July 1st. However, it may be found necessary to irrigate more frequently on new land, owing to the fact that such land will not retain the moisture so well as land that has been cultivated before. In all probability it will be necessary to irrigate new land at least three times between the date of planting and July first. Certain classes of old land may also require an extra irrigation. Wilting of some of the plants in the middle of the day during early development is not conclusive evidence that a general irrigation is needed.

It is very important that irrigation during the first part of the season be light in order to prevent too rapid growth of the plants. If given frequent heavy irrigations the plants will grow woody and they will be apt to maintain this tendency throughout the season at the expense of fruitfulness. The foundation of minimum sized plants and maximum productiveness will be laid if only sufficient water is given the

plants during early development to keep them in healthy growing condition.

THINNING

Cotton should generally be thinned after the second irrigation and cultivation, when the plants are between 8 and 12 inches high. Cotton planted on land rich from previous crops of alfalfa where the rows are 4½ feet apart, should be thinned so as to have the plants from 14 to 16 inches apart in the row. On new land where the rows are 3½ feet apart the plants should be thinned to from 8 to 12 inches apart, depending upon the richness of the soil.

Generally the planter can contract for the thinning or chopping at \$1.00 per acre, which will allow the workman fair wages. The thinning may be done in one operation and for many this will be the more practical way. While thinning in one operation or in two seems to have little direct effect on the productiveness of the single plant, still the yield of the field may be increased by two thinnings because a more uniform stand will be guaranteed.

If the cotton is to be thinned twice the plants may be thinned after the first irrigation and cultivation to 3 to 4 inches apart in the row. This distance will give the remaining plants room to grow and will insure plants enough to replace those which may be killed during cultivation and irrigation. The final thinning may in this case be left until the plants are larger and stronger than where thinning is done in one operation.

In thinning it is of great importance that the planter should obtain a uniform stand of plants properly spaced in the row. For example, if the soil is such as to require that the plants be thinned to a distance of 12 inches apart, it is highly important that, as nearly as possible, there be a plant every 12 inches in the rows all over the

field. This is important because it has a direct bearing on the yield.

Cultivation should be carried on as long as it is possible to get over the rows of plants. A riding which works both sides of the row equipped with sweeps that just cuts under the surface gives the best results with the least labor. The soil should be ridged up about the plants just high enough to leave a broad shallow channel for the irrigating water to run in. Ordinarily the plants will have grown to a size to prohibit cultivation by the middle of July. After that time the crop requires no attention but that for irrigation, until picking time, which begins from the middle to the last of September. It should be borne in mind that the maximum amount of fruit will be set by the minimum amount of water that is required to keep the plant thrifty. The tendency of the average farmer is to do too much irrigating and too little cultivating.

Note—The Department of Agriculture has issued a number of bulletins on Cotton Growing. These bulletins may be had on request to the department at Washington, D. C.

PRICES OF LAND

The land in the Salt River Valley upon which is grown this splendid variety of cotton sells at prices from \$100 to \$200 an acre. The price being governed by proximity to railroad facilities, towns and other local condition. As an example of what has been done during the season, Fall, 1913, we take the following from one of the daily papers of Phoenix. The figures have been confirmed, and we believe can be relied upon in every particular.

From one season's cotton crop, L. C. Sloan will pay half the cost of a sixty acre tract of high-priced land in the Mesa district, Salt River Valley.

Sloan is a Kentuckian who started out to pastures new several years ago. First he went to Oklahoma, which did not suit, and then

he went to Colorado. Still he was dissatisfied, so he came to the Salt River Valley.

For one year Sloan leased land and he made so much money that he decided to own a farm of his own. Accordingly he made Dudley Lewis a proposition for sixty acres of Lewis' fine farm.

Lewis agreed to take \$185 an acre, \$1000 to be paid down and the remainder in installments of \$2000 per year. Sloan accepted and paid the thousand. That left a balance of \$10,000.

Two or three days ago Sloan approached Lewis and asked him if he couldn't accept \$5,000 as his first annual payment. He added that he expected to pay the remainder next year.

Sloan planted ten acres in truck garden and fifty acres in Egyptian cotton. The truck garden paid his living expense and also the cost of growing the cotton, leaving the cotton crop as clear profit.

SEED SELECTION

While questions of picking, ginning, and marketing are doubtless uppermost in the minds of most growers, they should not lose sight of the fact that the industry can not be permanently profitable unless a supply of pure seed is maintained. Cotton, like corn, is open fertilized, and the pollen is readily carried from one plant to another by bees and other insects. Unless due precautions are taken to prevent crossing, the varieties soon become mixed and deterioration is rapid.

The Department of Agriculture, after much consideration of what type of cotton would be likely in the long run to give the most profitable returns in the Salt River Valley, distributed among the farmers seed of a carefully selected, uniform variety of Egyptian cotton which has been developed as a result of ten years of plant breeding work in Arizona. This variety has been thoroughly tested, both in the field and in the factory. It yields heavily and produces fiber which manufacturers of long staple cotton have found to be very satisfactory in spinning quality. The experience of those who planted this cotton last year indicates that it can be profitably grown in the Salt River Valley.

There is at present no evidence that any other cotton will be more profitable in this district. If, in the future, evidence should be forthcoming that a change to some other type would be advantageous, the change should be made at once and by the community as a whole. Meantime the introduction of other sorts by individual growers should be discouraged, as it would surely spell disaster to a promising industry.

A quarantine has been declared against the importation of cotton into the Salt River Valley, and before seed of any variety can be introduced the consent of the State Entomologist at Phoenix must be received.

The Staples of Arizona Cotton are known as Sacaton, River and Valley.