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एक भारत श्रेष्ठ भारत
Ek Bharat Shreshtha Bharat



EK BHARAT SHRESHTHA BHARAT CLUB

INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI



Report on EBSB Day Observation for the month of June'2020

Date: 5th June, 2020

Adhering to the protocol of observing EBSB Day every month, the EBSB Club of IIT-G observed the EBSB Day for the month of June on 5th June, 2020. During this time of pandemic, since all the students are lock downed at their own respective homes across the country, so the EBSB Club of IIT-Guwahati decided to observe the EBSB Day for the month of June in light of the “World Environment Day”. In accordance to the theme of this year’s World Environment Day, 2020 i.e “Time for Nature”, the students of IIT-Guwahati graciously took out time for the nature in spite of their upcoming exams. The idea germinated from the fact that if we analysis the student profile of IIT-Guwahati, the institute enjoys a culturally and geographically diverse student population. So as of now, all these students from different states of the country who are currently enrolled in different curriculums at IIT-Guwahati are at their respective homes. But even staying at home we can virtually come as one to mark the World Environment Day by planting trees at our respective places. This way the students from different states will come together as one India (*Ek Bharat*) and take a small step to contribute towards making India the best (*Shreshtha Bharat*) and at the same time standing in solidarity with those suffering from the global pandemic.

We are all aware that the environment has taken the brunt of man's inhumanity to his own surrounding. Studies show that in India, at least 1-1.5% of our GDP is being lost in catering to the consequences of a bad environment. This should be an absolute warning cry to us that the World Environment Day is a reminder for "Your environment, my environment and our environment". It is a day upon which, for more than over forty years, people around the world advocated and acted for a healthy environment. But slowly and slowly, it is also true that there has been a growing consensus among the people about the concern of the environment. It is also strikingly true that a youthful India could very well offer the nation a unique and powerful engine that can drive our global aspirations in the 21st century. We can't neglect the demographic dividend of our country when the 65% of the population is young and the average age of India in 2020 is 29 only. We strongly believe that a progressive young student society from all corners of India should definitely take up the baton and stand out as a tall flame of nationhood, thus feeling all culturally integrated and fostering a sense of common identity. This is only possible if a common spirit of understanding mutual interaction & reciprocity resonates throughout the country.

Even our culture has always taught us dispositional empathy and compassion towards nature. In this context, mention can be made of a Sanskrit Sloka from our ancient texts, which goes as-

"Kaale Barshetu Paarjaanye haa; Prithvi Saashyashalini

Deshohaayam Shobhrahitaa ; Saddjyannaha Shantu Nirbhayaah.."

Which translates to-

"May the rains be timely and plentiful. May this earth be adorned with crops and covered with vegetation.

May there be no problems and may only peace prevail in this country. May good people be fearless and live without fear..."

Keeping this very message in our hearts and minds, this "World Environment Day" the students of IIT-G across the country came together as one family and planted trees at their own respective places. Even our campus of IIT-Guwahati, located within the close proximity of the mighty Brahmaputra and blessed with a lush green ambience with mountains & lakes has always advocated us to inculcate a caring attitude towards nature. The rich and varied green landscape of IIT Guwahati continued to serve as a rich source of inspiration to take up this move. It was just like we have to extend this culture and carry forward at our own places too. The students planted different trees from Tulsi, Neem, Ditch Stonecrop, Debodaaru, Peepal, Papaya, Pomegranate, Lemon, Jaamun and the list goes on. The photographs of the students planting different saplings are shown as below in the next page-

North India:-



Ankita, New Delhi



Pankaj, Dehradun (Uttarakhand)



Sadaival, Chandigarh (Punjab)



Divya, Muzaffarnagar (Uttar Pradesh)



Kumar Shanu, Barauni (Bihar)



Satyam, Motihari (Bihar)



Shivam,Azamgarh(Uttar Pradesh)



Mitansha,Patna(Bihar)



Mayank,Chhibramau(Uttar Pradesh)

Western India:-



Jay,Jodhpur(Rajasthan)



Ashish,Mumbai(Maharashtra)



Amit,Bhilwara(Rajasthan)



Vatsal, Surat (Gujrat)



Pooja, Sangli (Maharashtra)



Ankit, Pali (Rajasthan)

Central India:-



Nihal, Betul (Madhya Pradesh)



Shivani, Jabalpur (Madhya Pradesh)



Sanjay, Guna (Madhya Pradesh)



Vishal, Ujjain(Madhya Pradesh)



Nihal,Korba(Chhattisgarh)

South India:-



Shiva, Ballari(Karnataka)



Goutham,Hyderabad(Telangana)



Dhiliphan Madhav,Arani(Tamil Nadu)



Vijaya,Mangalore(Karnataka)



Satish VH,Bangalore(Karnataka)

Eastern India:-



Dheejyoti,Guwahati(Assam)



Kaustabh,Kolkata(Howrah,West Bengal)



Dusu,Ziro(Arunachal Pradesh)



Mousumi,Tangla(Assam)



Sapunii Sebastian,Senapati(Manipur)



Sreshtha,Agartala(Tripura)



Kamal Narayan,Sarbhog(Assam)



Dibojit,Dibrugarh(Assam)



Nabaneeroj,Tezpur(Assam)



Gaurishankar,Jorhat(Assam)



Holding on to a chapter from the past, when Rakesh Sharma, the first Indian to travel in space was asked by then PM of India on how our country looked from outer space. The then Wing Commander Sharma replied in response, “*Saare Jahan Se Achcha*”. On a childlike imagination, this World Environment Day, a young and vibrant India also looked something like this-







The photo collage on the map of India was designed by *Saurav Khuttiya Deori*, a PHD scholar from Dept of Design, IIT-Guwahati.

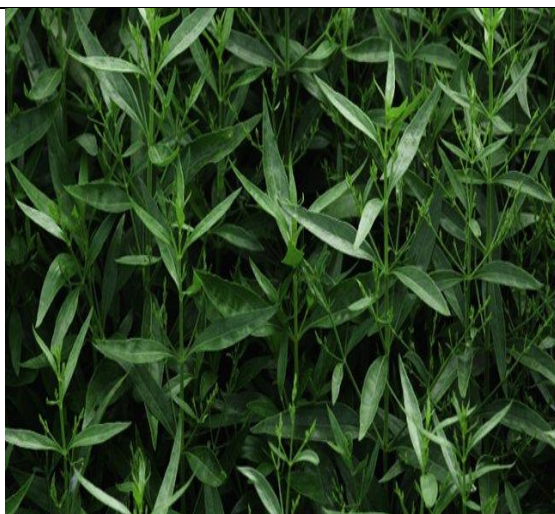
The students further went on to identify 10 important medicinal plants from both the states. The plants were chosen keeping its medicinal as well as its market value in mind. The plants are enlisted as below-:

Important plants of Rajasthan-:

SI.No	Local Name	Scientific Name	Medicinal Use/Market Value
1.	Brahmi	<i>Bacopa Monnieri</i> 	<ul style="list-style-type: none"> ➤ Brahmi has been in usage for generations and is widely beneficial in treating various health conditions as recommended by Ayurveda, Siddha, Unani and other alternative medicines across the world. ➤ Brahmi has been hailed as a memory booster for several centuries for increasing focus and attention. It is also used in improving pulmonary function and to treat various respiratory issues like congestion, bronchitis, cold, sinusitis. ➤ The juice of Brahmi acts as an instant healer in treating wounds and disinfecting the affected area and also recommended for diabetics.
2.	Dhatura	<i>Datura Metel Linn</i> 	<ul style="list-style-type: none"> ➤ They are still widely used and have considerable importance in international trade. Plants are important for pharmacological research and drug development ➤ Although careful consideration of the toxicity of the plant is required before its use but it is useful in curing many diseases such as asthma, cough, fever, inflammations, edema, neuralgia, insanity, myalgia, hyperacidity, duodenal ulcer, renal colic, calculi, and dysmenorrhea. Even the roots are used for bites of rabid dogs. ➤ Ethanolic extracts of <i>Datura</i> leaves exhibits significant anti-inflammatory activity.

3.	Aloe Vera	<p style="text-align: center;"><i>Aloe Barbadensis</i></p> 	<ul style="list-style-type: none"> ➤ Aloe vera plant has been known and used for centuries for its health, beauty, medicinal and skin care properties. ➤ It contains 75 potentially active constituents which act as potential antioxidant, anti-inflammatory, anti-allergic, laxative, analgesic, antibacterial and antiviral, cleansing and antiseptic properties.
4.	Gurmar	<p style="text-align: center;"><i>Gymnema Sylvestre</i></p> 	<ul style="list-style-type: none"> ➤ It is a reputed herb in the Ayurvedic system of medicine, which is also known as sugar destroyer. ➤ The herb can be used as an effective remedy for diabetes, besides being used for arthritis, diuretic, anemia, osteoporosis, hypercholesterolemia, cardiopathy, asthma, constipation, microbial infections, indigestion and anti-inflammatory. ➤ The herbal extract is used in dietary supplements since it reduces body weight, blood cholesterol, and triglyceride levels and holds great prospects in dietary as well as pharmacological applications.
5.	Hemp/Bhaang/ Marijuana	<p style="text-align: center;"><i>Cannabis Sativa</i></p>	<ul style="list-style-type: none"> ➤ The plant has been used for medicinal purposes in many cultures for hundreds of years, for example for

			<p>the treatment of pain, spasms, asthma, insomnia, depression, and loss of appetite.</p> <ul style="list-style-type: none"> ➤ It is occasionally recommended for the treatment of epilepsy. ➤ In many countries, it is approved for clinical use for the treatment of nausea and vomiting associated with cancer chemotherapy, anorexia in HIV/AIDS, and spasticity in multiple sclerosis.
6.	Neem	<p style="text-align: center;"><i>Azadiracta Indica</i></p> 	<ul style="list-style-type: none"> ➤ The plant has been extensively used in Ayurveda, Unani and Homoeopathic medicine. ➤ All parts of the plant, viz- leaves, flowers, seeds, fruits, roots and bark have been used traditionally for the treatment of inflammation, infections, fever, skin diseases and dental disorders. ➤ Neem leaf and its constituents exhibit immunomodulatory, anti-inflammatory, anti hyperglucmic, antiulcer, antimalarial, antifungal, antibacterial, antiviral, antioxidant, antimutagenic and anticarcinogenic properties.
7.	Kalmegh	<i>Andrographis Paniculata</i>	<ul style="list-style-type: none"> ➤ The plant is one of the most popular medicinal plants used traditionally for the treatment of array of diseases such as cancer, diabetes, high blood pressure, ulcer,



leprosy, bronchitis, skin diseases, flatulence, colic, influenza, dysentery, dyspepsia and malaria for centuries.

- Extract and pure compounds of the plant have been reported for their anti-microbial, cytotoxicity, anti-protozoan, anti-inflammatory, anti-oxidant, immunostimulant, anti-diabetic, anti-infective, anti-angiogenic, hepato-renal protective, sex hormone/sexual function modulation, liver enzymes modulation insecticidal and toxicity activities.

8.

Purnanava

Boerhavia Diffusa



- It is a renowned medicinal plants used to treat large number of human ailments as mentioned in Ayurveda, Charaka Samhita, and Sushrita Samhita.
- Plant parts are used by endemic and tribal people in India and Unani medicine in Arab countries to show Anti-bacterial, Anti-nociceptive, hepato-protective, hypo-glycemic, anti-proliferative, anti-estrogenic, anti-inflammatory, anti-convulsant, anti-stress and anti-metastatic activities and also in treatment of stress, dyspepsia, abdominal pain, inflammation and jaundice.








9.	Indian copperleaf	<p data-bbox="730 191 957 224"><i>Acalypha indica</i></p> 	<ul style="list-style-type: none"> ➤ The plant is used for several therapeutic treatments. Decoction of the leaf is used to treat earache and infections. ➤ The paste of the leaves is applied for skin infections. ➤ Besides the plant have many pharmacological activities, such as an anti-inflammation, anti-bacterial, anti-cancer, anti-diabetes, anti-hyperlipidemic, diuretic, and anti-helminthic. ➤ It is also a good cure for respiratory problems, rheumatoid arthritis, scabies and treatment of insect bites.
10.	Devils Horsewhip	<p data-bbox="699 800 989 833"><i>Achyranthus aspera</i></p> 	<ul style="list-style-type: none"> ➤ The plant is used in indigenous system of medicine as emenagogue, antiarthritic, antifertility, laxative, ecbolic, abentifacient, anti-helminthic, aphrodisiac, antiviral, anti-plasmodic, antihypertensive, anticoagulant, diuretic and anti-tumor. ➤ It is also useful to treat cough, renal dropsy, fistula, scrofula, skin rash, nasal, infection, chronic malaria, impotence, fever, asthma, piles and snake bites. ➤ This plant is astringent, digestive and stomachic and treatment of boils, diarrhea, dysentery, hemorrhoids, rheumatic pains, itches and skin eruptions.





Fig- Photo Collage of Medicinal Plants of Rajasthan in the map of Rajasthan

Important Plants of Assam-:

Sl. No	Local Name	Scientific Name	Medicinal Use/Market Value
1.	Tulsi/Tulokhi/ Basil	<i>Ocimum sanctum</i> 	<ul style="list-style-type: none"> ➤ The compound eugenol present in Basil leaves when ingested provides anti-inflammatory action in the digestive tract. ➤ Helps to maintain acid in the body and thus maintain pH. ➤ The paste of leaves when applied to skin act as good skin cleanser and its anti-inflammatory and antimicrobial properties prevents formation of acne. ➤ Low amount consumption of basil helps in slow release of sugar in the blood which is good for diabetics.
2.	Bos	<i>Acorus calamus</i> 	<ul style="list-style-type: none"> ➤ Rhizome of the plant possesses aromatic, stimulant, expectorant, laxative, diuretic, carminative and anthelmintic properties. ➤ It is also used for kidney and liver troubles, rheumatism, and eczema. The stem is used in cough, cold and toothache. ➤ The rhizomes are used in the form of powder, balms and pills. The leaves are used on wounds to kill worms. The rhizome is useful in diseases of nervous system, throat, and diarrheal diseases. It is also used for protection against smallpox, ringworm, in respiratory and gastrointestinal tract diseases and snakebite, in gout and rheumatism and in dysmenorrhea.

3.	Kala Haldhi	<p data-bbox="646 191 884 224"><i>Curcuma caesia</i></p> 	<ul style="list-style-type: none"> ➤ Fresh and dried rhizome of <i>C. Caesia</i> is used for the treatment of many diseases such as piles, nausea, fertility, cancer, fever, cough, cold, hemorrhoids, leprosy, asthma, epilepsy, wound, vomiting and it also helps in curing menstrual disorder. ➤ The paste of its rhizome is also used in the treatment of arthritis. It also helps in curing gonorrheal discharges, inflammation and as an aphrodisiac. ➤ It can be used as smooth muscle relaxant and it also possess depressant activity of central nervous system.
4.	Giloy	<p data-bbox="625 683 905 716"><i>Tinospora cardifolia</i></p> 	<ul style="list-style-type: none"> ➤ The plant is of great importance across the globe because of its different medicinal properties. ➤ The extract is extensively used in various herbal preparations for the treatment of different ailments such as anti-diabetic, anti-periodic, anti-spasmodic, anti-microbial, anti-osteoporotic, anti-inflammatory, anti-arthritic, anti-allergic, anti-stress, anti-leprotic, immunomodulatory and anti-neoplastic activities.
5.	Ginger	<p data-bbox="636 1068 894 1101"><i>Zingiber officinale</i></p> 	<ul style="list-style-type: none"> ➤ Ginger extract posses high percentage of α-Zingiberene, β-sesquiphellandrene, (E,E)- α-farnesene, geranial and ar-curcumene as major components, which are sources of pesticides, anti-inflammatory and antifungal properties. ➤ This plant has got different properties such as anti-diabetic, antioxidant, anti-inflammatory and antibacterial properties.

6.	Nephaphu	<p><i>Clerodendrum colebrookianum</i></p> 	<ul style="list-style-type: none"> ➤ The use of young and tender leaves as decoction for antihypertensive purpose is the most common form of ethnomedicinal application for the species of <i>C. colebrookianum</i> among all ethnic tribes and communities in the region. ➤ It is also used in the treatment of hypertension by different tribes of north east India. Leaves and roots are used by Manipuri tribes for skin diseases, cough, and dysentery. ➤ The tribal natives of Arunachal Pradesh and Mizoram use the leaf juice mixed with garlic extract to treat blood pressure or cooked leaf is taken for the same.
7.	Chirata	<p><i>Swertia chirayita</i></p> 	<ul style="list-style-type: none"> ➤ The plant is used in traditional medicine to treat numerous ailments such as liver disorders, malaria, and diabetes and is reported to have a wide spectrum of pharmacological properties. ➤ The wide range of medicinal uses include the treatment of chronic fever, malaria, anemia, bronchial asthma, hepatotoxic disorders, liver disorders, hepatitis, gastritis, constipation, dyspepsia, skin diseases, worms, epilepsy, ulcers, scanty urine, hypertension, melancholia, and certain types of mental disorders.
8.	Lemongrass	<p><i>Cymbopogon flexuosus</i></p>	<ul style="list-style-type: none"> ➤ The plant is used in beverages, foodstuffs, household products; as pesticide, fungicide, insect repellent and as ingredient in medicine.




			<ul style="list-style-type: none"> ➤ Lemongrass oil has found a wide range of applications; as flavouring agents, in pharmaceutical and perfumery industries and in synthesis of Vitamin A. ➤ Lemongrass contains substances that are thought to relieve pain and swelling, reduce fever, improve levels of sugar and cholesterol in the blood, stimulate the uterus and menstrual flow, and have antioxidant properties.
9.	Indian snakeroot	<p><i>Rauwolfia serpentina</i></p> 	<ul style="list-style-type: none"> ➤ Rauwolfia alkaloids are used in the treatment of hypertension. Reserpine is used to treat high blood pressure. ➤ It also is used to treat severe agitation in patients with mental disorders. ➤ The root of the plant is ground into a powder or sold in tablets or capsules. It is a compound commonly used in Asian medicine, which includes traditional Ayurvedic medicine native to India.
10.	Kotahi Bengena	<p><i>Solanum khasianum</i></p> 	<ul style="list-style-type: none"> ➤ The plant is of commercial and medicinal importance because of its high content of steroidal alkaloids such as solasodine and its triglycosides solasonine and solamargine. ➤ In pharmaceutical industry solasodine has become increasingly interesting as a valuable starting compound for the synthesis of steroid hormones, such as cortisone and oral contraceptives.



Fig- Photo Collage of Medicinal Plants of Assam in the map of Assam