



.....At Central Tuber Crops Research Institute

- ❖ Survey revealed
 - the incidence of mosaic in Thiruvananthapuram, Pathanamthitta, Kollam and Alapuzha districts of Kerala,
 - East Godavari and West Godavari districts of Andhra Pradesh,
 - Khurda and Ganjam districts of Orissa.
- ❖ The incidence varies between 0 to 100 % depends on the varieties .


Kerala




Andhra Pradesh




Dioscorea alata field in Orissa



.....Disease incidence in the world

- Nearly ten different viruses have been reported to infect yams (*Dioscorea* sp) around the world
- Seven are important
 - Yam mosaic virus* (YMV),
 - Dioscorea alata potyvirus* (DAV),
 - Dioscorea alata badnavirus* (DABV),
 - Dioscorea alata ring mottle virus* (DARMV),
 - Dioscorea trifida virus* (DTV),
 - Dioscorea dumeratum virus* (DDV)
 - Chinese yam necrotic mosaic virus* (CYNMV)



Information on presence of such viruses in India is scanty.




SYMPTOMS OBSERVED IN INDIA

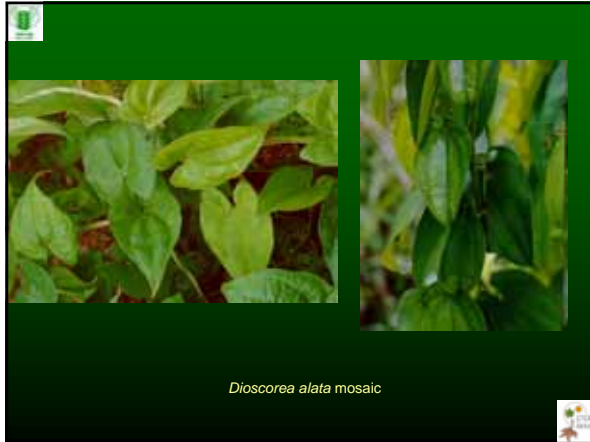


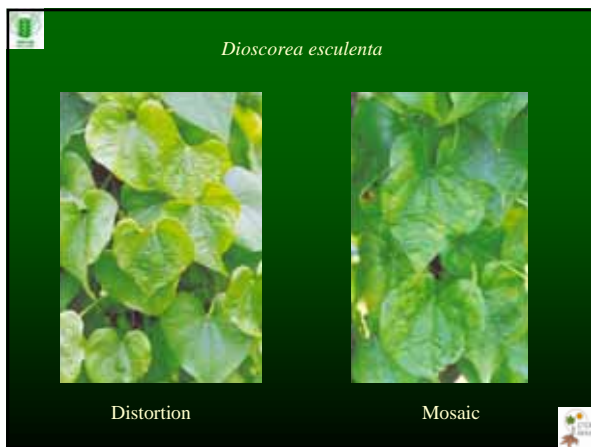

D. alata
Tapering(Kerala)

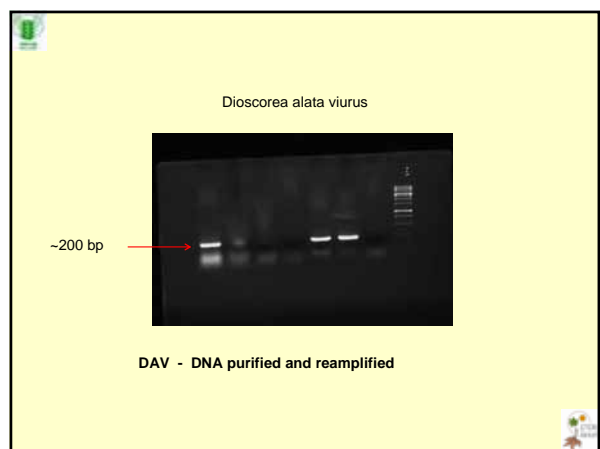
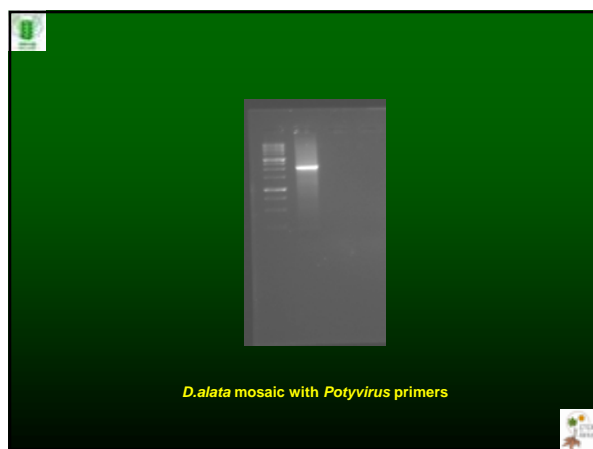
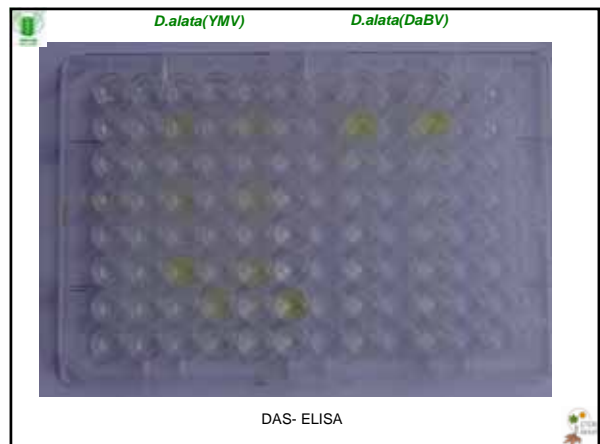



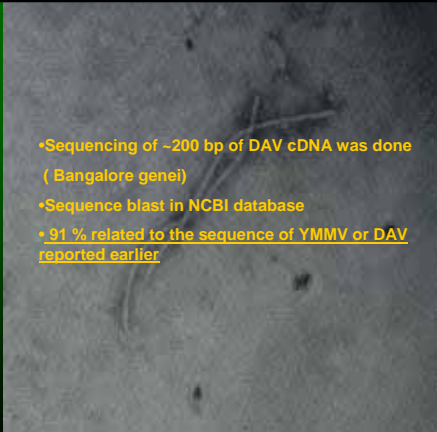
D.alata mosaic (A.P)











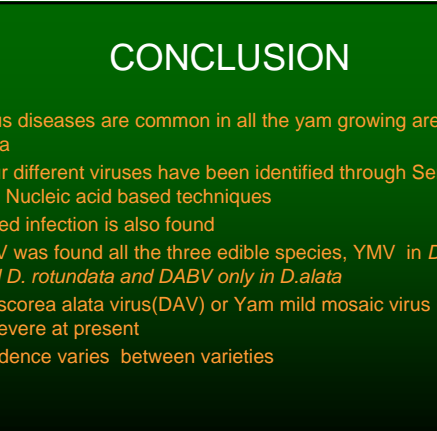
- Sequencing of ~200 bp of DAV cDNA was done (Bangalore genei)
- Sequence blast in NCBI database
- 91 % related to the sequence of YMMV or DAV reported earlier



D. alata (Sree Keerthi)

~ 579 bp

Dioscorea alata Badna virus



CONCLUSION

- Virus diseases are common in all the yam growing areas of India
- Four different viruses have been identified through Serological and Nucleic acid based techniques
- Mixed infection is also found
- DAV was found all the three edible species, YMV in *D. alata* and *D. rotundata* and DABV only in *D. alata*
- *Dioscorea alata* virus (DAV) or Yam mild mosaic virus (YMMV) is severe at present
- Incidence varies between varieties



THANK YOU