JatroMed Project

Demonstration case in Adrar – Algeria

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Centre de Développement des Energies Renouvelables

- C.D.E.R –

Marrakech International Workshop

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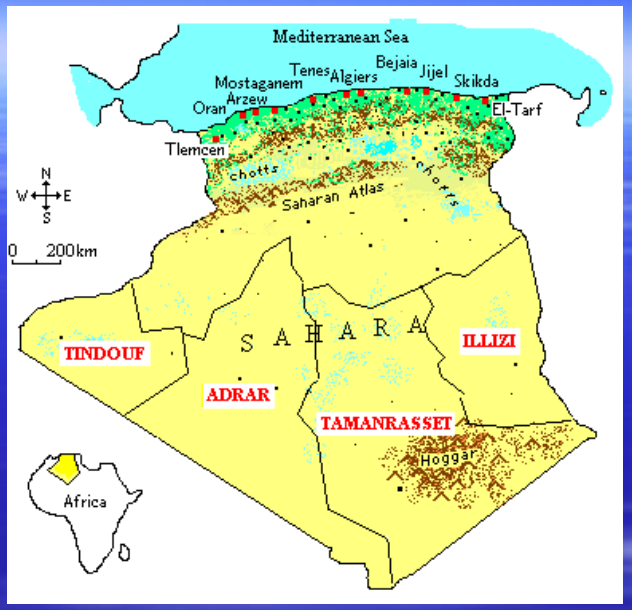
Adrar

1600 km South West of Algiers
Growing city with Increasing agricultural and industrial activities

Climate

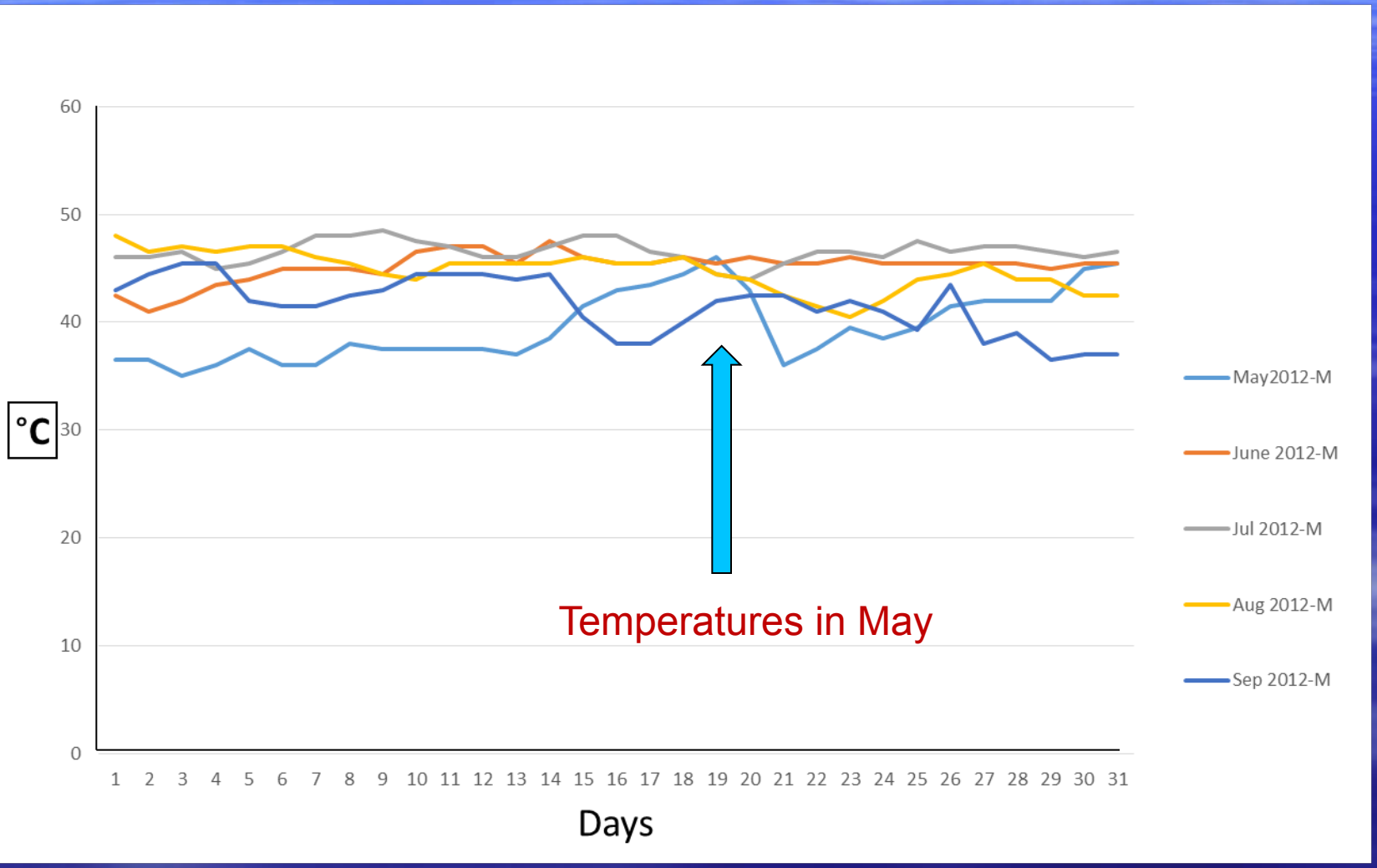
Very Arid
Extremely hot and dry in summer
Cold at night in winter (approx. 4-5 °C)
Very poor rain fall: less than 100 mm year



Algeria with 04 southern wilayates

Wilaya: it is the official name of an administrative territory (equivalent to province) (plural: Wilayates)

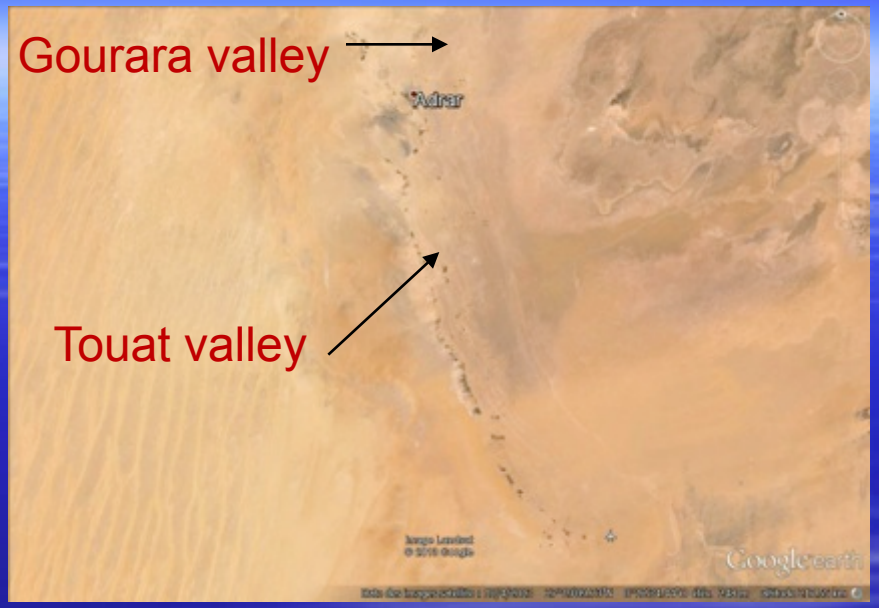
Temperatures during summer on site

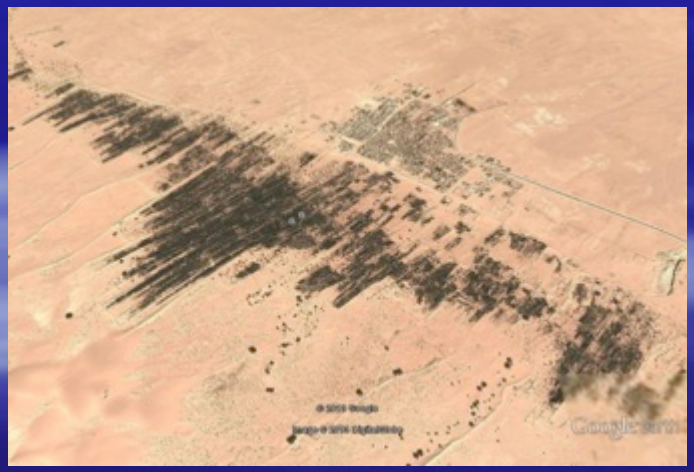


Wilaya of Adrar –

Area	439 700 km²
Population	**432 193** Inhabitants (estimation 2011)
Main occupation	Agriculture
Main natural resources	Natural gas, underground water

Most population settled in villages (ksour) along Touat and Gourara valleys





Ksar: Local name for village (plural: ksour)

JatroMed Experimental Site

INRA experimental station

Institut National de Recherche Agronomique

INRA experimental station

Research body

Depending of the central INRA institute in Algiers
(Ministry of agriculture)

Main activities:

- Research
- Experimentation
- Technical support for farmers
- Training

Agreement between CDER and INRA

Experimental field - genotypes blocs

SOIL ANALYSIS

N°	Samples	pH (r1/2.5)	EC mmhos/ cm2 (R 1/10)	Absorbable Phosphorus ppm	Total limestone %	Active limestone %	Carbon %	Organic matter	Total nitrogen (TN in °/° °)	Assimilable Potassium K_2O mg/ 100g
1	01	8.88	4.29	20	8.00	0.23	0.14	0.24	0.51	98
2	03	8.20	2.43	20	9.00	0.22	0.25	0.43	0.43	30
3	05	8.95	5.64	28	14.00	0.24	0.14	0.24	0.54	94
4	07	8.58	4.45	20	12.80	0.25	0.25	0.43	0.38	94
5	09	8.86	4.07	28	10.00	0.22	0.25	0.43	0.27	36
6	11	9.03	4.00	28	13.00	0.22	0.90	1.55	0.34	102
7	13	8.62	2.82	20	15.20	0.31	0.76	1.31	0.40	24
8	15	8.63	3.47	20	8.00	0.24	0.40	0.68	0.31	90
9	17	8.81	4.17	20	12.80	0.32	0.64	1.10	0.26	40
10	19	9.18	5.63	20	10.00	0.32	0.50	0.86	0.43	100

Chemical analysis

Physical analysis

Sample	Clay %	Fine Silt %	Gross silt %	Fine sand %	Gross sand %
01	8.25	1.5	9.61	36.14	44.5
02	5.0	10.75	9.25	47.86	27.14
03	4.0	14.25	15.73	47.09	20.93
04	7.0	14.14	4.43	37.64	36.79
05	8.5	4.0	4.43	-	36.11
06	4.0	14.5	3.32	35.33	42.85
07	2.0	8.5	19.95	50.09	19.46
08	7.0	14.0	2.84	38.1	38.06
09	7.5	6.25	4.62	41.91	39.72
10	4.5	15.75	7.32	38.15	31.28

Soil characteristics

- General texture: sandy soil (~ 75 % sand)
- Silt content (~ 18.5%) and low clay content (~5.5%)
- Structured in particles with high permeability
- Alkaline soil: pH > 8
- High content in limestone
- Electrical conductivity: 0.4 mmhos/cm^2
- Low organic matter
- Low content in nitrogen: 0.038 %
- Low content in carbon: 0.42 %

Water

Availability of underground water:

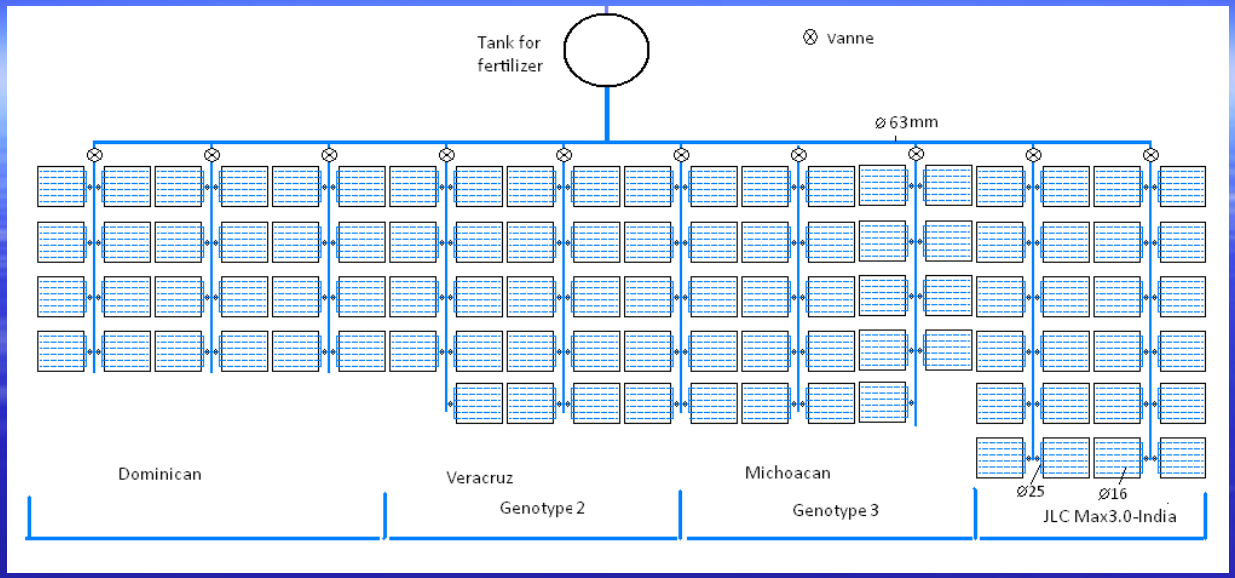
- **Open well 17 m deep (salinity 6 g/l)**
- **Drilling well 120 m (salinity 3 g/l)**

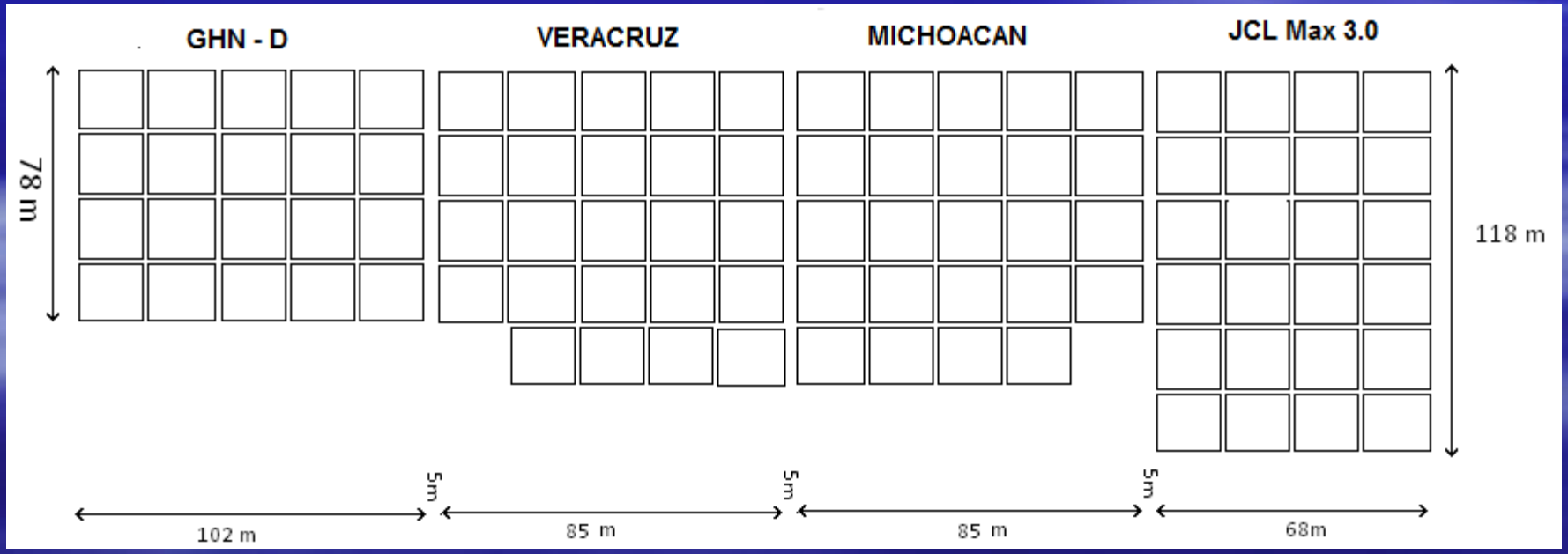
Water quality: brackish

Open well

Storage system

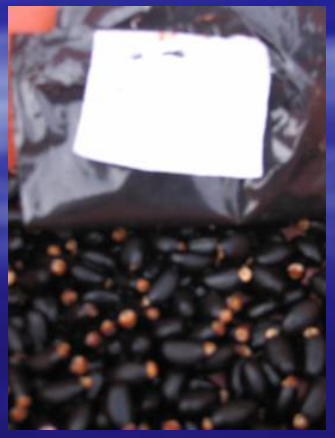
Irrigation System and Plot Distribution





Soaking operation

February 27th, 2012



Nursery preparation & seeds sowing

NURSERY

February 29th, 2012

April 4th,2012

MICHOACAN

Square.1 –
93.33% germination

Square.2 -
78.33 % germination

Square.3 –
80.55 % germination

Average germination: 83.37 %

Square N°4 -
81.30 % germination

JCLMax 3.0
INDIA

Square.1 –
43.33% germination

Square.2 -
46.11 % germination

Square.3 –
41.56 % germination

Average germination: 41.67 %

Square N°4 -
35.58 % germination

GHN - D
DOMINICAN

Square.1 –
53% germination

Square.2 -
47.22 % germination

Square.3 –
49.44 % germination

Average germination: 50.83 %

Square N°4 -
48.46 % germination

VERAGRUZ

Square.1 –
50.00 % germination

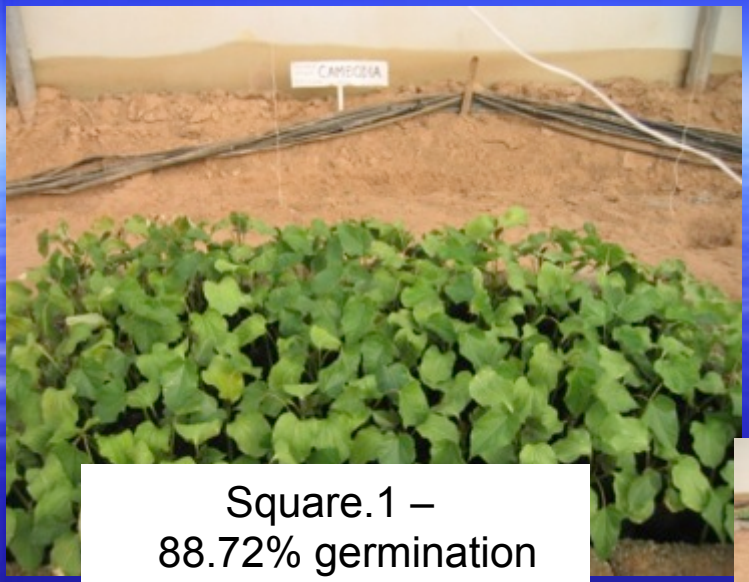
Square.2 -
35.55 % germination

Square.3 –
26.11 % germination

Average germination: 33.54 %

Square N°4 -
22.50 % germination

JAT083
Thaïland



Square.1 –
88.72% germination

Square.2 -
92.77 % germination

Square.3 –
89.18 % germination

Square N°4 -
92.00 % germination

Average germination: 90.66 %

May 2012
Transfer of plants
from nursery to shady place

Transplantation delayed for abnormal high temperatures in May

Field preparation – leveling, digging, mixing

Implementation of irrigation system

Problems faced

Crickets attack

Sand storm

Chemical treatment

Physical protection

Jatropha plants in demonstration field after transplantation in Oct/November

Dissemination activities

Media dissemination through local radio station

Explanations in nursery

Participants transplanting jatropha plants


THANK YOU