

U of A DEVELOPING VERT-TOLERANT COTTON



In this photo, Dr. Lee S. Stith stands between two test plantings of short staple cotton. At right is the commercial smooth leaf variety, and at the left is the new University of

Arizona verticillium-tolerant strain, UA 6016.

Although there appears to be more cotton on the plot at the right, the commercial variety, that is because

defoliation caused by wilt has left more open cotton bolls exposed to view. Actually, there is much more cotton on the plot at the left, but it is shielded from view by the leaves.

These plots, at the Experiment Station's Marana farm, were set up by Dr. Stith and Dr. Warner D. Fisher, U of A cotton breeder stationed at the Cotton Research Center in the Salt River Valley.

The new vert-tolerant strain matures somewhat later than the commercial smooth leaf, but promises to produce higher yields because of its tolerance to verticillium wilt. The 6016 is the result of a number of crosses and back crosses, with hundreds of strains tried and discarded before Dr. Fisher and Dr. Stith selected a few of the best for field tests.

30c per BLM AUM, and 40c per state AUM. They could not charge more than the full competitive value without causing some AUM's of grazing to go unused. A fee at some level between the present level and the maximum competitive values would adversely affect individual ranchers but would leave the range resource in use. Someone would be willing to pay that price. Indeed, what this research shows is that purchasers are now paying that price, but they are paying only part of it to the public that owns the land, and the rest of it to the previous holders of the permits.

(AUM) values, these figures show that an additional AUM of forest land sells for about \$23.33, and AUM of BLM land sells for about \$12.50, and an AUM of state land sells for about \$22.67.

The average price paid per animal unit was \$932 for stocked ranches and \$599 for unstocked ranches. This is an average price per AUM of \$77.66 and \$49.92, respectively.

If a rancher is willing to pay \$280 per additional animal unit of forest permit, then this must be an approximation of the capitalized difference between the fees charged by the Forest Service and the annual returns the purchaser expects from having possession of the permit. By using a discounting procedure, we may compute the grazing fee that would reduce this capitalized value to zero. This fee would represent the full competitive market value of an AUM of each kind of grazing permit. These full competitive values were estimated to be \$1.75 per AUM for forest lands, \$1.08 per AUM for BLM lands, and \$1.91 per AUM for state lands.

Governmental agencies need not charge this full competitive value, and indeed do not charge this much. Current fees are 38c per forest AUM,

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ables affecting the sale price. Data gathered included items such as date of sale, total sale price, amount of deeded land, types and amounts of public lands, and cattle included in the sale. Statistical analysis enabled us to estimate the sale value of each of the several components of land and leases of which these ranches were composed:

The results were as follows:

An additional animal unit of BLM permit increased the total sale price of these ranches by about \$150; an additional animal unit of forest permit included in the ranch sale increased the ranch price by \$280; an additional animal unit of state grazing land was valued at \$272, and an additional acre of deeded land in these ranches increased their sale prices by \$19. Note that these are not average values. They are the amounts that an additional unit of each of these kinds of land or lease is worth to the purchasers of these ranches, assuming that each had bought a ranch made up of an average amount of each of the kinds of land and leases.

Converted to AUM's

Converted to animal unit month