Does Arizona 44 Meet Trade Needs?

Report Shows Value Of Variety to State

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Agricultural Economics

The introduction of Arizona 44 has brought tremendous improvements in the acceptance of Arizona cotton by mills. In addition, A-44 gives a consistently higher yield per acre than the old P 18-C, and has a longer staple. The measurable benefits from improved spinning value, increased yield, and increased staple length have been combined to give a dollars and cents estimate of what Arizona 44 has meant to Arizona cotton farmers, as shown in the box below.

VALUE OF ARIZONA-44	
Improved Spinning Value	$2,867,219
Increased Yield	2,708,700
Increased Staple Length	678,150
Total	$6,254,069

Distributed over Arizona's entire 1952 Upland cotton production of 904,200 bales this represents $6.92 per bale; distributed over the 546,137 bales estimated A-44 production it represents $11.45 per bale. These figures are believed to be conservative. If Arizona still produced primarily P 18-C, she quite possibly might find herself in the position of having a product which could only be sold with difficulty and at discounts considerably larger than those which exist for P 18-C under the present circumstances.

Spinning Value

A-44 now sets the Phoenix market. Other varieties, except Arizona-grown 4-42, are bought at a discount. Some buyers will buy A-28 even with A-44, but more commonly both 28 and 33 are discounted a flat 25 points ($1.25 per bale). Some buyers won't bid on P 18-C at all, and claim not to have bought a bale of it all year. P 18-C is in a favorable competitive position only when cotton to fulfill commitments is in exceedingly short supply or when we have a strong export market. When Phoenix buyers will take P 18-C at all, they will do so only at substantial discounts.

The amount of such discounts naturally varies with the buyer and the particular demand conditions at the time, as well as with the grades involved. Recent conversations with Phoenix buyers indicate, however, that the following schedule may be representative:

GRADES	Discount for P 18-C Under A-44
Good Middling Strict Middling Middling Plus Middling	150 points or $7.50 per bale
Good Middling Light Spots Good Middling Spots	100 points or $5.00 per bale
Strict Middling Light Spots Strict Middling Spots	
Strict Low Middling Plus Strict Low Middling Low Middling Middling Light Spots Middling Spots Middling Light Grays Middling Grays	75 points or $3.75 per bale
Strict Good Ordinary Strict Low Middling Light Spots Strict Low Middling Spots	40 points or $2.00 per bale
Strict Low Middling Light Grays Strict Low Middling Grays	
Good Ordinary Low Middling Light Spots Low Middling Spots Tinges (all grades) Below Grade	No discount

Applying these discounts to the 1952 Arizona Upland distribution yields a weighted average discount of 105 points ($5.25 per bale) or, turning it around, a premium of $5.25 per bale for A-44. Multiplying this premium times the 546,137 500-pound bales of A-44 estimated to have been produced in Arizona in 1952 indicates an increased return to Arizona farmers of $2,867,219 due to spinning value alone.

Yield

Cooperative yield tests conducted at three Arizona locations during the years 1947 through 1951 indicate that A-44 outyields P 18-C by 43 pounds of lint to the acre, or 4.2 percent. Statistical tests show this increase to be highly significant. In terms of bales, A-44's increased yields gave Arizona 22,013 bales of cotton in 1952 that she would not have had from P 18-C.

With cotton at 32¢ and seed at $67 per ton, the gross revenue per bale approximates $186.80. Costs for picking, hauling and ginning each bale add to $63.75, leaving a net increase in revenue of $123.05 per bale. Multiplying the net revenue per bale times the increase in number of bales indicates a net gain to Arizona farmers from A-44's increased yield of $2,708,700.

Staple

Plot tests show an average improvement in staple for A-44 over P 18-C of only about 1/64 inch, but this is only a part of the story. During the years 1943-49, staples 1 1/16 inch and over constituted an average of less than a quarter of the Arizona Upland crop. In 1951 and 1952, after the introduction of A-44, the proportion of these staples had increased to approximately one-half of the crop. (See table below.)

Applying estimated market differences to these two staple distributions indicates that the staple distribution since the introduction of A-44 is worth an average of 15 points (75 cents per bale) more than that existing in the earlier period. Mul-

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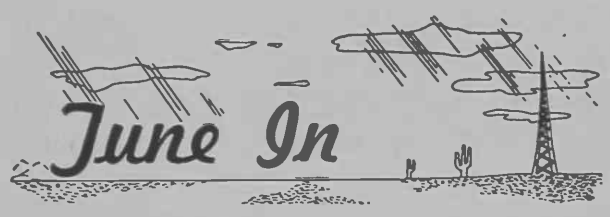
Percentage Distribution in Staple Lengths of Arizona Upland Cotton and Estimated Market Differences

Years	15/16" & Shorter	31/32"	1"	1 1/32"	1 1/16"	1 3/32"	1⅛" Longer	All Staples
1943-1949	5.7	4.3	17.4	49.3	19.0	2.5	1.8	100.0
1951-1952	1.5	2.1	8.2	38.8	42.9	4.9	1.6	100.0
1951-1952 Market Differences points	—105	—65	—25	0	+25	+65	+140	



DAILY (EXCEPT SUNDAY)

KTAR, Phoenix, 6:15 a.m. — Farm Front — Maricopa County Extension Agent. (6:10 a.m. on Saturdays)

MONDAYS

KYMA, Yuma, 7:00 a.m. — On the Farm Front.

MONDAY THROUGH FRIDAY

KYUM, Yuma, 7:20 a.m. — Yuma County Agricultural Extension Service Radio Program.

TUESDAYS AND THURSDAYS

KCLS, Flagstaff, 6:15 a.m. — Your County Agent Reports.

FRIDAYS

KCKY, Coolidge,Casa Grande, 4:00 p.m. — Pinal County Farm and Home Program.

SATURDAYS

KGLU, Safford, 1:00 p.m. — Stepping Along with the Agricultural Extension Service.

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tiplied by Arizona's 1952 Upland production of 904,200 500-pound bales, this shows an increased return to Arizona producers of $678,150 due to the greater staple length of A-44.

Fringe Benefit

A benefit more difficult to measure, but not less important, is the increased interest of mills in Arizona cotton evidenced by the increasing number of salaried representatives of Eastern merchants appearing in the Phoenix market. These buyers have direct mill outlets for large quantities of Arizona cotton, and their presence has resulted in substantial improvements in the buying basis during the past year. If Arizona is able to continue her volume of A-44, and to eliminate undesirable varieties from production, these buyers will continue to come into the Phoenix market to buy Arizona cotton.

Cantaloup Pests Have Enemies, Too

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cifically to control an infestation occurring on the crop at the time, and not as a preventive measure. It is not desirable to make routine applications when the plants have reached a certain stage of development.

Take Care!

Parathion is extremely toxic to humans and should be used only by a trained operator who will assume full responsibility and enforce the precautions prescribed by the manufacturers.

Pima S-1 Cotton

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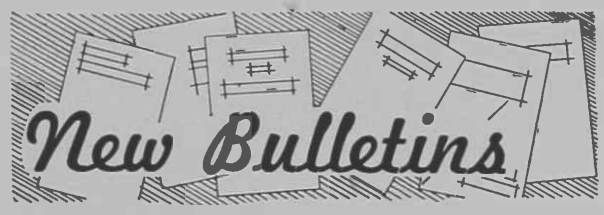
equal to Egyptian Karnak cotton, but not quite as good as Pima 32 or Amsak.

Type of Plant. Pima S-1 was bred originally for a plant height of 40 to 50 inches at Tucson on a medium heavy soil with normal irrigation. Pima S-1, when grown under these conditions, produces a plant which can be harvested with the cotton picker, provided defoliation is sufficiently complete.

But when Pima S-1 is grown on a heavy, fertile soil, such as alfalfa sod and irrigated heavily, it may grow considerably higher than 50 inches, as has happened in the Salt River and Yuma valleys. Under such conditions it is no longer a "Dwarf Pima," but even here it does not grow as high as Pima 32 or Amsak.

Present Status. Considering the lint yield per acre, lint quality, spinning performance and growth adaptation, Pima S-1 seems to have some promise as a commercial variety and the seed is being increased for a more extended acreage. With more experience in growing Pima S-1, it may be possible to obtain maximum yields of lint without at the same time growing too tall a plant.



Ask your County Agricultural Agent for a copy of any of these new bulletins or circulars. They are free to Arizona farmers and stockmen.

Experiment Station

Bulletin 246, "Cost of Pumping Irrigation Water, Pinal County, 1951."

Forty wells in Pinal County were used in this detailed survey of pumping costs by electric and gas powered pumps. Data are shown by graphs and tables. Procedures and results are covered in the text.

Extension Service

Circular 148-Revised, "Fruit Insect Control Hints."

This is a 1953 revision of the extension recommendations for control of deciduous fruit-tree pests in Arizona. Specific information is given.

Circular 179-Revised, "Cotton Insect Control, 1953."

Complete, up-to-date cotton insect control information is supplied, including hints on airplane application of insecticides.

Miniature Farm On U of A Campus

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Mohave soil. After cropping these soils for thirteen years, the nitrogen content of the two reached a temporary equilibrium point midway between that of the virgin soils. After another six years the nitrogen content of the Gila soil associated with the alfalfa rotation had remained constant while that of the Mohave soil had shown a serious slump. In both cases the soils in the "wheat-hegari" rotation had an unfavorably low nitrogen content.

The low nitrogen content of wheat grown on soils depleted in nitrogen is a direct reflection of the fertility of the soil. Certainly the discriminating buyer will choose the wheat with the highest protein content. This can only be grown on ground well supplied with nitrogen. The nitrogen content of the wheat grown on Gila soil in the wheat-hegari rotation was reduced by 50% during 23 years of cropping as a result of using a rotation lacking a legume. When it is realized that wheat is priced on the basis of its protein content the importance of maintaining a high nitrogen content in the soil becomes apparent.

Nitrogen Content of Wheat Grain
Gila Soil — 1952

	% nitrogen	% protein
Alfalfa rotation	2.5	15.6
Wheat—hegari rotation	1.25	7.8

This experiment disproves the old saying that only water is required to make a desert soil bloom. Experiments and practice have shown that desert soils cannot maintain a high level of productivity without the use of good cropping and fertilization practices. Inasmuch as Arizona's agriculture is becoming of age and most of the cropped land consists of Red Desert Soils it appears that fertilization must become a standard practice on these soils to maintain high yields and to insure crops of high nutritional quality.

Circular 203-Revised, "Defoliating Cotton in Arizona, 1953."

This is a complete revision of last year's circular. Latest available information on defoliating is included.

Circular 204-Revised, "Requirements for Arizona 4-H Club Work."

This circular lists in detail the requirements for all 4-H projects available in the state. It is for use of 4-H members and leaders.