

Provisional results PHASE 2 (Impact of climatic change on germination)

CIEF - VALENCIA



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Collection and conservation of seed lots

Taxon	collection place	collect. Data
<i>Linum mansuetanum</i> (A)	Manuel (València)	20/09/2006
<i>Linum catharticum</i> (A)	Cofertes (València)	09/10/2006
<i>Linum catharticum</i> (A)	Sagunt (València)	06/10/2006
<i>Helianthemum squamatum</i> (B)	Jalance (València)	12/07/2006
	Crevillent (Alacant)	17/07/2006
	Crevillent (Alacant)	23/08/2005
<i>Teucrium libanitis</i> (B)	Viver Quart (València)	21/07/2006
<i>Medicago cithra</i> (B)	Maroc	22/10/2006
<i>Pinus halepensis</i> (C)	Chelva (València)	03/05/2005
<i>Erica arborea</i> (C)	Almedijar (Castelló)	17/08/2006
<i>Arbutus unedo</i> (C)	Sagorbe (Castelló)	29/11/2006
<i>Crithmum maritimum</i> (C)	Sta Pola (Alacant)	16/11/2004
<i>Panacratium maritimum</i> (C)	Cullera (València)	07/09/2006
	Canet d'En Berenguer (València)	15/09/2006
<i>Glauclium flavum</i> (C)	Borriana (Castelló)	09/08/2006
<i>Fraxinus ornus</i> (C)	Chiva (València)	28/11/2005
<i>Acer monspessulanum</i> (C)	Ademuz (València)	17/10/2006



MAIN OBJECTIVE OF PHASE 2

To know the germinative behaviour of seeds in future scenarios of climatic change.



Germination experiments

STANDARD CONDITIONS TESTS (group C taxons)

- 10°C (darkness 24h/d and 12h/d light)
- 15°C (darkness 24h/d and 12h/d light)
- 20°C (darkness 24h/d and 12h/d light)
- 25°C (darkness 24h/d and 12h/d light)

TESTS AT PHITOTRON (selected taxons)

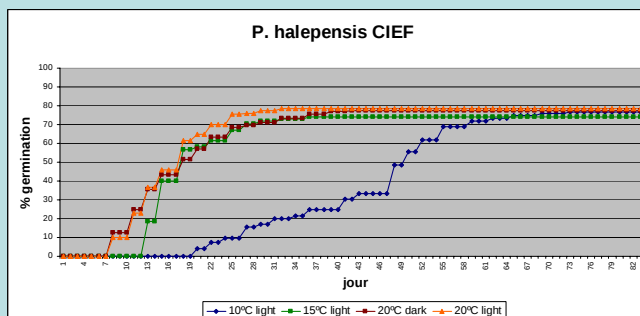
- REAL conditions test
 - Future scenario A2
 - future scenario B2
- Climatologists of CEAM (Centro de estudios ambientales del Mediterráneo) and Helena Flocas from Athens

Standard conditions tests

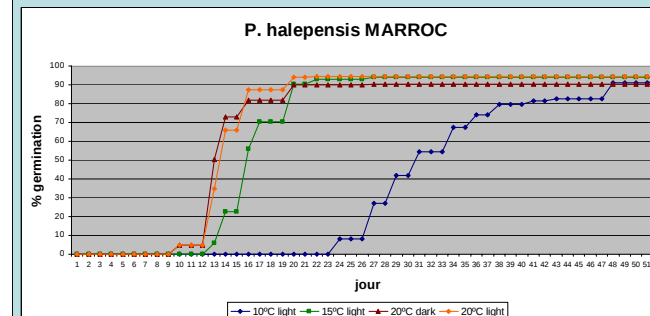
	10°C 12hL/12hD	10°C D	15°C 12hL/12hD	15°C D	20°C 12hL/12hD	20°C D	25°C D
<i>Pinus halepensis</i>	X		X		X	X	X
<i>Erica arborea</i>	X		X		X	X	X
<i>Arbutus unedo</i>	X	X	X	X	X	X	X
<i>Crithmum maritimum</i>	X	X	X	X	X	X	X
<i>Panacratium maritimum</i>	X	X	X	X	X	X	X
<i>Glauclium flavum</i>	X	X	X	X	X	X	X
<i>Fraxinus ornus</i>	X		X		X	X	
<i>Acer monspessulanum</i>	X		X		X		



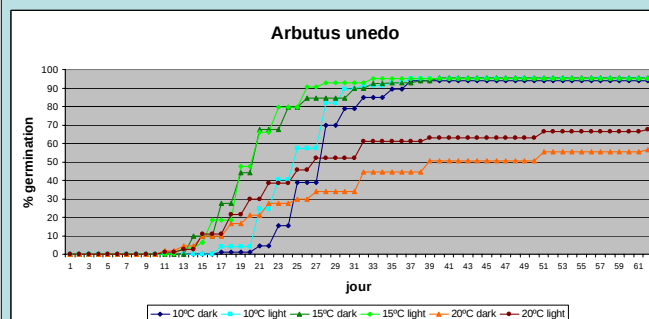
Provisional results of standard tests



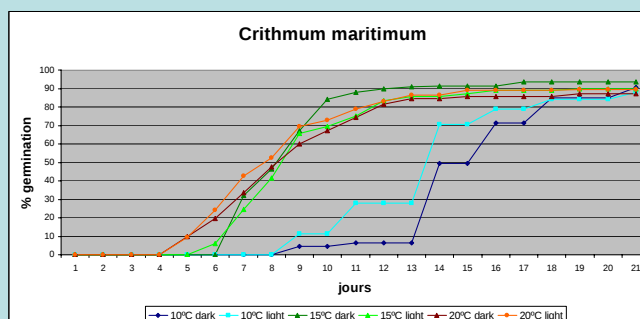
Provisional results of standard tests



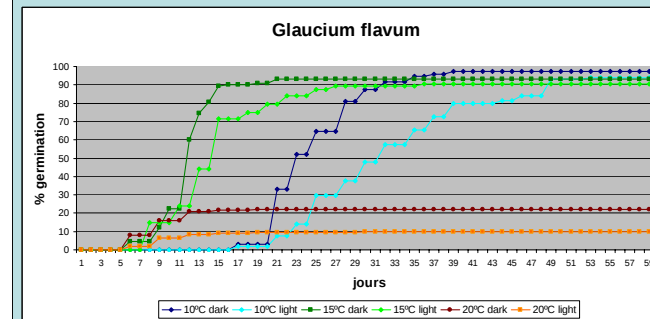
Provisional results of standard tests



Provisional results of standard tests



Provisional results of standard tests



PHITOTRON TESTS

These tests allow to simulate the germination conditions at nature

The phitotron



PHITOTRON TESTS

- Two groups of taxons

Coastal dunes habitat (Group 1):

Limonium dufourii (A)
Medicago citrina (B)
Pancreatium maritimum (C)
Glauicum flavum (C)

Gypsy soils habitat (Group 2):

Limonium cofrentanum (A)
Helianthemum squamatum (B)

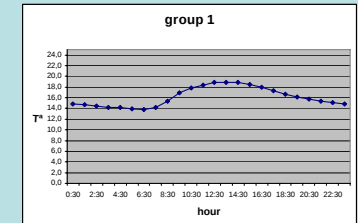
- Determine germination period
- Obtain daily T^a curve (CEAM data)

PHITOTRON TESTS

- Group 1

Germination period: October - November
CEAM data: 2005 - 2006

hour	T ^a	hour	T ^a
0:30:00	14,8	12:30:00	18,9
1:30:00	14,7	13:30:00	18,8
2:30:00	14,4	14:30:00	18,8
3:30:00	14,2	15:30:00	18,4
4:30:00	14,2	16:30:00	18,0
5:30:00	13,9	17:30:00	17,3
6:30:00	13,8	18:30:00	16,7
7:30:00	14,2	19:30:00	16,2
8:30:00	15,4	20:30:00	15,8
9:30:00	16,9	21:30:00	15,4
10:30:00	17,8	22:30:00	15,1
11:30:00	18,4	23:30:00	14,9

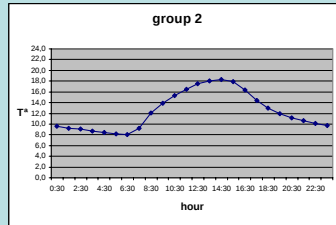


PHITOTRON TESTS

- Group 2

Germination period: October - November
CEAM data: 2005 - 2006

hour	T ^a	hour	T ^a
0:30:00	9,5	12:30:00	17,4
1:30:00	9,2	13:30:00	18,1
2:30:00	8,9	14:30:00	18,3
3:30:00	8,8	15:30:00	17,9
4:30:00	8,5	16:30:00	16,3
5:30:00	8,2	17:30:00	14,4
6:30:00	8,1	18:30:00	13,0
7:30:00	9,3	19:30:00	12,0
8:30:00	12,0	20:30:00	11,2
9:30:00	13,9	21:30:00	10,6
10:30:00	15,3	22:30:00	10,1
11:30:00	16,5	23:30:00	9,7



Objective for next year

- Field monitoring of *Pancreatium maritimum*



Info sheet

PARTNER	TAXONS GROUP A	TAXONS GROUP B	TAXONS GROUP C
CIEF	<i>Limonium mansanetianum</i> (Valencia)	<i>Helianthemum squamatum</i> (Valencia-Murcia-Barcelona)	<i>Erica arborea</i>
	<i>Limonium cofrentanum</i> (Valencia)	<i>Teucrium libanitis</i> (Valencia-Murcia)	<i>Arbutus unedo</i>
	<i>Limonium dufourii</i> (Valencia)	<i>Medicago citrina</i> (Valencia & Balearic Isls)	<i>Crithmum maritimum</i>
			<i>Pancreatium maritimum</i>
			<i>Glauicum flavum</i>
			<i>Fraxinus ornus</i>
			<i>Acer monspessulanum</i>

THANK YOU!

