

Scientist transforms 1500 ha waste land into bamboo forest

■ Staff Reporter

ONCE a lifeless hazardous fly ash dumping ground has now blossomed into a sea of green land covered with bamboo plantation, thanks to the vision, dedication, and science of one man



Dr Lal Singh

Dr Lal Singh, a Principal Scientist at CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) who made this possible.

Dr Lal Singh, with his team transformed more than 1,500 hectares of fly ash and garbage dumping grounds in Nagpur district itself including Koradi, Khaperkheda Thermal Power Plants, Manganese mine dump in Dongri Buzurg, Manganese mine dump in Gumgaon,



Kalmeshwar etc.

Along with this, he got success to rejuvenate waste lands in Bhidoni village in Madhya Pradesh, Pipalkoti in Uttarkashi, Sonbhadra district in Uttar Pradesh, Chandrapur district in Maharashtra etc. With the help of ecological wisdom with community empowerment, Dr Lal Singh planted more than 5 lakh bamboo saplings on land once considered unfit for any form of vegetation -- not only reclaiming the soil but reviving the lives

of people who depended on it.

"Fly ash, a by-product of coal combustion, poses a severe threat to health. The fine, powdery material often contains heavy metals and is easily carried by wind, contaminating nearby fields. In 2016, the then Energy Minister of Maharashtra wanted a solution of this dust. I told him that we can transform this land within six months," said Dr Lal Singh to The Hitavada.

Dr Lal Singh and his team developed a scientific model

known as Eco-Rejuvenation designed to reclaim degraded land using fast-growing bamboo species, microbial soil treatment and organic amendments.

"Bamboo grows rapidly up to one meter per month under the right conditions. That is the reason we choose it for the site," he explains. The transformation was not just environmental -- it was social.

Dr Lal Singh involved local residents and self help group women to plant and maintain the saplings on the land. Like fly ash dumping grounds, Dr Lal Singh also transformed garbage dumping grounds into bamboo forest in other states. Even, on a request to Nagpur Municipal Corporation (NMC) he showed interest to transform Bhandewadi dumping yard but due to lack of proper co-ordination by NMC the project halted