HUMAN FOOD VALUE OF AUSTRALIA'S DRY ZONE ACACIA SPECIES

S.J. MIDGLEY[1], J.C. BRAND[2], C.E. HARWOOD[1], G. ANNISON[3], AND K.C.RICHARDSON[4]

The seeds of many of Australia's dry zone acacia species have been a part of the traditional diet of Aboriginal people. Some species have grown very well in other dry parts of the world including areas often hit by drought and famine. The trees were introduced for land rehabilation due to their fast growth under difficult conditions and their use as wind breaks.There is a tradition in Africa for tree seeds to be used as food which has encouraged many research institutions to examine more closely options for tree planting for uses other than wood production.

Recent studies have shown that Australian acacias are a rich source of protein (11.0-36.6% wet wt.), fat (1.7-21.6% wet wt.) and carbohydrate (3.7-40.8% wet wt). They are also high in fibre (8.2-53.4% wet wt.) and contain considerable levels of minerals. Acacia seed oils contain large amounts of linoleic acid (40-70%), oleic acid (13-34%) and palmitic 7-16% (Brand, 1991, unpublished data). Some species contain high proportions of monounsaturated fatty acids.

Australian acacias contain lower levels of heat sensitive protease inhibitors than other legumes and haemagglutinins are reported to be absent. They do contain low levels of the toxic amino acid djenkolic acid, cyanogenetic glycosides and tannins but lathyrogenic amino acids are not present. The Australian acacia seeds are therefore a potentially valuable nutrient source for populations in parts of the world where traditional foods fail in times of drought. They can be planted as boundaries to field crops such as millet and it has been noted in these cases that overall productivity has increased.

The Australian acacias are now being examined in a systematic way which includes assessing the nutritive quality and safety of their seeds and silvilcultural characteristics. The successful introduction of Australian acacias to other parts of the world as human foods will require close consultation with target communities to determine desirable food preparation methods. Australian Aborignal knowledge of the food use of acacia seeds is an important component of the research program.

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[1]Australian Tree Seed Centre, CSIRO Division of Forestry, ACT 2600, [2]Human Nutrition Unit, University of Sydney, NSW 2006, [3]CSIRO Division of Human Nutrition, O'Halloran Hill, SA 5158, [4]CSIRO Division of Food Processing, N.Ryde, NSW 2113