

Brush Control

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FOUR methods are being used in controlling mesquite at the Jordan Experiment Range: handgrubbing, use of fenuron pellets, ground spraying, and aerial spraying. Handgrubbing, sparse stands of small mesquite is the most economical method of control, but the root must be completely severed below the budding zone, about four to six inches below the surface of the ground, and close supervision of labor must be maintained.

Both 25 per cent fenuron pellets and 80 per cent monuron powder have been found effective in controlling mesquite, but because of the present cost of these materials, use is limited to relatively sparse stands. Plant kills in the period from 1958 to 1960 averaged 83.1 percent with fenuron and 94.7 percent with monuron in 1960. These materials must be applied just before or in the early part of an expected rainy season.

With any of the spray programs, the mesquite plants must be fully leafed and

growing vigorously. This generally occurs when winter-spring precipitation is at least average, and there should be some available soil moisture at the time of spraying. The proper time for spraying is when the plants come into full leaf and seed pods are elongated but not filled. High kills can be obtained in the good spray years when individual plants are sprayed to the point of drip with a mix containing one and one-quarter pounds of 2, 4, 5-T in 100 gallons of water, but labor costs make this method rather expensive. A broadcast sprayer with a 50 foot boom was developed and costs were reduced to less than half of the costs of a two-gun sprayer. Results from this broadcast spraying are not final.

Experiments on aerial spraying of mesquite have shown that fair results can be obtained in the good spray years with $\frac{1}{2}$ pound of 2, 4, 5-T in a 1:7 diesel oil and water emulsion at a volume of five gallons per acre with 0.2 per cent emulsifier added.

Rootplowing, discing, and bulldozing have been found to control brush effectively. Other methods of seeding such as drilling, presswheels, furrows, in con-

junction with pitting, have been studied, and it was found that many seedlings are lost because of high temperatures in the surface soil as well as poor moisture conditions. On the Jornada Range, soil temperatures one-half inch below the surface averaged 92° in the summer with a brush cover, while in the open the soil temperature at the same depth averaged 119°. During an 80-day summer period, there was available soil moisture at this depth for 29 days under a brush cover and only nine days in the open. Seedlings will probably be more successful when they are protected in some manner and placed in the soil after the first summer rains to take advantage of more moderate temperatures and better soil moisture.

Oklahoma Shorthorn Field Day Planned

The second annual Oklahoma Junior Shorthorn field day will be held July 24 at the O. H. Deason and Son, Grandview Shorthorn Ranch, Fort Cobb, Okla.

The contest will begin at 9 a.m. with a type demonstration to be given by Bill Tagert, Oklahoma State University Livestock specialist. Dewayne Dietz, Wakeeney, Kan., will be the guest speaker. A drawing will be held for a registered Shorthorn heifer donated by Robert Collier and Bart Rayburn. A livestock judging contest will also be included in the program.

Texas Farm and Ranch Club Selects Wulff as Speaker

Fred Wulff, president of the Texas and Southwestern Cattle Raisers Association, will be the principal speaker at the East Texas Farm and Ranch Club meeting, at the East Texas Fairgrounds in Tyler, July 30.

The promotion of the beef-cattle industry will be the subject of the meeting. Wulff will discuss the condition and future of the East Texas cattlemen. A review of a recent livestock and pasture study tour in Georgia and Alabama, made by 59 East Texas agricultural leaders, will be made by Walker Wilson, president of the American Charbray Breeders Association, using the color slides taken on the tour.

Sorghum Support Rates Set

The U. S. Department of Agriculture announced 1964-crop grain sorghum terminal and county price support loan rates. The 1964-crop total national average support price of \$2 per hundredweight for grain sorghum grading No. 2 or better was announced July 18, 1963. While the total support is unchanged from the 1963-crop level, the 1964-crop support reflects an average loan rate of \$1.77 per hundredweight with a payment in kind of 23 cents, compared to 1963-crop rates of \$1.71 for loans and 29 cents for payment-in-kind.

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