THE FREE TREE OF INDIA: TOWARDS INCREASING GLOBAL INTEREST

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Abstract:*Azadirachtaindica* is a tree in the family Meliaceae and is native to India, Pakistan and Bangladesh growing in tropical and sub-tropical regions.Neem is called The Free Tree of India and also known as the Village Pharmacy because of its healing versatility. One of the best promising of all plants and the reason is that it may gradually benefit every person on this planet. Probably no other plant yields as many strange and diverse products. With the banning of broad-spectrum, toxic insecticides, such as DDT, the use of neem in crop protection has been increasing. It has lot of importance in social forestry, agro-forestry and rehabilitating waste and degraded lands. On the contrary, India has a very high resources of neem wealth with millions of trees scattered throughout the country but we are yet to start neem research systematically except some sporadic research is being carried out in several laboratories.

Keywords: Neem, Medicinal products, Pesticides, Fertilizers

INTRODUCTION

A*zadirachtaindica* is a treeof the family Meliaceae and is native to India, Pakistan and Bangladesh growing in tropical and sub-tropical regions.Itscentersof origin is southern and southeastern Asia. Neemis alsocalled‘The Free Tree of India’.It is also known as “the village pharmacy” because of its healing versatility.It has been used in Ayurvedic medicine for more than 4,000 years due to its medicinal properties. A village tree-neem is an attractive broad-leaved, evergreen tree which can grow up to 30m tall and 2.5m in girth. The bark exudes a clear, bright, amber coloured gum known as East India Gum. The gum is a stimulant, demulcent and tonic and is useful in catarrhal and other infections.

Socio-economic uses

One of the best promising of all plants and the reason is that it may gradually benefit every person on this planet. Probably no other plant yields as many strange and diverse products or has as many exploitable by-products. It has reputed value for its herbal medicine, spermicidal, anti-malarial, anti tubercular and lot of other beneficial properties of its derivativeshence treated as perfect, complete and imperishable gift in the nature.

Different extracts from leaves of neem were prepared using the solvents like methanol, chloroform and petroleum ether. The prepared extracts were screened for their anti-microbial activity against pathogens causing dental carries (Imran, et al., 2010). Neem has had a long history of use primarily against household and storage pests and to some extent against crop pests in the world. The important commercial neem products like neemkarnal pellets, neem cakes, neempesticides and other botanical products have been increasingly used for various purposes. With the banning of broad-spectrum, toxic insecticides, such as DDT, the use of neem in crop protection has been increasing. But at present very less scientific studies have been done and also no evidence for how much the tree has been commercial extracted at globally. Among the forest produce, neemis perhaps the only tree that has been potentially exported, besides of course few medicinal plants obtained from forests (NABARD, 2011). That is why many developed countries like *USA, Japan, Germany, France and Netherlands* which do not possess much neemwealth have been importing its products mainly from the India, Pakistan andBangladesh are the countries having dominant neem production. On the contrary, India has a very high resources of neemwealth with millions of trees scattered throughout the country but we are yet to start neem research systematically except that some sporadic research are being carried out in several laboratories. Results of large-scale field trials conducted by Saxena, (2007) reported that in major food crops, such as rice, maize, sorghum, banana, and vegetables, such as kale, cabbage, cauliflower, cucumber, okra, tomato, potato, etc, have illustrated the value of neem-based pest management for enhancing crop productivity.It was also reported that ammonia volatilization loss caused by nitrifying bacteria in soil can be reduced by use of neem and fertiliser mixtures, thus effecting saving on fertilisers (Abrol, et al., 2012). It was also reported that *Liriomyzatrifolii* (Burgess) sever pest on Chrysanthemum can be controlled byneem seed extract applied to soil (Larew, et al., 1985).Neem oil been variously used to control pear slugs in orchards and home- gardens.

Neem has lot of importance in social forestry, agro-forestry and reforestation and rehabilitating waste and degraded industrial lands. It is also useful as windbreaks and shelter belts in arid and semi-arid regions. The logs can also used for construction of buildings, cattle huts,carts and other agricultural implements.

It was also noted that for the first time ever, researchers in India have sequenced the entire genome of neem tree (*AzadirachtaIndica*) in its entirety hence. Researchers in the US and elsewhere

have sequenced genomes of several complex organisms but neem plant is not one of them (Indian express, 2011) and also the United Nations declared it as the "Tree of the twenty first century.

REFERENCES

Abrol, Y.P,; Pandey, R,; Raghuram, N and Ahmad, A. (2012). Nitrogen Cycle Sustainability andSustainable Technologies for Nitrogen Fertilizer and Energy Management.*Journal of the Indian Institute of Science*, **92**(1)17-36

Imran, K.; Surya, R. S,;Surekha, D,;Srujana, D,;Gotteti,KandHemasundara, A. (2010).Phytochemical studies and screening of leaf extracts of *Azadirachtaindica*for its anti-microbial activity against dental pathogens.*Archives of Applied Science Research*, **2** (2):246-250.

Larew, H. G,; Knodel-Montz, J,; Webb, R,; Warthen, E. and David, J. (1985). *Liriomyzarifolii* (Burgess) (Diptera: Agromyzidae) Control on Chrysanthemum by Neem Seed Extract Applied to Soil. *J. of Eco.Ent.***78**(1): 80-84.

Saxena, R. C. (2007). Neem for Sustainable Development and Environmental Conservation.Neemfor development& conservation. *http://www.neemfromindia.com/neem_articles.php*.

NABARD, (2011).Neem - A Versatile Tree.Model Bankable Projectshttp://www.nabard.org/modelbankprojects/forestrywasteland.asp.

Indian express,(2011). In a first, Indian scientists sequence neem tree genome. Bangalore, Friday Sep 30.