

CASTOR OIL PRODUCTION

161

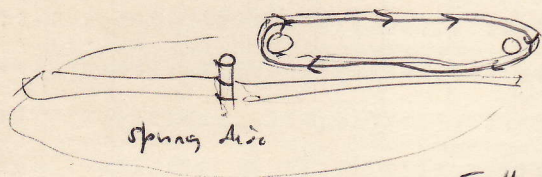
1986 Jan 30

Castor bean oil (from *Ricinus communis*) is an important horticultural product (U.S. uses 40-45,000 tonnes/year at cost of ca. ~~\$~~ \$/US 40M), but seeds are toxic, discouraging production. It should be possible to find a 'sweet castor' which lacks the toxic principle (of lupins). Presumably sweet castor meal would then be usable as livestock food.

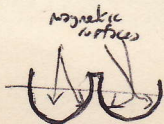
BAND HEAD FOR MAGNETIC DISCS ETC

1986 Jan 21

Instead of moving a disc reading head on a spring arm over the surface of a disc, how about placing one or more heads on a rapidly-driven band moving at a fixed speed over the head path? There would be difficulties with getting the signals back perhaps but all the stop-start motion of conventional heads could be eliminated.



Further - replace disc with half-toroidal surface and read/write with a rotating disc head. Or some other way of making the head head to get a fixed-speed motion.



SALINITY AND TREES

1986 Jan 20

Increasing salinity with removal of trees is attributed to rising of water tables with reduced transpiration. However, it is possible that all or part of the effect may be due to decreased amount of organic matter above ground. If 1 HA of ground is covered by trees, there may weigh over 100 tonnes (check with Carr?), whereas a pasture or field crop may weigh only 1 tonne. Does this mean an effective salt ratio in the trees: pastures of 1:100? Are tree ashes much higher in sodium than trees themselves? The solution to salinity may lie in increasing the amount of biomass to contain the salt, rather than reducing the salt. Can forests be effectively irrigated with saline water? (heavily mulched)