Nutritional Value of Tropical Plant Seeds

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In most tropical countries, a significant part of the people’s food and energy requirements is derived from a remarkable diversity of crop plants existing in the wild or under limited cultivation (Grivetti, 1978; Becker, 1986). The fruits, seeds, and leaves of many of these plant resources already form common ingredients in a variety of traditional native dishes for the rural population in developing tropical countries (Humphry et al., 1993; Okafor, 1980). Such plant resources, abounding especially in the tropical forests and savanna (Hoskins, 1990; Tewari, 1993), are in most cases wild relatives of crops, some with useful characters. Unfortunately, however, most of these indigenous species of food plants in the tropical regions, which have been utilized by native peoples since ancient times, were pushed aside during the colonial era when consumer demands in Europe largely determined the cultivation and research priorities of indigenous or traditional crop plants.

Indigenous food and useful plants in the tropics have suffered neglect, being considered “poor people’s food” and therefore agriculturally unimportant. Nevertheless, the local inhabitants still rely heavily for survival on these neglected and lesser-known indigenous forest and wild gathered food crops, especially in times of periodic drought or crop failure and preharvest hungry season (Falconer, 1990). Wild gathered food resources make an important source of variation and complementation especially with regard to vitamins and minerals in the diet of rural dwellers in Africa and tribal people in India (Herzog et al., 1994). Humphry et al. (1993) observed that edible wild plants were prominent in local diets of the Hausas during both drought and adequate rainfall in Niger and that their reliance on this wide range of local wild plants facilitated food diversity and drought-related survival strategies. The authors also noted that wild edible plants comprised 21% of the estimated volume of the total diet in the study areas. Grivetti et al. (1987) reviewed the dietary role of wild plants among some sub-Saharan people and observed a wide diversity of foods and recommended that these underutilized and underexploited wild plants should be considered a research priority within agricultural development programs. Moreover, many of these food plants grow in a much broader spectrum of soil and weather conditions, some even marginal conditions—and are often highly drought-tolerant (Campbell, 1986; Gangwar and Ramakrishnan, 1989). Quite a number of them are now under serious threat of genetic erosion and the danger of total extinction as long as they remain neglected and underutilized (Okigbo, 1994; Okojie and Okali, 1993).