

FARM ADVISOR FACTSIRRIGATED SUDANGRASS FOR EMERGENCY SUMMER PASTURE AND HAY

by

James E. Street, Extension Range Technologist
University of California, Davis

Irrigated sudangrass and sudan hybrids can produce an amazing amount of feed. If water is available and the crop is adequately fertilized with nitrogen one can expect 5 to 6 tons of dry matter per acre for a summer season or more.

Piper sudan has a very good reputation in terms of hay quality and palatability or acceptability by livestock and total production has averaged as good as the alternatives. Seed is available.

Sudan germinates very well at 65° F soil temperature. Mid-May is a good seeding time in the Sacramento Valley but it is said you can get your money's worth from irrigated sudan pasture planted up to the first of July in Sacramento County.

Broadcast seeding takes at least 20 pounds of seed per acre but 15 is enough with a 6- or 7-inch drill. With wider spacing as little as 5 pounds is enough.

Preirrigation is probably the best way to go to get a good stand and you also get to knock down a crop of weeds this way. However, several years ago I watched an unlevel field of heavy Capay clay that had contour check borders thrown up which was planted to sudan and was then flood-irrigated. A good stand was obtained and the field turned out to be a successful seed production venture.

Right now there are a couple of fields near Davis that were drill-seeded into soil that was very dry to a considerable depth. After seeding, the fields were sprinkler-irrigated. The first time over, small-bore nozzles were used and not more than 2 inches of water went on to avoid puddling the surface. The sprinklers came back over again 8 days later just as the sudan was emerging. The stand looks good.

Like any grass, sudangrass needs adequate nitrogen for good production. How much nitrogen to put on depends on the nitrogen level of the soil to start with. Between 200 and 250 pounds of nitrogen per season is a good general California recommendation. Don't put this all on at once. A good rule-of-thumb is to put on equivalent to a pound of nitrogen per acre per day and don't put on more than 40 pounds per acre at any one time. Higher rates per application run into nitrogen losses and the possibility of poisonous accumulation of nitrate in the forage. Rates up to 80 pounds as a preplant in low nitrogen soil is justified especially since this could be in the more economical form of aqua or ammonia.

If soils are short on available phosphorus, sulfur, potassium or zinc, an appropriate fertilizer should be used. Iron deficiency is not uncommon on some soils with pH much over 7.4. This can be corrected by a ferrous sulfate foliar spray. Use 25 pounds per acre plus water and a little wetting agent. The iron spray is cheap but might have to be used between each cutting of hay or pasturing.

There are many advantages to at least a 3-pasture rotation. Let growth get up to about 30 inches between pasturings. For hay, cut sudangrass when about half of the heads have emerged. Plants should be 4 to 5 feet tall by then. Raising the sickle bar up to 6 inches won't hurt.

Remember, sudangrass hay doesn't dry as fast as alfalfa.

Sudangrass in hot weather uses about 1/3 inch of water per day and in most soils 80% of the roots are in the top 3 feet. So, the irrigation will have to be adequate to fit these requirements.

Nitrate toxicity can be a problem in pasture, hay or greenchop. Just don't put on too much nitrogen at once and watch out for very dark green growth. If a lab check suggests a problem, just let the stand grow a while and the nitrate will be assimilated and diluted. Prussic acid is another possible problem but it usually can be avoided. Wait until regrowth is 1 1/2 feet tall before cutting or feeding and watch out for regrowth after frost or drought.

There is evidence of a urinary problem, cystitis syndorme, that sudan and the hybrids can cause in horses. The problem is rare in California. I am aware of a report from only Kern County. Ruminants are not affected.

During a sudangrass crop is a good time to hit morning glory and other broadleaved weeds with 2,4-D. Follow the label carefully.

Johnsongrass can be a contaminant in sudangrass seed. California-grown, certified seed should be free of problems. If you have any questions about seed, give your farm advisor a call.