



A case for systematic study and development of Taro varieties in India.

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Abstract: In Eastern and Southern parts of India locals consume several species of taros, crops that can be a big source of starch. In contrast to wheat, rice, maize, and potato etc. the major sources of edible carbohydrates, development of taro as a crop, despite similar potential has been neglected. Even in contrast to yam, which has been touted as super-crop, research on taro is very scanty in India. Not just the corms of taro plants but various other parts are consumed in eastern and southern India. Some species can be found growing extensively in the wild and near road side and this crop provides subsistence especially to the poorer sections of society. We conducted a qualitative survey of varieties of taro in Nadia District, West Bengal to assess the need of development of taro varieties in India.

Key words: Araceae; Survey; Taro (Kochu); Edible.

INTRODUCTION

Before the arrival of potato in the market from the new world, several plants of the Araceae family were used as one of the dominant edible sources for starch in several parts of world, including India. Despite the continued edible use of several plants of this family, some through cultivation and some by gathering, hardly any effort has been put in the development of commercial cultivars of these plants in India. Systematic classification and culinary uses of all the varieties and species used in India is also not adequate in the literature. Common encyclopedias and texts lump several varieties of plants of this family Araceae, an edible plant, which is also found in Europe. We qualitatively evaluated the local consumption of taro species and varieties and realized the immediate need to develop commercial cultivars of this potential super-crop.

Methodology

A field, village, and market survey of the Haringhata Borough of Nadia district of West Bengal, India was carried out in search of Araceae plants from November 2014 to August 2015.

RESULTS

An extensive variety of taro were noticed and hence noted in a tabulated form. Table 1 describes the various types of taro and their scientific names are mentioned. Various types of taro and their uses are mentioned in table 2. Some properties were taken into the consideration

Table 1:

S.No.	Local name	Scientific name	Edible/ Ornamental/ Wild
1.	Dudhmankochu (edible)	<i>Xanthosoma sagittifolium</i> (L.) Schott	Edible
2.	Maankochu	<i>Alocasia indica</i> (Lour.) Spach	Edible
3.	Cholakochu	<i>Colocasia esculenta</i> (L.) Schott	Edible
4.	Gathikochu	<i>Colocasia esculenta</i> (L.) Schott	Edible
5.	Oolkochu	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson	Edible
6.	Kharkol	<i>Typhonium trilobatum</i> (L.) Schott	Edible
7.	Bunokochu (poisonous)	<i>Alocasia formicata</i> (Kunth) Schott	Wild and edible after processed

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S. No.	Local Name	Edible part	Culinary and medicinal Uses
1.	Chola or pani or jolkochu	Leaf, stem, Corm, Roots (Kochurloti)	Prepared as food
2.	Dudmaankochu (edible)	Leaf and stem	Prepared as food
3.	Gathi or Arbi	Branched Tuber are edible but main tuber not edible	Prepared as food
4.	Maankochu	Leaf and Corm	Prepared as food, anti-diarrhoeal
5.	Oolkochu	Corm.	Prepared as food, also hepato-protective
6.	Bunokochu (poisonous)	Tuber	Use as poison but edible after processed with calcium hydroxide solution.
7.	Kharkol	Leaf	Prepared as food

Plate: Various types of Taro (kochu) in Haringhata Borough of Nadia district of West Bengal

*Colocasia esculenta*, Cholakochu*Xanthosoma sagittifolium*, Dudhmankochu*Colocasia esculenta*, Gathikochu*Alocasia indica*, Maankochu

*Amorphophallus paeoniifolius*, Oolkochu*Alocasia formicata*, Bunokochu

DISCUSSION

Several swollen tubers of Araceae family have been used for starch by humans [4]. Araceae is the oldest family of the monocot plants [24]. This family has been extensively diversified from the early cretaceous period [24]. There are 107 genera over 3700 species and this family is most diverse in the new world tropics [5]. Taros have raphides in them. Raphides are the crystals of Calcium oxalate, present especially in the idioblastic cells of leaves and roots [9] and these crystals can be irritant to throat. Previously research on taros in India has described these taros [36]; [37] but not the presence of these seven as common species and varieties in the Nadia district of West Bengal. Our work suggests a strong need for development of commercial cultivars of Taro, with desired properties such as low raphides content and high yield. Further, studies going on in various aspects.

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