

DEPARTMENTAL NOTES

ADLAY

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HISTORY

ADLAY (*Coix Lachryma-jobi*), or Job's Tears, commonly known as barley, is not unlike the latter in appearance hence the misnomer. This edible grain is of historical importance since it was cultivated in India about 3000 or 4000 years ago. It was known to the ancient Arabs who introduced it to the West. It was also grown in ancient times in China, Japan, and other tropical countries. In old records mention has been made of the plant only as a weed or cultivated as an ornamental plant. Early writers refer to the use of seed as beads for rosaries. An early missionary writer of Tonkin has said that adlay makes a refreshing drink, is a good blood purifier and an excellent diuretic. People in Tonkin call it the "Grass of Life". It is said that in India, *Coix* can hardly be said to enjoy a reputation for its medicinal properties. The grain was never too popular on this continent in view of the varied assortment of other cereals, but in times of scarcity *Coix* has been cultivated extensively as a food crop.

TYPES

There are many wild and cultivated forms of adlay. The wild species can be distinguished from the edible forms as the shell of the former is tough and the grain is hard. The edible varieties have a thin shell and are soft grained.

CULTIVATION

Adlay can be grown in chenas as a mixed crop, or as a pure crop in home gardens or in abandoned owita land where drainage is good. It will not thrive under water-logged conditions. It is most suited to friable or loamy soils with an abundant supply of humus, but seldom does well on heavy clay soils. It grows admirably from sea level up to elevations of about 2000 feet.

Adlay has been tried in different villages in Kegalle, Nawalapitiya, Dambulla and in Kandy district, and has given excellent results. The rainfall during its growing period should be evenly distributed. Dry weather should prevail when ear-heads begin to mature. In very dry districts it is necessary to irrigate the crop. Adlay tillers profusely when grown on well cultivated soil. The land is usually ploughed and harrowed or mamoty-forked.

On an even seed-bed 3 or 4 seeds are dibbled in by hand $2\frac{1}{2}$ ft. by $2\frac{1}{2}$ ft. apart and in rows. If the seed is not very fresh the seed rate may be doubled. For normal sowing 6 to 8 lb. will be required. When plants are about 3 ins. high, they are thinned leaving a couple in each hole. Plants are earthed up when 6 ins. to 8 ins. high. Inter-cultivation excepting periodic weeding is not necessary. The crop is ready to harvest in 5 to 6 months from sowing. A dressing of farmyard manure when the seed-bed is prepared is beneficial, especially in soil deficient in humus, but an excessive supply is not advisable as it would tend to promote vegetative growth at the expense of grain production. A few months after the harvesting of the crop the plants will tiller again and a ratoon crop can be reaped. Harvesting is done on a fine day preferably in the morning. Stalks are cut about 6 ins. from the ground. They are spread out in bundles and when thoroughly dry, threshed in the same way as other grains. Milling is done with an indigenous wooden mortar or in a stone corn-crusher. The former method is preferable. Grains should be absolutely dry before milling, otherwise a considerable proportion will be crushed. The yield per acre on average land is about 75 bushels of grain which produces about 25 bushels of cleaned grain.

USES

Coix is an excellent substitute for rice and is more nourishing. It can be boiled whole or partly broken. The flour is an admirable substitute for rice flour for the preparation of articles of food such as hoppers, milk rice and roti, which are usually indispensable as a morning meal among the indigenous population. The offals or millings can be utilised as food for poultry and farm animals. Tender adlay plants can be used as fodder for cattle. Plants before they are mature could also be used for preparation of silage for cattle. Unfortunately the grain has not earned the popularity it should considering the varied uses to which it can be put. This may be attributed to the ignorance of growers. Moorish cultivators have displayed

keen interest in the cultivation of this crop. There are possibilities of popularising this crop in small holdings and peasant proprietor settlements in many parts of the island. Taking the average consumption of rice per head per day as $\frac{5}{8}$ of a measure, a crop of adlay from an acre of land will provide sufficient food for a family of four people for about a year.

Wester in his article on adlay states that this grain has a greater proportion of fat and protein content than either rice or wheat and as such it is a more complete food than either of these grains.

ANALYSES OF ADLAY—RICE—WHEAT

	<i>Water</i>	<i>Protein</i>	<i>Fat</i>	<i>Carbo- hydrates</i>	<i>Fibre</i>	<i>Ash</i>
(a) Adlay (<i>Coix Lachryma-jobi</i>) (threshed)	10.8	17.6	5.6	62.1	0.3	3.6
(b) Raw Rice (<i>Oryza sativa</i>) (Polished)	12.21	7.64	1.00	77.9	0.33	1.0
(c) Wheat	10.62	12.23	1.75	71.18	2.36	1.81

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REFERENCES

WATT, SIR G.—The Commercial Products of India.

WESTER, P. J.—Adlay—A new Grain. *Philippine Farmer*, VII, No. 3. Reproduced in *Trop. Agriculturist*, LVII, No. 1, pp. 43-46, 1921.