

## 104 C. 11) UTILIZATION OF CRUDE GLYCEROL OBTAINED IN BIODIESEL PRODUCTION AS AN ALTERNATE TO GLYCOGENIC FEED SUPPLEMENT FOR DAIRY COWS

The glycerol was obtained in small quantities from nearby Bioenergy Research information and Demonstration Centre (BRIDC) Established by Karnataka State Bioenergy Development Board (KSBDDB) and protocol for purification was developed after several experiments.

### Production Biodiesel and Glycerol

1. **Jatropha Biodiesel:** 50 litres of oil was purchased from Super India Enterprises, Udaipur, Rajasthan and tranesterified the oil to biodiesel. 41 litres of biodiesel and 7 litres of crude glycerol were obtained. Crude glycerol was purified and stored for *in vivo* experiments.
- 2.



*Lab scale transesterification unit Pilot Scale transesterification Unit Separation of organic layer and Glycerol layer*

3. **Pongamia Biodiesel:** 100 litres of Pongamia oil was procured from BIDC, GKVK, Bengaluru and tranesterified. 72 litres of biodiesel and 18 litre of glycerol were obtained. The obtained biodiesel analysed for quality test and engine performance. The results are as follows.
4. **Glycerol Purification:** Each litre of crude glycerol gave 100ml – 150 ml of glycerol purified glycerol. Animal trials have been completed.