



# **Long-Term Public Maintenance of *Nicotiana* Germplasm NGPC Task Force Report**

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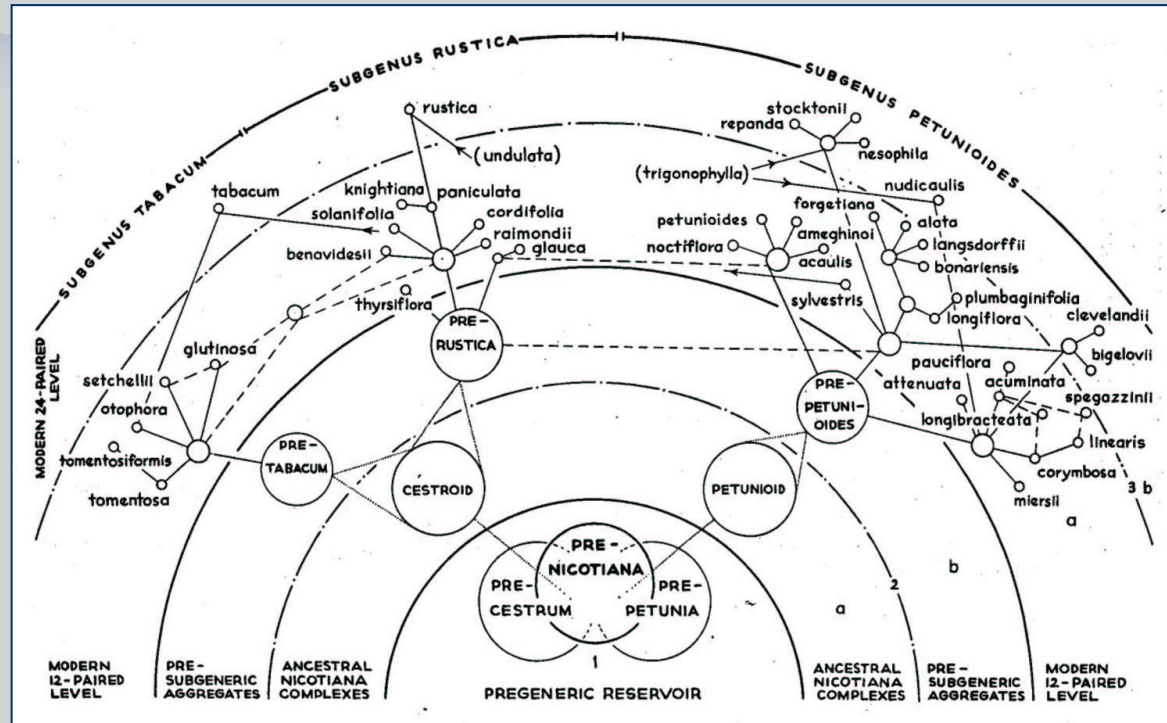
# ***Nicotiana* Germplasm Task Force**

## **Objective**

**To study potential systems for long-term support of public *Nicotiana* germplasm maintenance.**

## **Proposed Milestones**

**The intent of the Task Force on *Nicotiana* germplasm is to stimulate a CORESTA-facilitated discussion amongst members of the tobacco industry regarding a pathway for sustainable maintenance of genetic diversity within the genus *Nicotiana*.**



76 recognized naturally-occurring species (Knapp et al., 2004)

# Genetic Diversity in *Nicotiana*



1) Basis for market types and all past genetic improvement.

2) REQUIRED for continued varietal improvement and sustainability of production.

3) Important for development of tobaccos with novel chemistry profiles or regulatory compliance.

# ***Nicotiana* Germplasm Maintenance**



## **1) Private companies**

- bear internal costs, maintenance of personnel and know-how, long-term commitment**

## **2) Public collections**

- unstable footing**



# ***Nicotiana* Germplasm Maintenance**

- 1) Where are publicly available, non-privately-owned, *Nicotiana* germplasm collections located and what are the volumes of their holdings? Do they make these materials readily available worldwide?**
- 2) Does the CORESTA Taskforce believe that public collections are important, and worthy of discussion regarding strategies for long-term financial support?**
- 3) What are some ideas regarding potential strategies for tobacco industry partnership in such activities? Possibilities might include the use of CORESTA as a conduit to (1) collect annual financial support from interested companies, or (2) collect industry contributions to be deposited in a Foundation account whereby annual support would be generated via interest.**



# ***Nicotiana* Germplasm Maintenance**

**A number of publicly-available, non-privately owned *Nicotiana* germplasm collections were identified.**

**The most significant are (1) the United States *Nicotiana* Germplasm Collections maintained by N.C. State University, and (2) two collections maintained in Germany by NiCoTa and IPK Gaterslaben.**

**All survey respondents indicated that a system of financial support for one or more publicly-available *Nicotiana* Germplasm Collections would be in the best interest of the tobacco industry, as a whole.**



# ***Nicotiana* Germplasm Maintenance**

**An industry/public sector partnership to provide organized financial support would benefit the tobacco industry by:**

- 1) gained confidence that an invaluable public genetic resource for the future of the tobacco industry will be preserved.**
- 2) providing opportunity for private companies to reduce operating costs by donating a reasonable number of accessions (non-duplicate) to a public collection for maintenance and distribution (as needed).**





# Task Force Recommendations

**Recommends the tobacco industry:**

- (1) Contribute annually to a fund administered through CORESTA to support one or more *Nicotiana* Germplasm Collections**
  
- (2) OR establish an endowment to perpetually maintain the U.S. *Nicotiana* Germplasm Collection**
  - a) Approximately USD \$2.1 million would be required**
  - b) This collection could absorb unique accessions from other *Nicotiana* collections**
  - c) CORESTA could act as a conduit for financing**
  
- (3) Create a new task force to assess allelic variability and relationships amongst diverse materials in germplasm collections**



# ***Nicotiana* Germplasm Task Force**

**Thank You  
and  
Questions**