

FARM TO DOOR-WAY TOWARDS UNIFIED SOCIETY AN APPROACH

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ABSTRACT

Vegetables form an indispensable part of daily diet particularly in India, as a large section of people are vegetarian. Vegetables are rich sources of vitamins, protein and minerals like calcium, phosphorus, iron, iodine, and vitamins like vitamin-A, vitamin-B, vitamin-C and vitamin-K. Vegetables gave more farm income than other crops. The cropping intensity in vegetable growing is very high. Vegetables are sold at a higher rate than other crops. In India, the market for processed vegetables is increasing and thus more vegetable production is needed. Vegetable production is easily performed by local and tribal people. Tribal people are more related to the natural resources and forest reserves; they know the nature and feature of every crop. Their presence is very helpful in increasing the vegetable production.

In this contemporary world, tribal communities are getting diminished only due the fact that they are not recognized. According to census 2011, there are 105,295 villages and 57 UAs/Towns which have more than 50% Scheduled tribes population in the country while 3.23 lakh or half of the villages do not have any Scheduled Tribes population. Their position in society is getting lowered. Their situation can be improved with the use of new technology, but there is a certain gap between modern technology and the tribal people. We want to be this connecting link between the two with our idea. Our idea would be a great achievement for the upliftment of tribal people.

KEYWORDS: *Expeditious solution, emancipation of women, indigenous knowledge, Atmanirbhar, digitalization*

INTRODUCTION

Nowadays, it is very difficult for the people to go to the vegetable market by themselves and buy the fresh vegetables on daily basis then chop it and cook it. It is also not possible to eat

food from outside as it will become expensive and unhealthy. On the other hand, there is a huge amount of produce which is being wasted due to lack of storage and processing. As many tribal don't know the procedure to store the products, it leads to wastage.

Our idea would reduce this wastage of produce among tribal people. They would be able to enhance their awareness regarding processing and storage. Also, our idea would be a time saver for all people - working class and non-workingclass. In this contemporary world no one has time for anything, so it would be a life saver for all to have less expensive and healthy food at home.

Currently, due to Covid-19 virus many migrant workers and tribal people have lost their employment and are at survival risk. To tackle such similar situations it is very important to be self-reliant as also promulgated by our honourable Prime Minister Shri Narendra Modi as "ATMANIRBHAR BHARAT". Our idea is in favour of this theme and is a step towards it as well.

Our idea would create understanding between tribal and normal community. It will stop the reducing of tribal community. General public would come to know more of tribal people and tribal indigenous product.

EXPLANATION

To tackle these problems of all people especially for tribal people, we have an idea. Our idea is to sell the chopped vegetables which include potato, carrot, cauliflower, jackfruit, etc. in desired shapes, arranged in a tray packed with thin vacuum film sheet. Then, these would be delivered door to door, whenever ordered through web portal.

For example – If someone would like to cook mixed vegetable then he or she have to go through the web portal and order for a tray of chopped vegetables for cooking mixed veg which will include potato, carrot, onion, cauliflower, pea, and chillies. This tray would be delivered to the desired address. These trays will also be put up in supermarkets for sale. Other products tar (palm) whose juice is in huge demand and often get destroyed in one day due to fermentation but by pasteurization and sudden sealing it can be preserved for longer duration.

METHODOLOGY –

Firstly, collection of vegetables has to be done from farm or any local tribal farmer. Vegetables may include potato, chillies, cabbage, peas, beans, carrot, radish, onion and many

indigenous produce. These collected vegetables has to be washed thoroughly and then cut into small pieces with the help of vegetable cutter machine (single phase) followed by packing in trays using tray wrapping machine. The material used for packing is vacuum film sheet and trays would be according to the size of the tray. These wrapped trays would be kept under optimum low degree temperature to avoid rotting. These trays would remain viable for 1 week. Next is the creation of a web portal for the general people who require the trays, order would be delivered door to door through cycle. The main motive here is to promote the employment of tribal women in our firm as they are more related to nature they know the diverse forms of various vegetables. Also, tribal men would be more engaged in their farm to supply the raw material. The home delivery with the help of cycle is new and unique as it promotes more employment, less polluting and would reach different location easily.

Jharkhand with maximum number of tribal population is highest in production of jackfruit. Jackfruit, being an indigenous product, is used in making various new products but records say that 60-70% of the total produce gets wasted due to lack of storage among tribal people. Jackfruit is also included in our idea. For this – it is first peeled with the help of a peeling machine and then cut into small pieces followed by washing. Then, these pieces are kept in screw blanching machine for blanching them followed by keeping in a solution of brine+brix+citric acid, these processes increases the shelf life of jackfruit pieces decelerating the chemical reactions occurring inside them. These pieces are then packed in cans with the help of canning machine as cryo frozen ripe jackfruit pieces. These cans packed under modified atmosphere packaging are suitable to store and sell for up to 2 months. Our procedure would reduce the problem of wastage and unemployment of tribal people.

Palm (tar) is also an indigenous produce of Jharkhand but there is very little or no knowledge regarding its processing among tribal community. For this, firstly palm is obtained from local or tribal people's farm then it is put under juice extraction machine to extract all the juice then it is kept in pasteurizer to perform pasteurization to decrease the rotting and fermentation of palm juice followed by immediate canning with the help of canning machine. Its survival is up to 5 days. This drink is very much desirable among tribal group.

All the procedure performed would increase the employment of local people especially tribal and would reduce the wastage of many forest products. The lower class people need not leave their home town and family for earning money. Our idea would increase self-reliance among tribal people.

CONCLUSION

Presently, due to covid-19 every sector is becoming weak and is on very low verge of progress, but only agriculture sector showed positive GDP growth. It is displaying the fact that in every situation, agriculture is the only sector that has the audacity to flourish. This is the reason that our idea is shifting the focus of migrant worker from migration to metropolitan city to engaging in agro-based industry. Our idea supports the same. Our idea would be a major supporter to employment generation especially to tribal people in every stage of production – right from vegetable collection to home delivery of trays through bicycle. Our idea would promote digitalization of tribal people by introducing them to modern digital world. It would let them use software and computer to a higher extent. Our firm would also provide training to tribal women for the procedure of production. This would help them to set up their own small scale enterprise especially tribal women who can't leave their house. We will provide maximum support to tribal women for making a small community to set a small scale firm.

Conclusively, our idea is the best example of how modern technology can be combined with traditional tribal knowledge and be useful for all sections of society particularly for upliftment of tribal people.

REFERENCES

BOOKS-

Technology of food preservation; Desrosier, Norman and James

Food processing operations: principles and practices; Ellis Horwood

Introduction to food engineering; R.P.Singh

Modern food microbiology; J.M.Jay

WEBSITES-

mofpi.nic.in

m.indiamarket.com

censusindia.gov.in

ETHNOMEDICINAL USES OF PLANTS BY INDIAN INDIGENOUS TRIBAL GROUP-A REVIEW

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Abstract:

According to the WHO, about 80 percent of the world's population depend on conventional medicine for their primary health care. Each tribe or tribal group has its own treatment method, which includes various varieties of plants and plant parts commonly present in their residential area and surrounding areas as medicine for healing. In addition, people around the world are now turning their focus to natural medicines because they are relatively safer and cheaper. Even now, more than 80 % of the population is directly dependent on herbal medicine for healthcare in developed countries. Medicinal plants and indigenous systems of medicine such as Ayurveda, Siddha and Unani have the best genetic resources in India. However, medicinal plants are proving to be an important source of medicinal products worldwide. Nearly every segment of the Indian community uses plants as medicine and around 7,500 species of plants are used by many ethnic groups. Ethnomedicinal plants are endangered due to deforestation, overgrazing and their unresponsive use. So, it shows the urgent need for their protection. Conservation of biological resources as well as their productive use is essential in preserving traditional knowledge.

Keyword: *Indigenous, Siddha, Unani, Ethnomedicinal, Deforestation.*

Introduction: India, home to the world's largest number of indigenous people (8.6 percent of the total population of India), has a rich medical background. It is well known that the tribal people depend primarily on plants for their daily livelihood, particularly for herbal medicine, than the other groups. In India, since ancient times, the use of medicinal plants for the treatment of numerous different ailments has been documented and many modern medicines have been established by recording such traditional knowledge of ethnomedicine [1]. Medicinal plants and indigenous systems of medicine such as Ayurveda, Siddha and Unani have the best genetic resources in India. Documentation of tribal medicinal plants may play an important role in maintaining indigenous information, as such documentation may be a possible source for new and successful drugs to be discovered [3]. Tribes, by methods of trial and error, acquire knowledge of the medicinal properties of many plants. This expertise has

been passed down from generation to generation and is only available to traditional healers who are to be codified before this experience is lost forever. [4] Currently, over 25% of the formulations contain plant products. The selling of herbal teas and organic foods has also increased dramatically. Natural products are now preferred to be used by people in general. Ethnomedicine is used in its original form, but plant extraction is now used to prepare medication without mixing any pharmaceutical products. [5]

Careful selection of plants, parts, as well as preparation and administration procedures have been very important in traditional healthcare programmes. Ethnomedicinal formulations made from one or more than one plant species were given as oral doses both externally (skin, nasal, eye and dental) and internally [7]. Nearly all plant parts were used for the preparation of different medicinal formulas: roots, rhizomes, tubers, bark, leaves, bulbs, berries, nuts, young shoots, entire plants, and gum and latex. Doses were not regulated but were administered based on age, physical appearance and seriousness of the disease. The type of condition and its severity decide the course of treatment frequency. The preparation mode involves juice, paste, decoction, powder, infusion and chewing of raw plant components and therapy is administered by raw, dried in small pieces or powdered, mixed with solution or with water / milk / honey and paste / lotion [2]. Since they are more familiar with nature, the use of ethnomedicine is seen in large numbers in the tribal, but now biomedicine and allopathic medicine are used in many cases for the impact of industrialization and globalisation, as well as for curing the disease. All Ethnomedicine is really very effective and positively used by the tribals as allopathic medicine alternatives that have no side effects and are available cheaply. [5] In terms of food, storage, wild herbs and shrubs, various tribal groups preserve their indigenous ways of managing community resources for their benefit. There is no question that sacred environmental practises, religious taboos and prohibitions play an important role in protecting natural resources and managing the environment in this way. Their understanding of various aspects and elements of their traditional world has also been shown to be expressed in their folk literature. [6]

Table 1: Indigenous Tribe List:

Tribe	State	Health Practices Adopted	Reference
Santal	Jharkhand West Bengal Assam Tripura Bihar Odisha	Due to low costs of herbal medicine, unavailability of primary health facilities and the side effects, rural people rely more on herbal or traditional medicine	1
Koch	West Bengal	To treat a variety of diseases and disorders, people belongs to this community collect and preserve locally and available wild and cultivate plant species and practise herbal medicine. For their livelihoods, they are economically deprived and thus dependent on forest and subsistence farming.	2
Savara, Lodha	West Bengal	The Savara of North 24 Parganas exclusively performed regular and agricultural labour, fishing, gathering medicinal herbs, while the Lodha of Paschim Medinipur only performed fuel wood collection and daily labour.	6
Oraon	Jharkhand	Indigenous traditional medicine played a vital role in Oraon tribal community. Plants are used by oraon tribals for fruit, food, medicines, hunting, narcotics, poison, gums, dyes, insecticides and etc.	8

Mandal *et al.* (2020) reported 73 medicinal plants from 45 families have been reported for use in the treatment of 38 disease forms, ranging from very common physical problems to complex diseases. Leaves (47.50 percent), followed by fruits (11.25 percent), bark (10.0 percent), roots and seeds (6.25 percent each), latex (5.0 percent), bulb, stem, tuber and rhizome (2.50 percent each), and flower, whole plant and branch (1.25 percent each), are found to be the dominant plant parts used. The medicine's method of preparation consists of extract (32.5 percent), paste (21.25 percent), decoction (20.0 percent), juice (15.0 percent), latex (5.0 percent), ointment (3.75 percent) and cooked (2.5 percent), and fresh plant parts were used for the preparation of medicine all the time. It is documented that tribal medicinal plants play an important role in maintaining indigenous information, as such documentation may be a possible source for new and successful drugs to be discovered. Raj *et al.* (2018)

performed research from December 2014 to May 2016 in the peripheral areas of the Chilapatta Reserve Forest in the foothills of the eastern sub-Himalayan mountain range of West Bengal, India. They also observed total of 140 plant species representing 116 genera and 65 families for medicinal purposes. For the preparation of various medicinal formulas, almost all plant parts were used and doses were prescribed on the basis of age, physical appearance and disease severity. Juice, paste, decoction, powder, infusion and chewing of the raw plant parts is included in the preparation mode. They observed 400 respondents, including conventional medical practitioners via an open-ended questionnaire for a personal interview schedule. The questionnaire included issues such as ethnomedicinal plant organisms, plant materials used, dosage protocol and therapy. Enhanced cultivation techniques of commercially viable ethnobotanical species should be promoted by populations by capacity building, timely policy action and clear business linkages. This will ensure the production of income and enhancement of livelihoods and overall survival of these species. Abubacker *et al.*, (2018) held up the fact that India has a rich heritage of medicinal plants and in-house development of Ayurveda, Siddha and Unani and conducted a survey in the Nilgiri Hills over some forty nine medicinal plants species (associated to twenty nine families) used by the tribal population. They observed different types of the plants, the medicinal properties of such plants and the type of preparation of parts of the plants used by the tribes. The samples were collected twice a month over a period of one year and during this period, questionnaires were prepared and pitched to the tribal people, so that a thorough knowledge about the surveyed plants can be imbibed in. The authors concluded that herbs contributed to the most dominant growth forms in the field of discussion of ethnomedicines. Manna *et al.*, (2018) recorded information of ethnomedicinal plants of the Lalgargh Forest Range of India Via interviews, observation and interaction (using open-ended semi-structure questionnaires were taken individually). He found that local population used 52 different plant species to treat multiple diseases. 17 of the 52 species of plants were herbs, 20 trees, 11 shrubs, and 4 are climbers. The tribes prepared drugs from the extracts of leaves, nuts, vegetables, bark, roots and even whole plants. By trial and error procedures, they obtained knowledge of the medicinal properties of many plants.

Bandyopadhyay *et al.*, (2017) studied the effects of herbal medicines used by the tribes of the Bankura district against some traditional ailments. Information on the medicinal uses of the plants was obtained on the basis of extensive field surveys, interrogations of folk doctors and knowledgeable local informants in the tribal inhabited areas of the district. 20 plant species

belonging to the mainstream use of ethno-medicine in Bankura (western Bengal's main tribal populated locations) have been studied. Ethnomedicine is really useful and positively used by the tribes of Bankura district as allopathic medication substitutes that have no side effects and are available in the district cheaply. Ghatak *et al.*, (2015) surveyed seven villages belonging to two sub-divisions of the two districts of South Bengal, namely North 24 Parganas and Paschim Medinipur. The Savara and Lodha are distributed in South Bengal as the smallest tribal group. A three-step methodology was used: data was gathered through main informant interviews and focus group discussions. In the rural environment, Transect walk and note-taking were used to seek in-depth information and record first-hand information. The Savara of North 24 Parganas exclusively performed regular and agricultural labour, fishing, gathering medicinal herbs, while the Lodha of Paschim Medinipur only performed fuel wood collection and daily labour. With the help of standardized questionnaires, traditional healers and resource persons were interviewed on medicinal use of local flora in all the tribal villages of Coochbehar district during July, 2007 to December, 2009 by Datta *et al.*, (2014) and It has been recorded that a total of 46 plant species belonging to 42 genera and 27 families have been used to treat 33 distinct physical ailments. The herbal preparations made from traditional medicinal plants were often used in the Cooch-Behar district to treat cuts and bruises, stomach and abdominal disease, to treat jaundice and liver disorders, and to treat intestinal worms and fever. Ethnomedicinal research is a new venture among the Oraon tribe of Jharkhand's Latehar District. The method of collecting Ethnomedicinal plant information was based on a personal interview with tribal vaidhyas from different age groups living in the villages in agricultural regions by Marandi *et al.* (2014). The medicinal plants were photographed and, along with the interviewed tribal vaidhyas, the voucher specimens were collected. The data collected were compared and cross-checked in order to assess their validity with the available data from the locally published booklets on medicinal plants. In order to collect the ethnobotanical species in the flowering and fruiting stage, field trips for ethnobotanical survey were made at different seasons. For 62 different types of human diseases, the recorded 67 herbal ethno-medicinal formulations are used and consist of 72 plant species belonging to 57 genera and 41 families.

Table 2: List of some medicinal plants and trees used by the tribes.

Sl.No.	Scientific Name	Family	Parts Used	Ethnomedicinal Use	Reference
1	<i>Andrographis paniculata</i> (Brum. f.) Nees	Acanthaceae	Leaf	Leaf extract is taken orally for 3 days in stomach problems.	1
2	<i>Hygrophila auriculata</i> Schumach	Acanthaceae	Leaf	Freshly prepared leaf extract is used to treat anemia.	1
3	<i>A. sativum</i> L.	Amaryllidaceae	Bulb	The juice made from the bulb is used in the treatment of ear problems.	1
4	<i>Mangifera indica</i> L.	Anacardiaceae	Bark	Juice obtained from crushed bark is orally administered for diarrhoea.	1
5	<i>Colocasia esculenta</i> (L.) Schott	Araceae	Leaf/tuber	Leaf and tuber curry is taken with food to treat constipation.	1
6	<i>Borassus flabellifer</i> L.	Arecaceae	Young leaf	The juice of young leaves mixed with water is given in cases of dysentery.	1
7	<i>Cocos nucifera</i> L.	Arecaceae	Dry fruit	Copra of the dry fruit is crushed to extract oil which is used for ear pain.	1
8	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Root	Dried root extract is used to treat dysentery and urine disorder.	1
9	<i>Bombax ceiba</i> L.	Bombacaceae	Bark	Juice made from the bark is used in excessive menstrual discharge.	1
10	<i>Ananas comosus</i> (L.) Merr.	Bromeliaceae	Leaf	The whitish thick basal portion of the leaf is made into a paste and consumed in the treatment of fever.	1
11	<i>Carica papaya</i> L.	Caricaceae	Latex/leaf	i) Latex is used as a cleansing agent during menstruation and abortion. ii) Leaf paste is used in bone fracture.	1
12	<i>Momordica charantia</i> L.	Cucurbitaceae	Leaf/fruit	Five teaspoon of leaf or fruit extract is taken orally once daily to prevent diabetes/stomach disorder /asthma/ anemia.	1
13	<i>Ocimum tenuiflorum</i> L.	Lamiaceae	Leaf	Leaves extract is mixed with ginger paste and honey is used to treat cough.	1
14	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Leaf	Take a regular bath in warm Neem water in the itching problem.	1

15	Artocarpus heterophyllus Lam.	Moraceae	Latex	Latex is used to treat skin problem.	1
16	Ficus racemosa L.	Moraceae	Latex	Latex mixed with water taken orally to treat diarrhoea.	1
17	Phyllanthus emblica L.	Phyllanthaceae	Fruit/leaf	Decoction of dried fruit juice is used in the treatment of diarrhoea	1
18	Piper betle L.	Piperaceae	Leaf	Leaf juice is used externally for head-ache. Also used for easy delivery.	1
19	Ziziphus mauritiana Lam.	Rhamnaceae	Seed	Paste of seeds is good for leucorrhoea.	1
20	Neolamarckia cadamba (Roxb.) Bosser	Rubiaceae	Leaf	Leaf decoction is used to treat aphthae.	1
21	Aegle marmelos (L.) Corrêa	Rutaceae	Ripe fruit/leaf	Fruit juice is taken orally in stomach problem. ii) Leaf paste used to treat fever.	1
22	Citrus medica L.	Rutaceae	Fruit	Fruit juice is used to treat intestinal worm.	1
23	Datura metel L.	Solanaceae	Leaf	Leaves are made into a paste	1
24	Solanum tuberosum L.	Solanaceae	Tuber	Boiled tubers are taken with a little salt in stomach pain.	1
25	Camellia sinensis (L.) Kuntze	Theaceae	Leaf	Leaf decoction is taken orally with sugar for nerve stimulant.	1
26	Zingiber officinale Roscoe	Zingiberaceae	Rhizome	The rhizome paste is used to treat cough.	1
27	Centellaasiatica	Apiaceae	Leaf	Used to check premature fall of hair.	5
28	Chenopodium album	Amaranthaceae	Leaf	Advised in hiccup.	5
29	Cinnamomum	Lauraceae	Leaf	It is used as expectorant.	
30	Coraindrum Sativum	Apiaceae	Leaf	Used to cure Diabetes.	5
31	Emblica Officinalis	Phyllanthaceae	All parts	Used for healing from general weakness and in chronic disease.	5
32	Aegle marmelos Corr.ex Roxb.	Rutaceae	Root	Urinary troubles.	5
33	Shorea robusta Gaertn.f.	Dipterocarpaceae	Bark	Cholera	4
34	Solanum nigrum L.	Solanaceae	Whole plant	Kidney Trouble	4
35	Vitex negundo L.	Verbenaceae	Leaf	Skin disease	4
36	Cuscuta reflexa Roxb.	Cuscutaceae	Whole plant	Bone fracture	4
37	Catharanthus roseus(L.)G.Don.	Apocynaceae	Leaf	Cancerous Wound	4
38	Aegle marmelos L.	Rutaceae	Fruit, roots and leaves	Used as an ayurvedic remedy for diarrhea, dysentery and intestinal parasites.	3

39	<i>Acorus calamus</i> L.	Araceae	Dry Rhizomes	Bronchitis, Abdominal tumours and in Snake bite.	3
40	<i>Achyranthes bidentata</i> BI.	Amaranthaceae	Whole Plant	Menstrual pain, Hypertension	3
41	<i>Artemisia annua</i> L.	Asteraceae	Leaves	Malarial fevers	3
42	<i>Asparagus racemosus</i>	Asparagaceae	Leaves, roots	Dyspepsia	3
43	<i>Bacopa monnieri</i> (L.) Pennel	Scrophulariaceae	Whole plant	Nerve tonic / memory enhancer	3
44	<i>Citrus aurantium</i> L.	Rutaceae	Flowers	Gastric Irritabilities	3
45	<i>Coleus forskohlii</i> Brig	Lamiaceae	Tuberous root	Asthama	3
46	<i>Cymbopogon flexuosus</i> Nees.	Poaceae	Leaves and shoot	It relaxes the muscles of the stomach and gut, relieves cramping pains and flatulence.	3
47	<i>Ficus caria</i> L.	Moraceae	Dried freshly receptacles	It is used to remove the gravel in the kidneys or bladders and also obstruction of the liver and spleen.	3
48	<i>Lavandula angustifolia</i> Miller	Lamiaceae	Leaves, Flowers, Seeds	Lavender oil is to soothe headaches.	3
49	<i>Stephania glandulifera</i>	Menispermaceae	Root	Root used in headache	7
50	<i>Solanum indicum</i>	Solanaceae	Seed	Seed applied on teeth and gum to treat infection	7
51	<i>Sida acuta</i>	Malvaceae	Root	Root extract used against blood urea, boils and nephritis	7
52	<i>Sesbania grandiflora</i>	Fabaceae	Leaves	Extract of leaves used in jaundice	7
53	<i>Sesamum indicum</i>	Pedaliaceae	Fruit	Fried fruit taken in case of fever	7
54	<i>Ricinus communis</i>	Euphorbiaceae	Seed	Seed oil is used as pain killer	7
55	<i>Rauvolfia tetraphylla</i> L.	Apocynaceae	Root	Root extract used in stomach pain and to treat intestinal worms	7
56	<i>Ocimum basilicum</i> L	Labiatae	Seed	Seed paste applied against stings of wasps, bees and other venomous insects.	7
57	<i>Ocimum gratissimum</i>	Labiatae	Leaf	Leaf extract applied on cut to stop bleeding	7
58	<i>Acorus calamus</i> Linn.	Araceae	Rhizome	Rhizome powder with jaggery or honey is given orally for epilepsy and also used as antibiotic.	8
59	<i>Alternanthera sessilis</i> Linn.	Amaranthaceae	Root	The root paste is applied on the forehead to treat headache.	8
60	<i>Anacyclus pyrethrum</i> DC.	Asteraceae	Flower	Flowers are chewed for	8

				bleeding gums. Root decoction is used for male vitality and also for toothache	
61	<i>Andrographis echioides</i> Nees	Acanthaceae	Whole plant	Paste of whole plant is given orally with water for cobra bite.	8
62	<i>Argemone mexicana</i> Linn.	Papaveraceae	Whole plant	Paste of whole plant is applied around scrotum to treat hydrocele.	8
63	<i>Boswellia serrata</i> Roxb.	Burseraceae	Leaf	The leaf paste is applied on the eyes for conjunctivitis.	8
64	<i>Calotropis gigantea</i> Linn.	Asclepiadaceae	Root and Bark	The paste of root bark is applied as painkiller for snake bite (viper).	8
65	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Whole plant	The whole plant is fried and crushed in oil of <i>Celastrus paniculatus</i> which is used as massage oil for polio and arthritis.	8
66	<i>Euphorbia thymifolia</i> Linn.	Euphorbiaceae	Whole plant	The paste of whole plant is given orally with mishri in a glass of water for diarrhea and dysentery.	8
67	<i>Ficus racemosa</i> Linn.	Moraceae	Fruit and Root	The root sap is added with mishri and given orally to treat jaundice. The unripe fruits are chewed and eaten for female infertility.	8
68	<i>Limnophila conferta</i> Benth.	Scrophulariaceae	Whole plant	It is used as vegetable for stomach and intestine related diseases.	8
69	<i>Litsea polyantha</i> Juss.	Lauraceae	Bark	The bark paste is applied for bone fractures and bruises and boils.	8

Conclusion: Medicinal plants in many indigenous cultures have a long history and are an important part of the care of different illnesses, and this herbal medicine practise is centred on hundreds of years of traditions and insights. India is one of the major emporiums of ethnobotanical riches, with immensely diversified ethnic groups and rich biological capital. In view of the advancement of modern medicine due to low rates of herbal medicine, unavailability of primary health care facilities and the side effect of pharmaceutical medicines, people from rural areas still rely on herbal or conventional medicine. Since they are more familiar with nature, the use of ethnomedicine is seen in vast numbers of the peoples, but today biomedicine and allopathic medicine are used in many cases for the impact of industrialization and globalisation, as well as for the cure of diseases. Enhanced cultivation techniques of commercially viable ethnobotanical species should be promoted by populations

by capacity building, timely policy action and clear business linkages. This will ensure the production of income and enhancement of livelihoods and overall survival of these species.

References:

1. Aninda Mandal, Tamalika Adhikary, Debarun Chakraborty, Priti Roy, Joy Saha, Anushree Barman, Poulami Saha (2020) Ethnomedicinal uses of plants by Santal tribe of Alipurduar district, West Bengal, India, *Indian Journal of Science and Technology*, 13(20): 2021- 2029.
2. Antony Joseph Raj, Saroj Biswakarma, Rainer W. Bussmann (2018) Indigenous uses of ethnomedicinal plants among forest-dependent communities of Northern Bengal, India. *Journal of Ethnobiology and Ethnomedicine*, 14, 8.
3. Abubacker MN, Gurunathan S, Ganapathy G, Prince M. (2018) Survey of Some Ethno Medicine Used by Tribal Population in Nilgiri Hills, South India, *American Journal of Ethnomedicine*, 5(1) : 4.
4. Shyam Sundar Manna, Satyendra Prasad Mishra (2018) Ethnomedicinal survey of plants used by tribal in Lalgah forest range, W .B, India, *The Journal of Phytopharmacology*,7(2): 199 – 202.
5. Debankana Bandyopadhyay (2017) Herbal Folk Remedies and Ethnomedicine of Bankura District of West Bengal, *American Journal of Ethnomedicine*, 4(2): 16.
6. Proggya Ghatak (2015) Indigenous Knowledge and bio-cultural conservation: A case of savaralodha from West Bengal, *Man In India*, 94 (4): 619-629.
7. Tanmay Datta, Amal Kumar Patra, Santanu Ghosh Dastidar (2014) Medicinal plants used by tribal population of Coochbehar district, West Bengal, India-an ethnobotanical survey ,*Asian Pacific Journal of Tropical Biomedicine*, 4(Suppl 1): S478–S482.
8. Raphael Ranjit Marandi, S. John Britto.(2014) Ethnomedicinal plants used by the Oraon tribals of Latehar District of Jharkhand, *Asian J. Pharm. Res.* Vol 4, Issue 3, 126-133.

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**National E-Conference
On
Natural Calamities and Ecosystem Restoration
(28th - 29th Sep, 2021)
Organized by IQAC Govt. College, Dholpur Rajasthan**

This is to certify that

Gopu Arun Kumar Bharath

Student, department of mining engineering, Jharkhand Rai university has presented a paper in this e-conference. The title of the paper is **Ventilation survey of underground mine**


Dr. S. K. Jain

Principal


Dr. Anjad Fatmi

Coordinator


Dr. Anuj Kumar

Co Convener


Dr. Rachna Mehta

Convener

**National E-Conference
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Natural Calamities and Ecosystem Restoration
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This is to certify that

MALLIKANTI ELISHA

Student, Department of Mining Engineering, Jharkhand Rai University, Ranchi has presented a paper in this e-conference. The title of the paper is **VENTILATION SURVEY OF UNDERGROUND MINE**


Dr. S. K. Jain


Principal


Dr. Anjad Fatmi

Coordinator


Dr. Anuj Kumar

Co Convener


Dr. Rachna Mehta

Convener

**National E-Conference
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Organized by IQAC Govt. College, Dholpur Rajasthan**

This is to certify that

Yerramekala Lokanath

Student Department of Mining Engineering has presented a paper in this e-conference. The title of the paper is **ASSESSMENT OF PERFORMANCE OF DRAGLINE IN OPENCAST MINE**


Dr. S. K. Jain

Principal


Dr. Anjad Fatmi

Coordinator


Dr. Anuj Kumar

Co Convener


Dr. Rachna Mehta

Convener