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The Importance of Seedlings Quality in Timber and Bio-energy Production on marginal lands

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One of the main issues that the forest sector is facing is to achieve a balance between the demand for biomass &wood production and the need to preserve the sustainability and biodiversity of forest ecosystems. The purposes of the new approaches are to ensure more efficient management of ecosystems and implement intensive forestry that will increase biomass production & timber yields. To achieve this, we need to determine the macroeconomic potential of the various options available, including the use of biotechnology and genetics. The success of the forests plantations capacity may be solved through forest certification, based on: a) Stabilization of the forests and soils structure. b) Hierarchy of biomass production in the forest's management process. c) rganization and implementation of effective plantation on marginal lands. d) Maintenance or increase of forest productivity by introducing new items as and when they are required. It is important to evaluate of the influence of factors such as the quality of soils of plantation areas, the utilization of the genetic resources and the management of forest operations with the environmental economic criteria such as net present value of benefits (NPV) and the corresponding flow annuities (EACF).The existing evaluations studies showed that the quality of the plantation areas has the most influence and through validated quality seed production can generate an increase in the NPV up to 73%. The importance of seedlings quality in timber and bio-energy production on marginal lands based on the literature it is estimated according to the heredity of the characteristics of the wood structure (except shrinkage). This clearly indicate that seedlings with the appropriate morphological characteristics can significantly improve the growth performance and help to support the development of biomass plantations oriented in tailor-made timber and bio-energy production.