

RESERACH CONFERENCE, CANADA 1982

Subject: Tobacco Breeding
Author: Dr. B. Wilberg

Our presentation on R&D Germany's tobacco breeding activities will include a short survey on our total breeding activities and then followed up by explanation of the various methods that we have been using and applying at present.

1. Comparative field trials:

Tobacco breeding for other countries is possible in Germany (example: nicotine)

2. Haploid Technique

This is now a well established method

3. Protoplast fusion:

This technique offers new possibilities

4. Radio-immuno-assay (RIA):

With this assay thousands of plants can be analysed for a specific compound within a short time.

A RIA was developed for nicotine and duvatriendiol (dvt)

A breeding programme for high nicotine: condensate using haploid technique and RIA was established in scope of Leaf Steering Committee. The general procedure is described. First results obtained by means of Dvt-RIA are presented.

...2

401089424

5. Nicotiana-Spectrum:

Wild species of the genus *Nicotiana* will be used to broaden the genetic basis for tobacco breeding (examples *N.rustica*, *N.sylvestris*, *N.megalosiphon*)

6. Cell culture:

The way from an explant to a new plant via cell suspension culture is described.

7. Testing for Disease Resistance:

Blue mould, Bacterial Wilt, Root-knot nematodes

401089425