



**NATIONAL  
AGRICULTURAL  
RESEARCH  
FOUNDATION**

**Agricultural Research  
Center of Northern Greece  
(ARCNG)**

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# SEELEGUMES

♣ Large plant biodiversity of Greece

♣ Project timeframe -24 months

} thus we have sought to

## *Cicer arietinum*



- ▶ collect chickpea varieties, and local landraces
- ▶ morphological and genetic characterization



***Ex situ* conservation of *Cicer* accessions as seed samples**

***In situ* conservation is undertaken mainly by traditional farmers**

**Current trends in agriculture and nutrition are seeking for**

- **well-adapted cultivars in view of the forthcoming climate change**
- **high added value products**
- **chickpea is an important source of nutrients for human diet  
particularly for sensitive groups  
an excellent alternative to soybean for livestock feed**

## *Cicer arietinum* collection of seed samples

A/A	Cultivar Name	Location of origin
1	Amorgos	NAGREF
2	Andros	↓
3	Gavdos	
4	Gravia	
5	Evros	
6	Thiva	
7	Kerinia	
8	M14719	
9	Serifos	
10	Sifnos	
11	E210	
12	E216	
	<b>Local land races</b>	
	49 accessions	

Map of Greece indicating origin of *Cicer arietinum* collection of local landraces



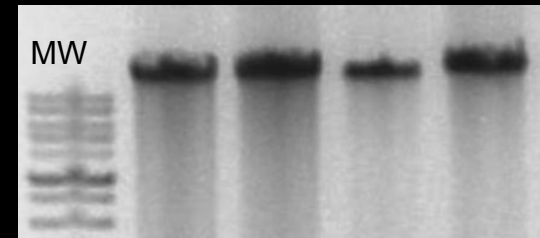
## **Experimental Plan**

- ▶ **Morphological characterization of *C. arietinum* accessions**
- ▶ **Growth of individual plants in greenhouse → underway**
- ▶ **Molecular characterization of individual plants → underway**
- ▶ **Assessment of genetic diversity of accessions**

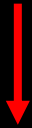
# Molecular characterization of *Cicer* accessions

## Isolation of genomic DNA

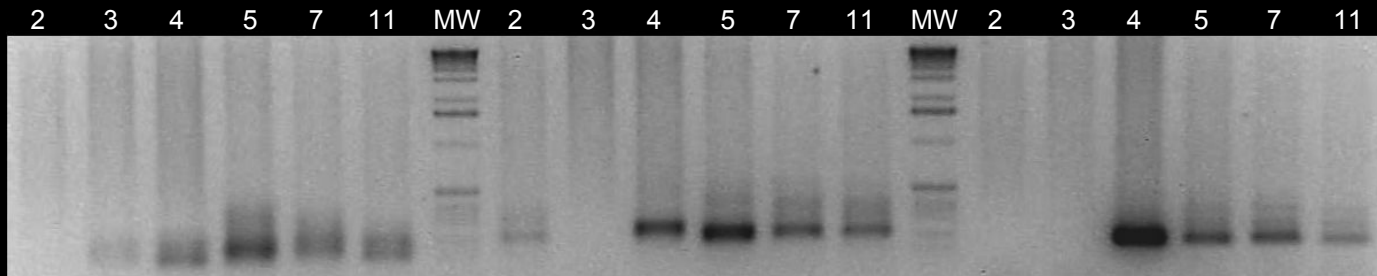
Extraction of gDNA has been performed from individual samples of selected accessions. Quality and quantity of isolated gDNA has been assessed spectrophotometrically.



## Selection of molecular markers



## PCR analysis of gDNA



Cultivars are as follows:

- 2= Andros
- 3= Gavdos
- 4= Gravia
- 5= Evros
- 7= Kerinia
- 11= E210

**Thank you !**

**See you all in Thessaloniki, Greece!**