

# Forage Plants For a Drouth Year

## Sudan grass, grain sorghums, summer legumes, and alfalfa

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SUDAN GRASS OFFERS RELIEF in the forage shortage this year.

It will produce under irrigated or dry-farming conditions.

Sudan grass is the best summer forage annual to use for supplemental feed this year when even a small amount of green feed will stretch dry feed supplies. It is an excellent pasture plant with no danger of bloat.

Under irrigation, on good soil, Sudan grass should produce three cuttings and five to eight tons of hay per acre. It can be pastured for over a 100- to 125-day period.

The best time to plant is when the soil has warmed slightly, to aid germination—from now until about May 15.

Under irrigated conditions Sudan grass is seeded with a grain drill at the rate of 15 to 20 pounds per acre. The soil should be worked only deep enough to get a firm seed bed, and it should be well firmed before planting. The seed should be planted one inch into the moisture.

Operations schedule for planting Sudan grass begins with a tandem disk to shallow work the soil and it should be followed by a drag harrow. The planter should come along immediately and it should be equipped with press wheels. A grain planter can be used. The planter should be followed with a cultipacker to firm the soil after planting to hold moisture.

This procedure will safeguard against loss of moisture and is particularly important on dry-land plantings this year.

Under irrigation the field may be watered to bring up the crop.

Under dry-land conditions where only from two to three feet of moisture is available, it is better to plant Sudan grass in rows 24 to 36 inches apart, seeding three to six pounds per acre.

Sufficient number of runs in the grain drill can be stopped to space the rows as desired. Cultivate or spray to keep down nonproductive weeds and eliminate their competition for available moisture.

Sudan 23 is to be preferred but common Sudan and Sweet Sudan may be used.

### Grain Sorghums

Grain sorghums can aid in overcoming the feed grain shortage this summer.

Early maturing, drouth-resistant varieties are well suited as summer-growing grain.

Dwarf White Durra, commonly known as white gyp corn, is recommended for dry-farming conditions. It should be planted in wide-apart rows, about 28 to 42 inches, and the plants should be about 15 to 18 inches apart in the rows. Distance between the rows will depend upon the soil type and moisture conditions. Seeding rates should be low under dry-land conditions, about one to two pounds of seed per acre.

White gyp corn seed is in short supply this year.

One of two new milo varieties—Double Dwarf Yellow Sooner or Double Dwarf White Sooner—may be planted in place of Dwarf White Durra.

The Sooner varieties mature about ten days to two weeks earlier than Double Dwarf 38 and slightly earlier than Dwarf White Durra.

Double Dwarf 38 is a good variety to plant under irrigated conditions and can be used for dry-land plantings.

It will out-yield other varieties under irrigation, and it is resistant to the commonly occurring root rot.

### Summer Legumes

Cowpeas, soybeans, and some other summer-growing legumes may be used to produce hay this year in areas with adequate subsurface moisture or under irrigation.

Iron or Brabham cowpeas or any other commercially grown variety may be used. Iron or Brabham are to be preferred where nematodes are a factor.

Cowpeas should be planted in rows 28 to 32 inches apart, and about 20 pounds of seed to the acre. They can be irrigated like any bean crop and mowed for hay when the plants have reached the pod stage.

Cowpeas have the usual good feeding value of legume hay. They should be cut with a mower, rather than with a bean knife, for a cleaner hay.

In the cooler parts of California, including coastal districts, soybean hay may be produced. Virginia and Manchu have proven to be good hay types for California. They should be planted at about 20 pounds to the acre in rows 28 to 32 inches apart.

Cut with a mower at the pod stage or earlier if the red spiders attack. These pests frequently prove to be a real problem in soybeans.

Dolichios and mat beans are good summer-growing legumes that will give good hay yields, but because of shortage of seed, probably will not be extensively planted.

Sesbania, commonly used as a cover crop in the Imperial Valley, is a heavy producer, but the forage is unpalatable to livestock.

Guar, while palatable, is sparsely leaved and produces a poor quality feed.

Sesbania and Guar are not recommended for pasture or hay purposes.

### Alfalfa

Alfalfa has been underestimated as a dry-land crop.

It is one of the deepest rooted of our economic plants. Its roots may reach 15 to 20 feet into deep soils thereby tapping the lower water zones.

Yields may be reduced this season because of shortage of water, but the plants will recover if proper management practices are applied.

When alfalfa begins to show moisture stress in the latter part of the season the last growth may be short but it can be pastured off without damaging the stand.

In spite of the wide impression that alfalfa should not be pastured, over 300,000 acres of this crop are grazed in California every year.

### Recommendations

If the alfalfa for pasturage is permitted to reach about the same stage of maturity, at which it would be cut for hay—about one tenth in bloom—no damage will result to the stand.

Rotation grazing is the best method of pasturing alfalfa, as with irrigated pastures.

Tests have shown that cattle, sheep, and hogs can make good use of alfalfa pasture.

The first day stock are turned into a new field of alfalfa, they should have a reasonably good fill of dry hay or straw. It is advisable to keep racks of dry feed in the pastures at all times.

Well distributed salt and water should be available in the pastures.

Under proper management, alfalfa bloat losses may be avoided.

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