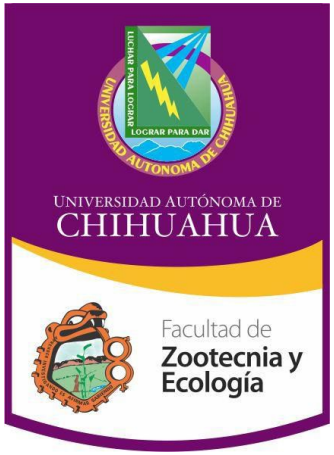


Native plant propagation for restoring rangelands

Alicia Melgoza, Carlos Morales, Otilia Rivero

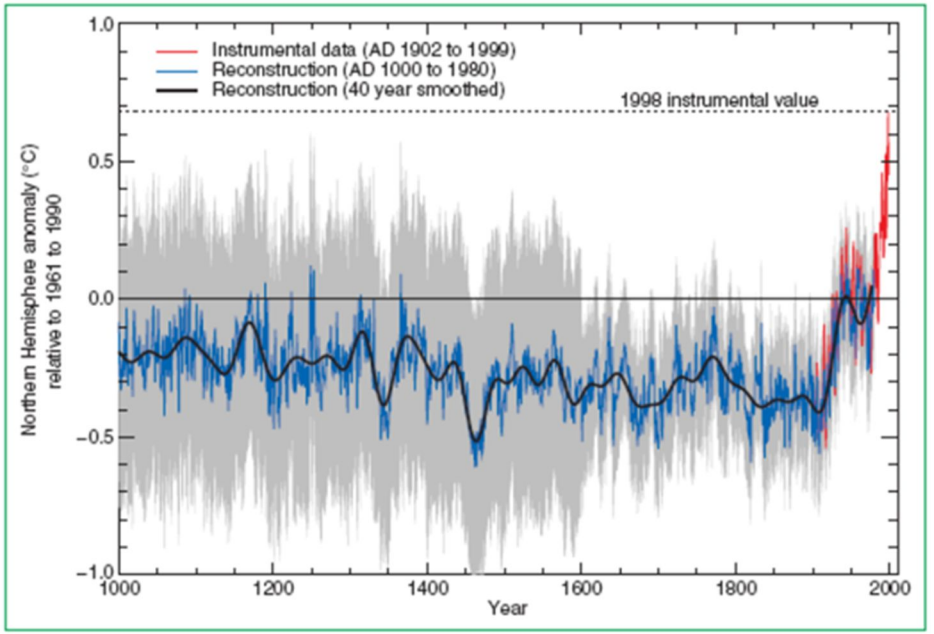
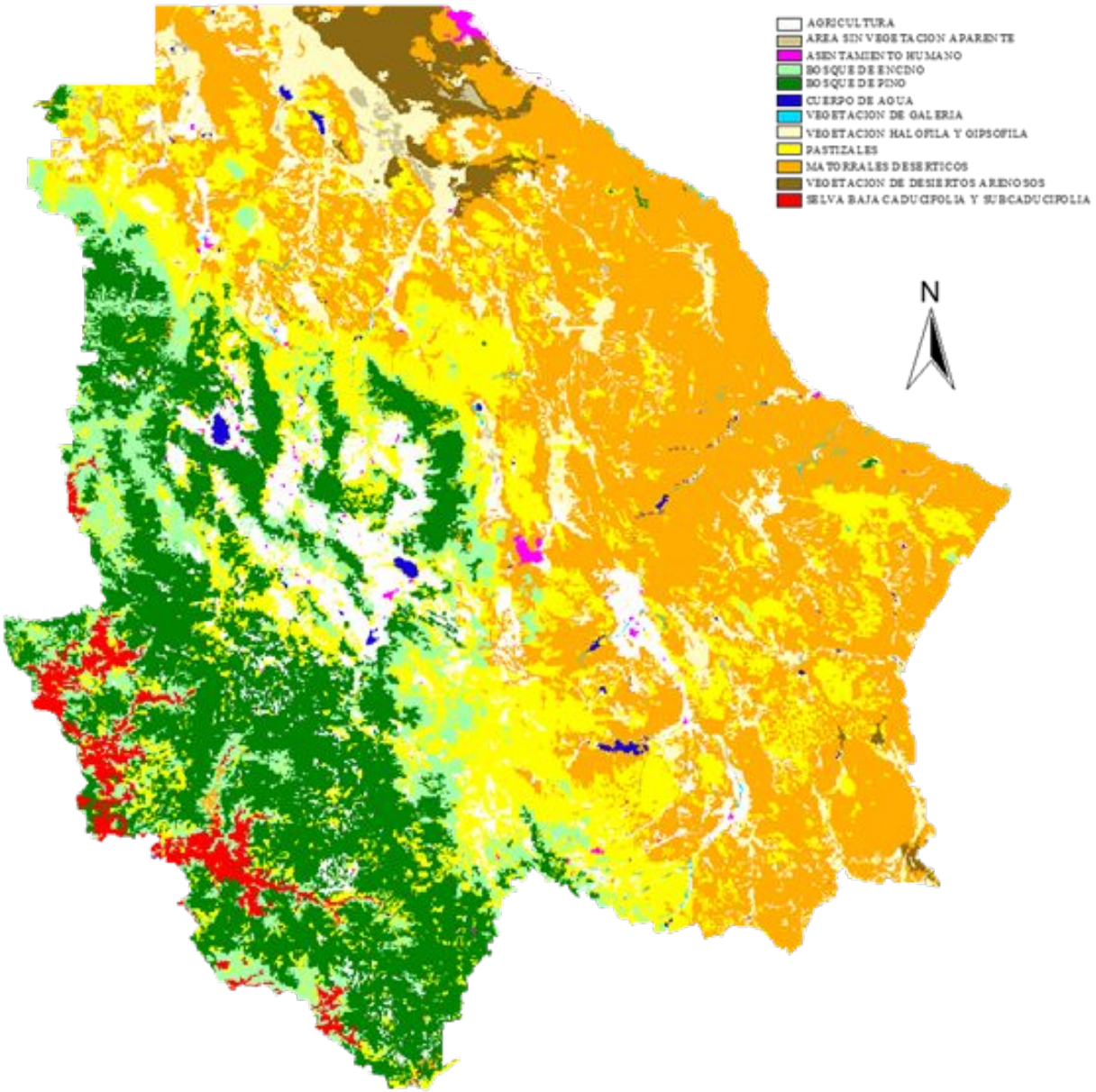
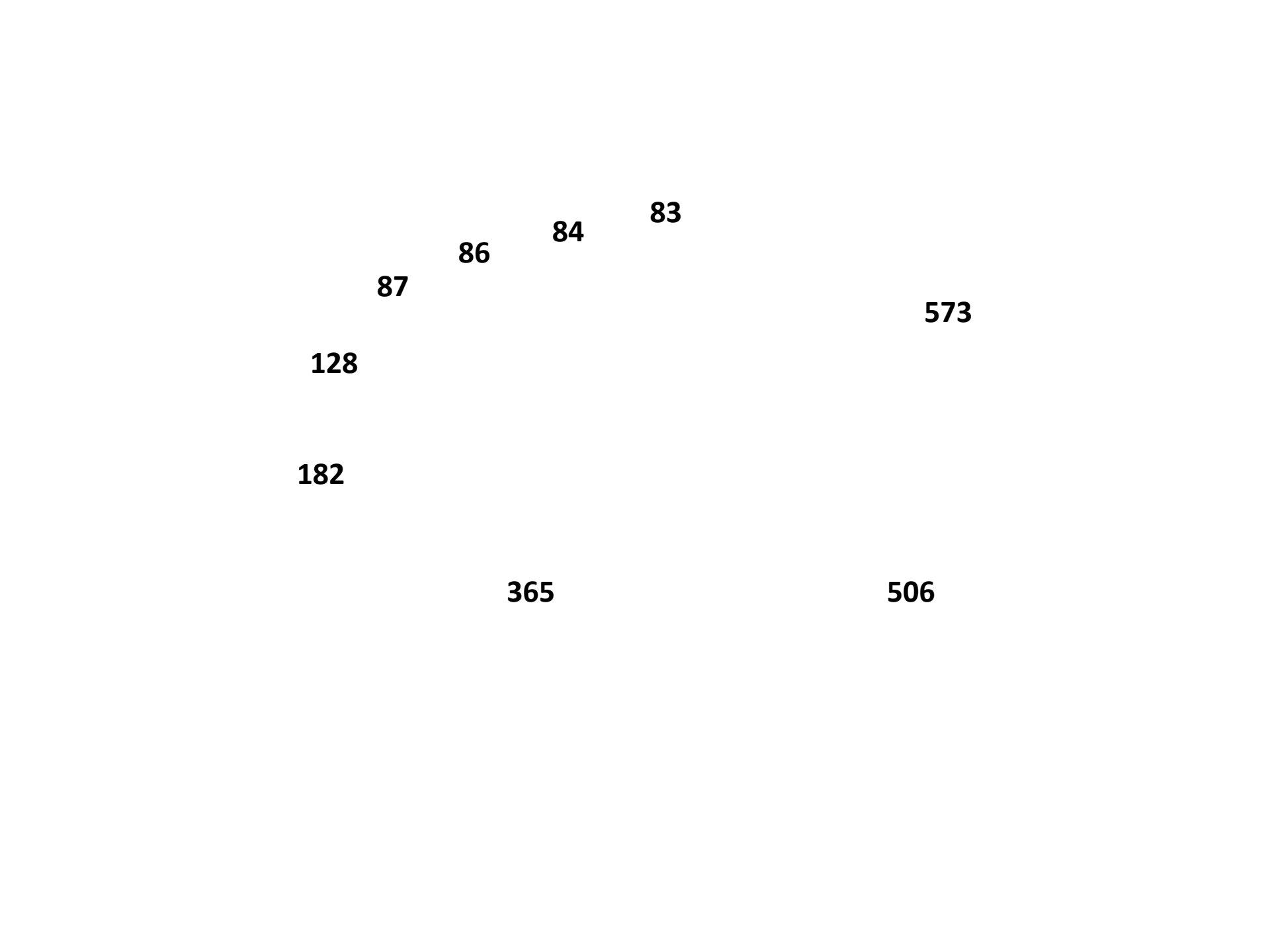


Figure 5: Millennial Northern Hemisphere (NH) temperature reconstruction (blue – tree rings, corals, ice cores, and historical records) and instrumental data (red) from AD 1000 to 1999. Smoother version of NH series (black), and two standard error limits (gray shaded) are shown. [Based on Figure 2.20]

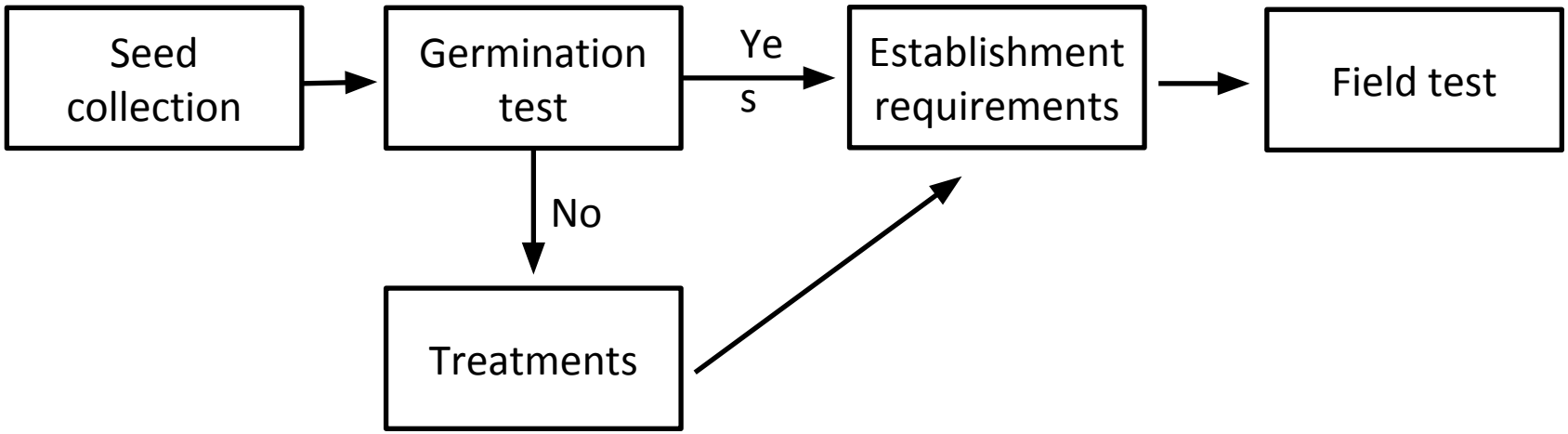
VEGETATION TYPES OF CHIHUAHUA, MEXICO

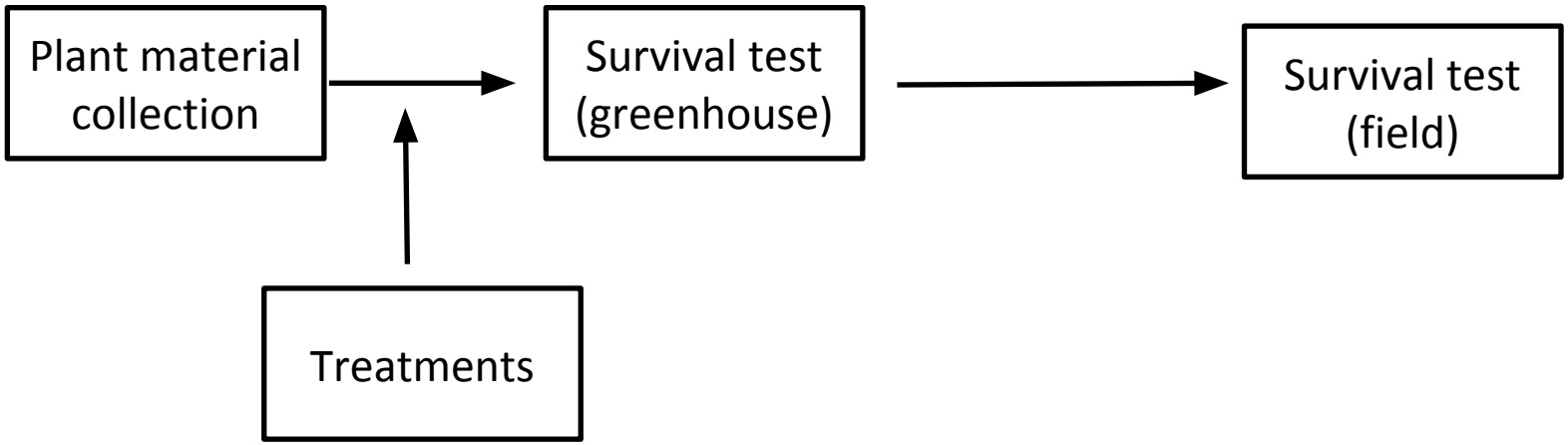



83
84
86
87
573
128
182
365
506

OBJECTIVE

To generate information for the development of protocols on native plants propagation.


Seed collection
Germination test
Yes
Establishment requirements
Field test
No
Treatments


Plant material collection
Survival test (greenhouse)
Survival test (field)
Treatments

NATIONAL CENTER FOR GENETIC RESOURCES

From INIFAP, Jalisco, Mexico, established in

CENARGEN, EMBRAPA (Brazil)
Millennium Seed Bank (United Kingdom)
NCGRP (USA-ARS)
National Institute of Agrobiological Sciences (NIAS, Japan)
Svalbard Global Seed Vault),
CGIAR Consortium (CIMMYT, CIAT, ICRISAT, ICARDA, IRRI, World Fish Center)
INTA Argentina

ACCOMPLISHMENTS


inifap
Manual de Plantas Importantes en la Apicultura
Manual de Plantas Útiles
Manual de Plantas Forrajeras
CONACYT
Manual de Plantas con Potencial Ornamental
PRODUCE

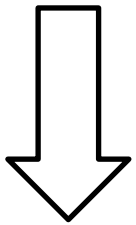
Firmar documento

MANUAL PRÁCTICO PARA LA IDENTIFICACIÓN DE LAS PRINCIPALES PLANTAS EN LOS AGOSTADEROS DE CHIHUAHUA

Unión Ganadera Regional de Chihuahua
Fundación PRODUCE Chihuahua

La biodiversidad en Chihuahua
Estudio de Estado

- **2 projects about native plant propagation**
- **3 projects related to plant species evaluation**



Over 700 collections

Species	Germination (%)	Germination Veolocity	Root:shoot ratio
N A T I V E			
Digitaria californica	23.00	1.52	**2.04:1**
Leptochloa dubia	**68.75**	**9.06**	1.22:1
Bouteloua dactyloides	**68.00**	3.22	0.92:1
Bouteloua gracilis	35.00	3.18	0.72:1
Bouteloua curtipendula	**76.25**	6.23	0.63:1
Pleuraphis mutica	12.00	0.95	0.95:1
Heteropogon contortus	52.50	4.96	0.80:1
Bouteloua eriopoda	14.00	**0.68**	1.80:1
Muhlenbergia rigida	51.67	3.62	**4.10**:1
Muhlenbergia minutísima	31.00	1.21	**1.75:1**
E X O T I C			
Eragrostis lehmanniana	3.75	**0.31**	1.06:1
Eragrostis echinocloidea	5.00	0.54	0.55:1
Melinis repens	15.71	1.82	**2.73:1**
Eragrostis curvula	**71.67**	**6.35**	1.10:1
Eragrostis superba	50.00	4.39	1.20:1
Pennisetum ciliare	55.00	3.07	0.98:1

Advantages and disadvantages for rapid and slow germination

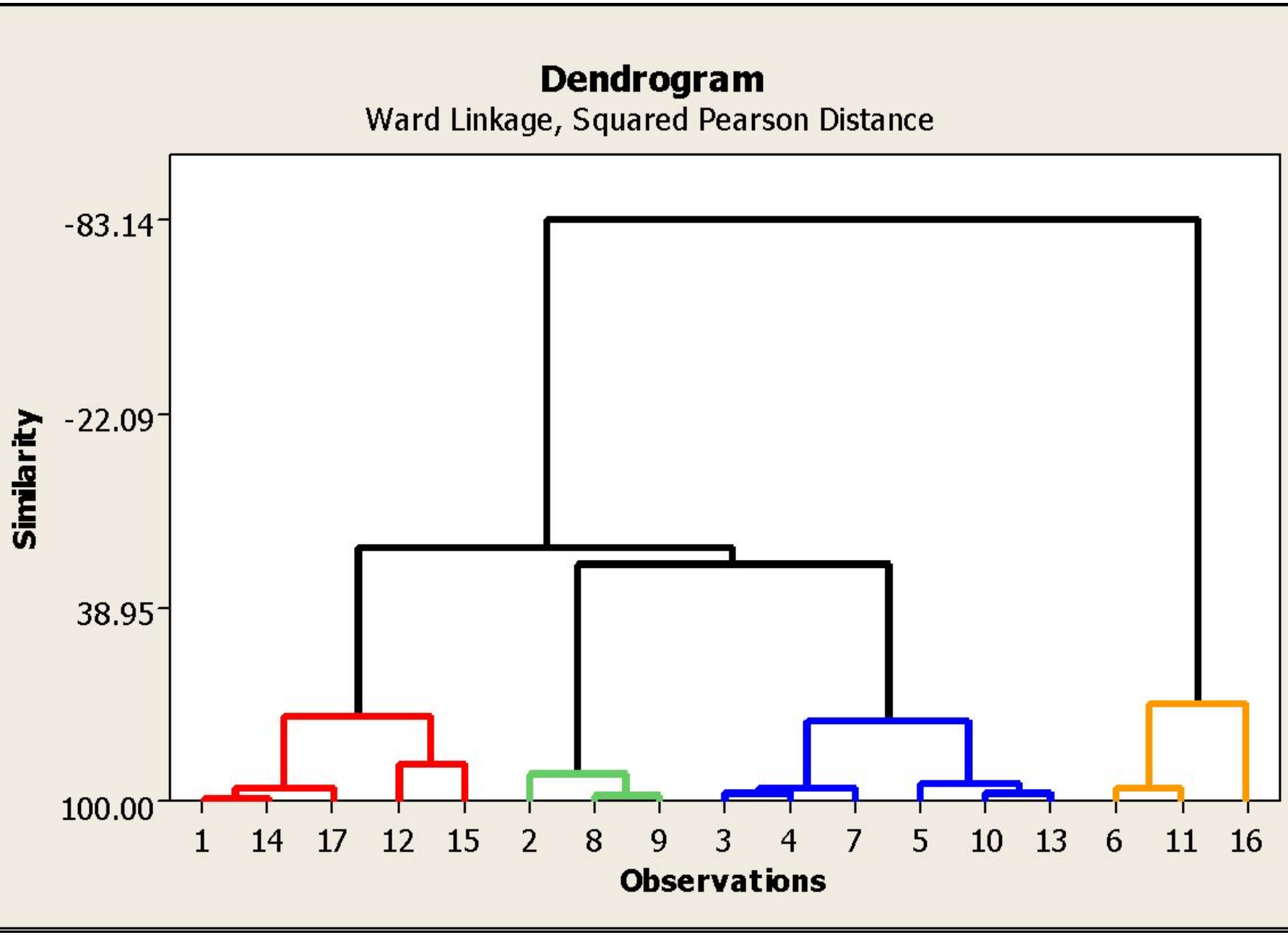
MOIST REQUIREMENTS FOR GERMINATION

WET YEARS	NORMAL YEARS
Agave lechuguilla	*Agave americana*
Menodora scabra	*Acacia greggii*
Plantago patagonica	*Tecoma stans*
Zinnia grandiflora	*Viguiera decurrens*
	Yucca elata

:

Bouteloua curtipendula
B. gracilis
Digitaria califórnica
Leptochloa dubia
Setaria macrostachya

Transplanted in a common garden
Two years latter there was an evaluation


Dendrogram
Ward Linkage, Squared Pearson Distance
Similarity
-83.14
-22.09
38.95
100.00
1 14 17 12 15 2 8 9 3 4 7 5 10 13 6 11 16
Observations


IFOAM
200ml
MAR 21 2007


MAR 21 2007


MAR 21 2007


Tuk-Stik
MAR 21 2007

1. ***Acacia angustissima***
2. ***constricta***
3. ***A. neovernicosa***
4. ***Aloyssia gratissima***
5. ***writhii***
6. ***Buddlejia marrubifolia***
7. ***B. scorioides***
8. ***Celtis reticulata***
9. ***C. ehrenbergiana***
10. ***Eysenhardtia spinosa***
11. ***Fouqueria spendens***
12. ***Leucophyllum frutescens***
13. ***Prosopis glandulosa***
14. ***Quercus emoryi***
15. ***Rhus microphylla***
16. ***R. vriens***

Over 15 native plants can be used for mine reclamation

CHALLENGES





Seed collection

Infrastructure and equipment

Cooperation: national e international organizations

Public politics

Seed commercial producers




The preceding presentation was delivered at the

2017 National Native Seed Conference

Washington, D.C. February 13-16, 2017

This and additional presentations available at http://nativeseed.info

NATIVE SEED NETWORK

Institute for Applied Ecology