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## Studies on comparative assessment of tree borne oil species in Southern zone of Tamilnadu, India

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Energy demand fulfillment from biological origin gets great attention in the recent times. Due to the large scale of energy demand, the bio fuel especially Tree Borne oil species (TBO's) got higher demand by its yield and sustainability. Among the tree born oil species, *Jatropha curcas*, *Simarouba glauca*, *Pongamia pinnata*, *Madhuca indica* and *Azadirachta indica* preferred first for their potential and wide range of adaptability. In order to assess their feasibility and comparative efficacy an investigation was carried with a questionnaire in the Southern Zone of Tamil Nadu which includes Tirunelveli, Tuticorin and Sivagangai, Madurai Districts. The important components of assessment during survey include the popularization of the species among farmers, interest on that crop, willingness to cultivate in their field and their general commands on that species. The assessment was done in seven selected villages under each district. An economic feasibility and productivity status assessment was also done for all the species by comparing the yield and cost of production statements.

The survey conveyed the message that the exotic tree born oil species (*Jatropha* and *Simarouba*) got great attention and scope for cultivation due to its high yielding capacity, awareness and the support and subsidy given by the State and Central Governments to grow in their field. They are also ready to cultivate the indigenous oil tree species (*Madhuca*, *Pungam* and *Azadirachta*) in their waste / marginal lands but not at the cost of their productive systems. The economic comparative analysis also supports the thoughts of farmers, which recommends growing of *Jatropha curcas* with 3 X 2 M and *Simarouba glauca* with 6 X 6 M spacing. Since, TBO's are more nitrogen consuming species, growing of tree born oil trees species in combination with N<sub>2</sub> fixing annuals as intercrop is recommended. It also helps to meet the intermediate economic need of the farmers before getting the benefit from TBO's.