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### Agricultural Experiment Station

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## HEGARI IN ARIZONA

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#### DESCRIPTION

Hegari is a plant belonging to the sorghum family. It is valuable for both grain and forage. In general appearance hegari resembles kafir more than any of the other common field crops. The leaves of hegari are broad and long as well as numerous, the average hegari plant bearing from 12 to 14 leaves. The stalks usually grow to a height of 5 feet and the head is always borne on an erect stem.

#### USES

Hegari is an excellent grain crop for the conditions of Arizona. It is also a first-class forage or fodder crop. It makes as good silage as any other sorghum crop. It is drought-resistant, therefore valuable on dry-farms. It responds well to irrigation, but does not "overgrow," fall down, and lodge badly, and is therefore well liked by irrigation farmers. The erect seed heads make it easier and cheaper to harvest and handle than milo. The fodder is relished by all classes of stock because the stalks are sweet and reasonably juicy. In addition to all these advantages the leaves of the plant remain green until after the grain is thoroughly matured. When fully ripe, the grain shatters, though not badly.

## GROWING SEASON

Hegari matures in about 110 days on an average. Under suitable conditions, when planted in midsummer by the side of milo, it will mature in an equal number of days. If moisture is limited, milo will mature in less time. Because of this characteristic, where hegari is planted in midsummer after small grain harvest, care should be used to see that sufficient moisture is supplied to keep the crop growing steadily; otherwise frost may injure it before it is fully matured in the fall.

## FEEDING VALUE

In feeding value the grain of hegari appears identical with that of kafir or milo. The grain of all the sorghums should be ground before feeding; otherwise some of its feed value may be lost because of the animal's inability to digest it fully. Since the leaves of hegari remain green until the grain is fully matured, it is easy to harvest the crop without loss of leaves, and therefore without loss of feed value. This makes it a very desirable crop for fodder, and equally desirable for silage. In many cases the grain is harvested first and later the stalks and leaves are placed in the silo.

## SOILS

In general, hegari is adapted to any soil on which other sorghums will grow. An ideal corn soil is ideal for hegari. In other words, a rich loam soil well supplied with organic matter is best, but hegari will thrive on practically all soils except those that are extremely alkaline, wet, poorly drained, or acid.

## CLIMATE

In its climatic adaptations, hegari is similar, for the most part, to milo. It does not do well in the spring when the ground is cold and the air cold at night. It grows best during warm or hot weather. It is killed by heavy frosts either in the spring or fall. It is considered a quick-maturing sorghum and under southern Arizona conditions is especially valuable because it can be planted in May, June, or early July (after wheat harvest) and still mature before fall frosts. It will not prove valuable at elevations so high that the nights are always cool. If it is planted at elevations above six thousand feet, the planting should be considered an experiment.

## SEED-BED AND PLANTING

In preparing the land for hegari, good preparation will pay as well as for corn and other crops. When hegari follows small grains, disking may be sufficient if the ground is in good condition and of a loose and open nature. If the ground is of a compact nature, or of adobe, plowing and subsequent working of a good seed-bed will be desirable. The ordinary method of planting corn or sorghums in any particular community, whether with lister or planter, will be satisfactory for hegari.

Hegari requires warm soil for satisfactory germination. In the spring plantings should be delayed until one or two weeks after corn planting time.

Hegari stools freely and if the seed is of good quality two pounds per acre is sufficient to give a full stand, provided the ground is in



A Field of Hegari on the Salt River Valley Experiment Farm

proper condition for planting. With poorer seed or less favorable conditions, four to five pounds will prove better.

## CULTIVATION

The same cultivation and care should be given hegari that is given milo, kafir, or other sorghums under similar conditions.

## HARVESTING

In harvesting hegari for grain, it is advisable to allow the grain to ripen thoroughly; otherwise heating is likely to occur, particularly if the headed grain is placed in large piles or stored in bins. Damp weather favors heating of the stored grain. When the plant has matured sufficiently for the stem at the base of the head to snap and break clean when bent sharply, it is usually dry enough to store with safety.

## TWO CROPS PER SEASON

In a majority of cases it has not proven worth while to attempt to grow two crops of hegari in the same season from one planting. Such an attempt usually results in the first crop being planted so early that it does not do as well as it should, and the second crop is certain to give a smaller yield than one crop planted at the right time. Moreover, the growing of two crops of any sorghum on the same ground in a single season will leave the ground in bad physical condition.