conferenceseries LLC Ltd

10th International Conference on Food Science and Food Safety

24th Global Biotechnology Congress

APRIL 18, 2022 | WEBINAR

Micro-propagation and development of a high yielding new bamboo line BFRI bamboo BB1 of Bangladesh

Md Mahbubur Rahman and Waheeda Parvin
Bangladesh Forest Research Institute, Bangladesh

Bamboo is emerging as one of the most important 21st century crop, since it produces food and wood. It is one of the fastest growing, annually renewable and harvestable plants with highest productivity and short harvesting cycle. It has a great potential in poverty reduction, industrial and sustainable development in rural areas. It is also playing important roles for preserving our environment. Bangladesh has 37 bamboo species. Among them Bambusa balcooa (Roxb), local name (Borak bans) is one of the important thick wall village bamboo. Tissue culture protocol of B. balcooa was developed from branch nodal bud culture through direct regeneration and produced bamboo seedlings for mass propagation in 2002. *In vitro* multiple shoot production of a single shoot was optimized and observed a vigorous growth in different culture medium. Each shoot produced a mini clump within 2-3 weeks with maximum shoots (20> nos/culture) in the culture vessels. The rooted shoots were transferred in soil for hardening under green house. Young mini clumps with 2-5 shoots each were divided for further proliferation and transferred to polybag for their growth. At the age of 10-12 weeks the new seedlings were ready for field trail. Field trails were done at different locations of the country in 2005. Performance of the tissue culture seedlings was observed and found promising. A three years old clump of BFRI bamboo BB1 produced maximum number of culms which was recorded as 30.4 nos in the field. This value is at least three times higher than the rhizome produced clump of the parental stock. Average culm height and diameter was recorded as 19.3m and 7.7cm respectively which was also higher than the rhizome produced clump of the parental stock.

Received date: February 23, 2022; **Accepted date:** February 25, 2022; **Publish date:** April 25, 2022