DISCUSSION

Nutritive values of conventional foods are known to a good deal all over the world. National Institute of Nutrition, Hyderabad (Gopalan et al. 2004) has carried out analysis of about 591 Indian foods, including cereals, grains, pulses, legumes, leafy vegetables, roots, tubers, nuts, oil seeds, condiments, spices, fruits, fishes, other sea foods, meat, poultry, milk, milk products, fats, edible oils, sugars, beverages (alcoholic) and (non-alcoholic). Proximate principles of some less familiar foods are also determined. However, hundreds of wild edibles i.e. ethnic foods still are awaiting the scientific studies. Little research has been carried out and there is a general lack of knowledge about their potential. Also, in this modern age acceptability about wild vegetables has considerably reduced.

People often have a negative attitude towards these vegetables and fail to appreciate their taste. Promoting the nutritional value of traditional leafy vegetables will have a good impact on encouraging their use.

Out of 16 wild edible species selected for further analysis- except four i.e. *Scilla, Caesulia, Bombax and Oroxylum*, all others were found to be used widely as food over the entire Vidarbha region.

Nutraceutical potential of the wild edibles studied here is discussed in light of the role of nutrient components and bioactive molecules they contain, and the medicinal uses mentioned in literature (as are already given in review and enumeration part).
Most of the wild edibles especially leaves and flowers are available in rainy season. The material for analysis therefore was collected in the same season and at the same stage, which is preferred by people.

Except for *Caesalia axillaris* and *Schleichera oleosa* (Anonymous 2002, Anonymous 2003), and flowers of *Bombax ceiba* (Gopalan et al. 2004) no information is available about the nutritional value; scanty information is available about the medicinal constituents of the species.

Earlier studies on *Caesalia axillaris* have shown dry matter 23.2, crude protein 22.4 fat 2.2 crude fibre 27.6 and ash 11.6%. The material studied here was collected from marshy places having high moisture content; and therefore proportionately values obtained deviate. Wound healing and anti-inflammatory property can be attributed to the presence of flavones and essential oil. Presence of catechol is in confirmation of earlier observations. (Anonymous 2002)

Green leaves of *S. oleosa* have been studied earlier and shown to contain crude protein (10.37), fibre (32.34), calcium (2.42) and phosphours (0.71)% (Anonymous 2003). However, present study deals with young red-brown leaves, hence the values are not comparable. Presence of fatty acids reported here is supported by earlier studies. Major cyanolipid of oil is shown to consists of two fatty acids (Anonymous 2003).

Leafy wild vegetables studied reveal a wide range of nutrient profile and presence of various bioactive molecules.
The moisture content was found always to be more than 70% except for *M. gangetica* and *S. oleosa*; *M. gangetica* grows comparatively on dry soil/usually on black cotton soil. Young leaves of *S. oleosa* are produced just after first shower.

Carbohydrates range from 0.348 (C. argentea) to 6.57gm (M. gangetica) /100gm. Protein values range from- 0.249 to 7.2 gm/100gm fresh weight. The highest being present in *M. gangetica* while the lowest is in *D. muricata*. Values of crude fat are quite satisfactory. Crude fat was found lowest in *C. argentea* (0.13gm), while it was highest in *R. hypocrateriformis* (1.014gm). On the contrary, lipids are comparatively quite low; the lowest being 0.003 gm in *S. oleosa* while 0.256 gm i.e. highest in *D. muricata*. (Fig.1).

Not much is known about the role of chlorophyll in human metabolism. However, recent studies show that green vegetables have a definite role in prevention of effects of certain toxins and prevention of liver cancer, skin cancer, colon cancer etc. Lutein and Zeaxanthin are found notably in leafy green vegetables and play a role in keeping eyesight good supporting the role of carotene.

Total chlorophyll and also chlorophyll ‘a’ and ‘b’ were found to be highest in *M. gangetica* (3.12, 0.2, 0.1mg) while it was lowest in *S. oleosa* (0.005, 0.0022, 0.0022mg.). In fact, the young leaves of *S. oleosa* which are used as vegetable are reddish-brown. Amongst green leaves *S. hyacinthiana* (0.106, 0.056, 0.05 mg) showed lowest chlorophyll content (Fig-2).

Highest amount of anthocyanin was found in *S. oleosa* (4.83mg); while it was lowest in *G. indicum* (0.74mg). Leaves of *S. oleosa* can be promoted as an medicinal food for their antioxidant, anti-inflammatory and antidibetic due to rich anthocyanin content (Fig-2).
Lycopene is another pigment possessing antioxidant antitumour and anticancer property. Maximum lycopene content was found in *R. hypocrateriformis* and *C. trilocularis* (7.85, 7.6mg) while it was minimum in *G. indicum* (1.44mg) (Fig-2).

Blood purifying activity of *R. hypocrateriformis* can be attributed to its high lycopene content that helps in preventing the entry of toxins through cell membrane.

Carotenoids were estimated during present study by referring standard graph of β carotene. Therefore, the values obtained are considered as values of β carotene. *D. muricata* was found to contain maximum i.e. 648.1 mg while *C. argentea* was found to contain lowest i.e. 47.5mg of β carotene.

Vit. A deficiency is most widespread and serious nutritional disease among young. In general entire Indian continent faces Vit. A deficiency (Ahmed and Darnton-Hill 2004). β carotene acts as precursor of Vit. A. Considering the Vit. A deficiency in Indian population, *D. muricata* can be prescribed as supplementary diet to overcome the general Vit. A deficiency. Almost all leafy vegetables studied here are rich in carotenoid content. (Fig-3) The recommended level of Vit. A (retinol) for adult is 600µg, (Gopalan et. al. 2004) which can easily be fulfilled by using few grams of wild vegetables.

Maximum Vit. C content was found in *C. argentea* (5.088mg) and minimum in *R. hypocrateriformis* (1.32mg) (Fig 4).

Phenols also are important as antioxidants. Leaves of *S. oleosa* were found to possess highest amount of phenols (326.6mg) while *D. muricata* and *C. benghalensis* where found to possess lowest amount (21.93, 20.66mg) (Fig-5).
Dietary fiber though cannot be considered as nutrient, is an important constituent of diet that plays very important role in health promotion and disease prevention. Crude fibre estimated here constitutes insoluble dietary fibre which adsorbs bile salts, it also facilitates intestinal movements. Leaves of *C. tuberosum* and *D. muricata* were found to contain high amount of dietary/crude fibre (49.9, 43.25% of dry tissue); while *C. argentea* and *S. oleosa* showed less than 10% fibre content (Fig-6).

Gross mineral content was found to show a broad range. Highest content was shown by *C. benghalensis* (25.1gm) while lowest by *S. oleosa* (4.58gm) (Fig-7).

*D. muricata* showed highest Calcium content i.e. 3.25gm while *S. oleosa* had only 0.11gm. Sodium was found to be highest in *C. benghalensis* (4.2gms), while the lowest content was found in *S. oleosa* (0.709gm) (Fig 8).

Potassium content was also highest in *C. benghalensis* (0.87gm). *M. gangetica* had lowest potassium content (0.2gm); but highest iron content (0.44gm); *S. oleosa* showed lowest iron value (0.014gm). An average portion of leaves of few can provide sufficient iron and contribute considerably to the recommended intake of an adult (1 to 3 mg per day). This has also been advised earlier by Dietz (2005). Phosphorus content of all wild vegetables was found to be comparatively low. They showed a narrow range i.e. from 0.035 (*G. indicum*) to 0.114gm (*S. hyacinthiana*) (Fig. 8).

Almost all green leaves are a good source of protein, vitamin, and minerals, but dark green leaves usually have a greater food value than light green leaves (Dietz, 2005.). *Merremia gangetica* which is highest in chlorophyll content is also the richest source of carbohydrates, proteins and crude fats. Calcium content is also very good; next to *D. muricata* i.e. 3.08/ 100gm.
Flower vegetables usually are not a regular part of diet; they constitute fancy food or delicacy. However, the nutrition provided by them cannot be neglected.

Total carbohydrate content was highest in *O. indicum* (2.735gm), while lowest in *B. ceiba* (1.421gm). However, lipid content was highest in *B. ceiba* (1.5gm) and lowest in *T. pallida* (0.2gm). Flowers of *O. indicum* showed lowest protein (0.128gm), while that of *T. pallida* are highest in protein (0.88gm) but are lowest in crude fat content (0.48 gm). *C. fistula* flowers contained highest crude fat (0.93gm). (Fig 9.)

Since *C. fistula* flowers are yellow (both calyx and corolla) and flowers of *B. ceiba* are used after removal of calyx their chlorophyll content is zero. Chlorophyll content of *O. indicum* and *T. pallida* is also very low. Anthocyanin and carotenoids were found maximum in *B. ceiba* (3.89 and 800 mg). *T. pallida* was lowest in anthocyanin, carotenoid and vitamin C content (1.07, 172.52 and 1.566mg). Flowers were found to be richer in Vit C content than leaves. Lycopene and vitamin C was highest in *C. fistula* (0.84 and 10.485 mg). Lowest lycopene was found in *O. indicum* (0.16mg). (Fig-10-12).

*O. indicum* showed highest phenolic content i.e. 280mg while *C. fistula* flowers showed lowest i.e. 35.33 mg (Fig.13). Crude fiber content of all flowers is negligible; however, *B. ceiba* flowers showed highest value (18.1 gm) (Fig-14).

Flowers are low also in gross mineral content (*T. pallida* 11.4, *B. ceiba* 5.47gm/100gm) (Fig-15)Flowers of *T. pallida* showed highest iron, sodium and potassium content (0.079, 2.394, 0.56 gm). Phosphorus content was found highest in *C. fistula* (0.122gm), while *O. indicum* had highest calcium content (2.475gm). Overall flowers of *B. ceiba* are poor with respect to all minerals. (Fig-16)
All wild edibles studied gave negative test for copper and nickel. Aluminum was found to be present in all except *C. axillaris* and *B. ceiba*. Magnesium, manganese and chloride was present in all without exception.

Fruits of *O. indicum* are pickled and used as medicinal food item. Its nutritional value is very good. Carbohydrate and protein content is 1.677 and 3gm, while crude fat is 0.46gm/100gm fresh weight. Phenol content is also as high as 145.33 mg, which must be responsible for its anti-inflammatory activity that might be providing relief in rheumatism. Calcium content is also good-13.05 gm/ 100gm dry weight (Fig. 17-22). As far as iron concerned both, the *O.indicum* and *B. vahlii* are very poor.

Seeds of *B. vahlii* are supposed to be highly nutritious by tribals. They were found to contain good amount of carbohydrates, proteins, fat and lipids (Fig 18-19). Nutritive values of *B. vahlii* are much nearer to that of Bengal gram (whole). It is further needed to study the protein profile of these seeds. May be the protein quality of seeds is very good.

Proteins are usually calculated from total nitrogen content, by multiplying it with conversion factor (N×6.25). The same has been followed here also. Recently Yeoh and Wee (1994) had shown that for leaf protein from Kjeldahl nitrogen, traditional factor of 6.25 is not valid. For protein content conversion factor should be first determined for a particular taxonomic group. In general 4.43 should provide a reasonably good estimate of protein content.

Total carbohydrate content of various vegetables, fruits and edible flowers was estimated by earlier authors also. However, the values had been calculated only indirectly by subtracting sum of moisture, protein, fat, fiber and ash. During present
studies actual estimation of carbohydrates has been done. Also, the carbohydrate components like starch, reducing sugar and non-reducing sugar are estimated here for the first time. In all wild vegetables studied here amount of sugars was always found to be more than starch; except for *C. fistula* flowers, where starch and sugars are found in equal amounts. Sugars are readily available source of energy. The wild vegetables therefore are easily digestible as far as at least carbohydrates are concerned.

Studies on nutritional potential of selected wild edibles has shown that these are in no way inferior to the conventional marketed vegetables. The values of different nutrients obtained during study are compared with four popular conventional vegetables viz. *Amaranthus*, Fenugreek, Spinach, and Cabbage. For comparison, all the values obtained are converted into per 100gm fresh weight, since the values in available literature are based on fresh weight (Gopalan et al.2004).

Protein in presently studied wild vegetables shows a range from 0.249 to 7.2 gm per 100gm; the maximum being present in *Merremia*. When compared with conventional leafy vegetables it is almost double that of *Amaranthus spinosus* and Fenugreek leaves. *Celosia* and *Commelina* are also higher in protein content than Amaranthus, Fenugreek, Spinach and Cabbage. Crude fat estimation shows a range from 0.13 to 1.014 gm per 100 gm; the highest present in *R. hypocrateriformis*; which is more than the compared ones, *M. gangetica* and *C. axillaris* showed crude fat equivalent to that of *spinach*. Dietary fiber content is important constituent of food. Most of the wild leafy vegetables showed better fiber content then the conventional ones- highest being 8.42 and the lowest being 0.893gms/100gm which also is comparable with any of the conventional one. Carbohydrate content ranges from
0.348 \((C. \text{ argentea})\) to 6.57 \((M. \text{ gangetica})\) which is equivalent to fenugreek and Amaranthus leaves (Table I).

Vitamin C (Ascorbic acid) content of these wild vegetables was found to be comparatively much low; on the contrary \(\beta\) carotene was found to be tremendously high. It appears that wild vegetables can serve as wonderful source of Vitamin A. (Table I).

Comparison of mineral content has revealed that wild vegetables are more richer in minerals than the conventional vegetables (Table II). Calcium shows a range from 44 mg \((S. \text{ oleosa})\) to 624mg \((G. \text{ indicum})\)/100gm. Sodium shows a range from 19 mg \((C. \text{ axillaris})\) to 77.8mg \((C. \text{ bengalensis})\)/100gm. Except \(C. \text{ axillaris}\) all wild leafy vegetables are richer in sodium than conventional. Iron is one of the mineral which is responsible for haemoglobin content of blood. Lowest iron content was shown by \(C. \text{ trilocularis}\) and \(C. \text{ argentea}\) (4mg)/100gm while highest content was shown by (167mg)/100gm. Even the lowest iron content is more than conventional vegetable except spinach.

Iron deficiency anemia is much prevalent in developing country. In India about 88% pregnant women are anemic. Iron fortification of food is answer to this problem. It has been shown that multicentric field trials with iron-fortified common salt were effective in reducing the prevalence of iron deficiency in Indian population (Vijayaraghvan K. 2004). Plant ash of \(M. \text{ gagentica}\) may be used to for salt fortification. Also the herb can be cultivated and marked as regular vegetable.

Values for potassium (0.87-0.2gm/100gm dry weight) show that wild vegetables contain a good level of potassium though it is much higher in spinach.
However, they all are low in phosphorus; the daily allowance even for children being 300mg.

Nutritional potential of wild edible flowers studied here when compared with commonly used and marketed flowers of drumstick, agathi and plaintain show that wild flowers are in no way inferior to these species except for protein and carbohydrate content. Values of crude fat shows a range of 0.48mg (\textit{T. pallida}) to 0.93mg (\textit{C. fistula})/100gm which is more than all the compared ones. Vitamin C content of \textit{C. fistula} flowers is also comparable with the marketed flower vegetable. For comparison of \(\beta\) carotene no values are available; however \(\beta\) carotene of all the wild flowers is very high (Table III).

As far as minerals are concerned wild flowers are richer in minerals than the marketed ones highest calcium content was found in \textit{O. indicum} (353mg/100gm), which is about seven times found in drumstic flowers; while the lowest content was found in \textit{B. ceiba} (39mg/100mg) which is more than plaintain; agathi flowers are very poor in minerals. Flowers of \textit{C. fistula} show highest content of phosphorus (360mg) while rest of the species show quite low content. Maximum iron was also found to be present in \textit{C. fistula} (16mg) flowers while it was lowest in \textit{O. indicum} (2mg); however, this is still higher than that of plaintain. Potassium content of wild flowers is quite low as compared to that of drumstic and plaintain. (Table IV)

Energy value of wild edibles is comparable with many of the marketed species (Table V). Energy value of \textit{C. trilocularis} and \textit{D. muricata} is very low; however, \textit{D. muricata} contains highest amount of carotenoids, which is higher than any conventional species.
B. ceiba flowers were found to contain flavanones, leucoanthocyanin, hydroquinone, catechol and chlorogenic acid. Antidiarroheal activity and use on stomach disorders and as antidote to snake poison may be because of presence of chlorogenic acid. Flavanones might be acting as antimicrobial agents in skin diseases, urinary infection and typhoid. Petals of B. ceiba have been shown to contain pigments like anthocyanin, pelargonidin and cyaniding; various flavonoids and polysaccharides also have been isolated from the petals (Anonymous 1988).

C. trilocularis showed presence of flavanones, catechol and polyoses. Though C. trilocularis does not find any mention in ethnomedicinal literature its closely related to C. olitorius which is used against many disorders. The bioactive molecules present in C. trilocularis can prove effective as anti-inflammatory, antitumor, antioxidant and stimulant.

S. oleosa leaves contain flavones, flavonols, leucoanthocyanin, catechol and polyoses. Presence of alkaloids is doubtful since only Wagners test is positive. Leaves of S.oleosa doesn’t find any mention in earlier ethnomedicinal literature. However, bioactive components present indicate that it can be used as anti-inflammatory, antitumor, antioxidant and stimulant. Tannin also has been reported by earlier workers in green leaves; probably the absence of tannin found here is related to the stage of development.

Seeds of B. vahlii are poor in bioactive compounds. Tannins have been reported earlier but found to be absent in present study.

C. fistula flowers were found to content flavones, flavonens, pyrogallol and polyoses. Since, only Wageners test was positive; presence of alkaloid is doubtful. Astringent properties of flowers may be due to pyrogallol that binds with tannins.
Pyrogallol may further provide anti-inflammatory, antiseptic and anticancer properties. *C. fistula* flowers are known to contain several types of flavonoids. Petals are known to possess gibberellic acid (Chatterjee 1992, Anonymous 2002).

*C. axillaris* plants yield an oil which has sweet smell; plants collected from Northwest Himalaya yield oil having spicy odour, they also contain catechol. The essential oil has shown to possess antimicrobial activity on human pathogenic bacteria and fungi. It also produced cardiac inhibition in frog heart and fall of blood pressure (Anonymous 2002). Flavonens, alkaloids, steroids and triterpenoids are reported from mature *Caesulia* leaves by Bhogaonkar (1989). The wound healing property of leaves may be because of triterpenes and steroids. However, these compounds were found to be absent from young tender leaves studied here.

Flavonaols, catechol and chlorogenic acid was found to be present in young leaves of *G. indicum*. Though no medicinal use is found in earlier ethnobotanical literature; the flavanol, catechol and chlorogenic acid make it potentially effective as antioxidant, stimulant and an antidote against poison.

Flavones, flavonols, catechol, triterpenoids and chlorogenic acid were found to be present in *M. gangetica* leaves. A weak response was noted for leucoanthocyanin test; since the members are not woody, leucoanthocyanin should be absent from the tissue. Leaves are supposed to be effective in migraine, abscess and ulcers. The antimicrobial property of flavonoids and terpenoids may be responsible for later two activities, while catechol which is stimulant might be giving some relief from migraine.

The flavonoids present in *Rivea hypocraeteriformis* leaves might be imparting antimicrobial property.
*Oroxylum* flowers contain flavonoids, tannic acid/gallic acid, triterpenoids and fatty acids; while tannic/gallic acid and flavonone are present in *Oroxylum* fruit also. Locally both the flower and fruits are used in rheumatism. The fatty acids present can promote smooth muscle contraction.

Present study revealed that *C. argentea* contains flavonoids (flavones, flavonols), hydroquinone, catechol, steroids and fatty and organic acids. The flavonoids present might be imparting diuretic and antispasmodic property, which is useful in stomach disorders and colic pain. Presence of steroids and fatty acids in addition will impart refreshing property to the herb. Leaves of *C. argentea* are reported to be rich in potassium and contain flavonoids showing antibacterial activity comparable to ampicillin and streptomycin (Anoymous 2002).

Flavones and flavonols, hydroquinone and polyoses were found to be present in *D. muricata*. Extract of leaves should be further tested for its polyoses, which produce tightening of skin.

Leaves of *C. tuberosum* show presence of pyrogallol, steroids, fatty acids and polyoses. Tuberous roots of the species are well known for giving vigour and vitality. Presence of steroids and polyoses make the leaves also vigour imparting.

Alkaloids, flavones and pyrogallol are present in leaves of *S. hyacinthiana*. No medicinal uses are mentioned in earlier literature. Presence of alkaloids and flavonoids definitely must be imparting some medical property which is however, not yet known.

Flavones, flavonols, napthal and polyoses were found to be present in young leaves of *C. benghalensis*. Presence of alkanols and sterols is reported earlier (Anoymous 2002) from the plant.
Nothing is known about the chemistry of *T. pallida*. Flavonones, Chlorogenic acid fatty acid and polyoses were noted in *T. pallida* flowers. No medicinal use is attributed to the species in earlier literature. However, they may prove useful as antimicrobial, antitoxin, anti-rheumatic and cosmetic for skin (anti wrinkle).

A variety of techniques are used by indigenous people to reduce or eliminate the bitter or acrid components that are common in leaves and roots; the simplest technique is to choose only the youngest and fastest growing plants, and, if necessary, only the youngest leaves of young plants, which are least likely to have a buildup of bitter and unpleasant compounds. Some vegetables are soaked, then boiled. They are sometimes left in sun to reduce the bitterness. Fire itself is a useful tool for denaturing some chemicals, making an otherwise unpleasant food palatable. Many species, as they grow older become unpalatable.

Some of the wild edibles do create problems. This is especially true for famine wild edibles; used only when preferred alternatives are not available and in situations where chronic food shortages prevail. Usually special methods of preparation and cooking of local vegetables have developed by experience, over generations, to make them edible (Dietz 2005). Before popularizing wild edibles one should keep in mind that the methods of use also should be strictly followed.

Wild edible plants are facing threats in their natural habitats from various human activities. The level of impact of these activities varies from place to place. Popularization and cultivation practices of these vegetables will definitely help their conservation.

In addition to food value, many of the wild edibles are marketable and provide the opportunity to supplement household income. Status assessment of wild edible
plants of Arunachal Pradesh has revealed that, the contribution of wild edibles to the
diet and economy of the local people is often significant and therefore focus on these
species should remain priority (Angami et.al. 2006).

*Amaranthus* is one of the best examples where a traditional crop has been
successfully reintroduced into agriculture. It was grown by Aztecs 5000 to 7000 years
ago. Taking into consideration the nutritional potential of Amaranth grain, in
approximately only 15 years American Amaranth has gone from an obscure plant to a
recognized grain (Stallknecht and Schulz-Schaeffer 1993).

Food and Fertilizer Technology Centre of Taiwan has introduced 18 wild
vegetables into cultivation. So that they can be promoted as food and alternative
source of income to farmers (www.fftc.agnels.org.) One of these eighteen species
*Corchorus olitorius* is one that is also used in Vidarbha as wild edible.
SUMMARY AND CONCLUSIONS

Present survey indicates that people from age group of 40yrs. and above are well verse with traditional knowledge of wild edibles. This is the age group which actually in practice utilizes wild edibles. Here out of 80 people interviewed 50 i.e. 62.5% belong to this age group. Only 6 persons i.e. 7.5% are from age group below 30. Only 30% of the persons having the traditional knowledge belong to age group of 30-39. This clearly indicates that the younger generations care least about their knowledge heritage. The fact is noted by earlier workers also. Modi et al. (2006) working on traditional knowledge of Ezigeni, South Africa report that the younger generation might have less knowledge of wild vegetables than older members of the community.

Survey of wild edibles of Iberian Peninsula (dc-Santayana et al. 2007) reported that many of the uses now exist only in the collective memory of the elderly. Some people still pick them on walks to relive the flavors of their childhood.

Therefore in-depth survey of wild edibles is necessary; not only to know such species and their recipes, but also associated problems (Balemie and Kebebew 2006).

The bulk of useful tropical biodiversity is under exploited and is one of the glaring over side of area of food and nutrition. The creation of more crops and the support of new croppers is of global importance. Integration of wild edible species into agriculture system will not only protect biological diversity but also provide adequate food and contribution to the rural economy. More such surveys are necessary to identify the edible species according to the local preferences.
*Celosia argentea* is rich in Vit. C and Vit. A. The plant grows in Africa and Asia both as weed and cultivated leafy vegetable. It can be taken up for agriculture even in India, as it grows abundant in wild. It is very resistant to pest and diseases. It is the most important leafy vegetable of Southern Nigeria and is popular in Benin, Zaire and Indonesia. (Palada and Crosman 1999)

*Merremia gagentica* should be taken up for cultivation. It is rich in proteins, carbohydrates, crude fats, lycopene and chlorophyll pigments. Though low in Vit. A and Vit. C; it is rich in iron and calcium. It is a low herb, spreading and rooting at nodes. Cultivation is very easy; pieces of stem with roots can be used for propagation.

Leaves of *Goniocaulon indicum* are a preferred wild vegetable, especially of agriculture laborers. Its cultivation also can be easily taken up. It is highly resistant to pests and diseases and also requires least care. Roxburgh observed that, “it is not uncommon to see fields of this as thick as if the plants were sown by a careful farmer” (Hooker 1996).

*Digera muricata* leaves can be used as regular source of β-Carotene and Vit A. Young leaves can be collected and shade dried and packed for long term use; since Vit A does not easily degrade (Gopalan 2004).

Leaves of *Commelina benghalensis* are rich in sodium and potassium and calcium. It can be introduced as seasonal delicacy. Cultivation is easy as it roots at nodes.

Most of the wild leafy vegetables are higher in protein content than conventional leafy vegetables.
Presence of various bioactive molecules in the wild edibles studied suggest their potential as neutraceuticals.

Fruits and flowers of *Oroxylum indicum* can be introduced as medicinal food for patients of rheumatism.

Species containing polyoses can be used in anti-wrinkle creams in cosmetic industry.

The findings suggest further investigations into nutritional profiles and processing methods of all the species reported and study of the pharmacological properties for the neutraceutical species, since they are also used for medicinal applications.

In 2006 Indian government passed Food Safety and Standard Act to integrate and streamline the many regulations covering neutraceuticals, foods and dietary supplements (Kaushik 2009). Considering the biodiversity, cultural richness and the knowledge treasure of ethnic and rural communities; India can become a leader in the field of neutraceuticals.
EPILOGUE

Studies on wild vegetables have revealed a number of vegetables with high nutritional values, comparable to those of cultivated vegetables considering the high cost modern agricultural practices for exotic species. Advocacy of these wild vegetables can provide a solution for low cost agriculture/horticulture; especially to the regions like Vidarbha, which is comparatively dry and where there is tremendous backlog of irrigation facilities. This can further provide a booster dose to rural economy; where unfortunately suicides of farmers have become almost common.