

Current situation
of *Triticum*
classification in
National Collection
of Greece

Ricos Thanopoulos
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of Athens

Piešťany, Slovakia, 17–19th September 2019



The lose of a scientific “tradition”

633.11 PER

THE WHEAT PLANT

A MONOGRAPH

BY
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RÉPUBLIQUE HELLENIQUE — MINISTÈRE DE L'AGRICULTURE
STATION D'AMÉLIORATION DES PLANTES — A SALONIQUE

BULLETIN SCIENTIFIQUE N°

FORMES GRECQUES DE BLÉ

PAR
J. S. PAPADAKIS
DIRECTEUR DE LA STATION

L'OUVRAGE A ÉTÉ PUBLIÉ EN DEUX ÉDITIONS GRECQUE ET FRANÇAISE AUX FRAIS
DE LA DIRECTION GÉNÉRALE DE LA COLONISATION DE LA MACÉDOINE



SALONIQUE
1929

TRITICUM DICOCCUM



TRITICUM DICOCCUM
var. rotundum 13 D 1
Germany

TRITICUM DICOCCUM
var. rotundum 13 D 2
Savaca, U.S.S.R.

TRITICUM DICOCCUM
var. rotundum 13 D 3
Serbia

TRITICUM DICOCCUM
var. rotundum 13 D 4
Greece

TRITICUM DICOCCUM
var. rotundum 13 D 6
Georgia, U.S.S.R.

TRITICUM DICOCCUM
var. striatum 24 D 1
Black Sea, Georgia

Papadakis (1929): Wheat varieties and forms in Greece

Species	No of varieties	No of forms
<i>T. monococcum</i>	1	1
<i>T. polonicum</i>	1	1
<i>T. durum</i>	14	45
<i>T. turgidum</i>	12	17
<i>T. aestivum</i>	9	16
Total: 5	37	80



Monococcum Vulgare
Καπλουιζᾶς
Kapluzas

Polonicum Nigrobarbatum
Δεβέντης
Leventis

Durum Leucurum
Ρουσαιᾶς
Roussias

Durum Leucurum
Μονολόγι
Monologhi

Papadakis (1929)

Kypraiiko (Lamia) = Tounous + Kondouzi

L.

Levendis (Hélie, Zante) = Lavendis Peloponnisou
Levendis? (Rethymnos) = Diminitis Rethymnou
Levendis? pedinos (Rethymnos) = Kamboura

M.

Malakos choris agana (Serrès) = Malacos Serron
Mavragani (Halmyros) = Mavragani Aïdiniou
Mavragani (Thèbes) = Mavragani Aïdiniou
Mavragani (Samos) = Kamboura
Mavragani à grain allongé (Boeotie, Negreponte) =
Kamboura

Mavragani à grain gros et court (Boeotie) = Rhapsani
Mavragani (Larissa, Macedoine Occidentale et
Centrale) = Rhapsani

Mavragani (Mytilène) = Mavragani Scalochoriou
+ Asprostaro Scalochoriou

Mavragani (Céphallonie) = Mavrostaro Kephallinias
Mavragani provenant d'Adana (Larissa) = Mavra-
gani Argoladanon + Mavragani Adanon + Ma-
vrostaro Adanon

Mavragani (Epire) = Mavragani Ioanninon
Mavragani (Thrace, Macedoine Orientale) = Ma-
vrostaro Thrakis + Mavragani Scalochoriou +
Mavrostaro Romanou

Mavragani (Limnos) = Mavrostaro Romanou
Mavragani (Peloponèse montagneux) = Mavragani
Vytinis

Mavragani (Plaines du Peloponèse) = Mavragani
Argolidos

Mavragani (Cyclades) = Mavragani Argolidos

Mavragani (Crète) = Mavrotheris Kritis + Mavra-
gani Argolidos + Mavragani Aïdiniou + Mavra-
gani Araio Kritis + Mavragani Kritis + Mavra-
gani Arapiko + Kamboura + Mavragani Scalochoriou
+ Mavragani Kokkinosporo Kritis + Niloticon
Kritis + Mavragani Sympaghès Kritis

Mavri Gremmenia (Attique, Negreponte) = Ma-
vragani Argolidos

Mavrotheris (Cliou) = Mavrotheris Chiou

Mavrotheris (Crète) = Mavroteheris Kritis + Mavra-
gani Argolidos + Mavragani Aïdiniou + Mavra-
gani Araio Kritis + Mavragani Kritis + Mavragani
Arapiko + Kampoura + Mavragani Scalochoriou
+ Mavragani Kokkinosporo Kritis + Niloticon
Kritis + Mavragani Sympaghès Kritis

Melinguissiou (Serrès) = Deves + Ptatitsa

Monologhi (Boeotie, Attique, Negreponte) = Mo-
nologhi

P.

Polonikos (Salonique) = Levendis Peloponnisou
Proussis (Thrace) = Tsipoura + Jalisteri Floritsa

R.

Raidestou (Thessalie) = Pseudoarnaouti + Platitsa
+ Deves

Rhapsani (Locride, Phthiotis, Thessalie) = Rhapsani
Rovaki (Crète) = Aspro Rovaki + Kokkino Rovaki

Roussias (Boeotie, Negreponte) = Deves + Pseu-
doarnaouti + Platitsa

Rossikos (Crète) = Levendis Peloponnisou

Roussias (Epire) = Roussias

S

Sari Bashak (Thrace, Macédoine) = Deves + Platitsa

Sideritis (Negreponte) = Deves + Pseudoarnaouti

Sioutarka (Macedoine Occidentale) = Sioutarka

Sitos Parou = Grinias + Myconou + Parou

Sitos Myconou = Grinias + Myconou + Parou

Sitos Hellinikis Gheorghikis Heterias = Kamboura

Skliros (Chiou) = Pseudoarnaouti + Platitsa

Skylopetritis (Attique, Negreponte) = Grinias +
Tsougrias + Skylopetritis

T

Tounous (Thrace, Macedoine) = Tounous + Aspro-
stachys + Jalisteri Floritsa + Kondouzi

Trimini (Copaïs) = Trimini

Trimini (Tripolitsa) = Trimini

Tsinganadon (Chalcidique) = Arnaouti + Kokkino
Arnaouti + Tsinganadon + Kokkino Pseudoar-
naouti

Tsipoura (Samos) = Tsipoura + Kondouzi + Mavra-
gani Argolidos

Tsombato (Crète) = Tsombato + Chnoudostombato
Tsougrias (Peloponèse) = Grinias + Tsougrias

X

Xanthossitaro (Xanthi, Drama) = Deves + Pseudoar-
naouti

V

Vadarka (Florina) Vadarka

Velitsa (Arta) = Kokkinostaro Ipirou

Venetico (Chios) = Kamboura

Vrastaminos (Chalcidike) = Deves

Z

Zoulitsa (Peloponèse) = Kizeltzes

Synonyms

Examples of composition

2 forms

3

11

Papadakis (1929)

Αριθμ. εν	Αριθμ. εν	Όνομα κοιλίας	κατά περιοχήν	D. Leucurum	vulg. Erytroleucon	D. Affine	vulg. Alborubrum	vulg. Craecum	D. Melanopus	D. Leucomelan	P. Reichenbachii	vulg. Erythrospermum	D. Provinciale	vulg. Ferrugineum	D. Hordeiforme	D. Obscurum	D. Affricanum	V. Nigroaristatum	vulg. Albidum	vulg. Sardoum	vulg. Meridionale	vulg. Lutescens	D. Aegyptianum	D. Murciense	V. Pseudomeridionale	Rurg. Rubroaetrum	Rurg. Megalopolitanum	Rurg. Melanatherum	D. Erythromelan	Pol. Nigrobarbatum	Διάφοροι		
103		Ευλόχιστρον Κιλίας																															
104		> "Αρης																															
105		> Χαλκίδας																															
106		> Αιτωλίας																															
107		*Ακ Μπαράχ Αράμας																															
108		> Αιθιοπείχου																															
109		> Ροδότης																															
110		> Αράμας																															
111		> Αιθιοπείχου																															
112		Μρός																															
113		*Αρίτιχο Κορινθίας																															
114		> Ζαχύνθου																															
115		> Μεσσηνίας																															
116		*Ασπρόστρο Αέσθου																															
117		> Αχαΐθου																															
118		> Γκιωνιτών																															
119		Κοκκινόστρο Αέσθου																															
120		> Γκιωνιτών																															
121		Κοντογι. Καρόλιτης																															
122		> Γκιωνιτών																															
123		Μανιτόμπα Ροδότης																															
124		> Γκιωνιτών																															
125		Σίτος Εάθης																															
126		> >																															
127		> >																															
128		sendioreCapelli Παρών																															
129		> Κορινθίας																															
130		Διμήγι. Αευχάδος																															
131		> Αέσθου																															
132		ΔιαλομήΜενάνας 80367																															
133		Δομηγιτόν Κορινθίου																															
134		*Ασφοδαίτα Αιτίας																															
135		Ζουλιτόν Κορινθίας																															
136		Βρασταγιότ. Χαλκίδης																															
137		Σίτος Κορινθίας																															
138		> Αευχάδος																															
139		Καλασενίτη Τρικιών																															
140		Σουράρα Εβόσσου																															
141		Συροκονδυλάτης Πάφου																															
142		*Αθαλάσσα Καρόλιτης																															
143		*Εγχώριος Τήνου																															
144		Νισέας Καρόλιτης																															
145		Καναλιώτης >																															
146		Μελιγκίτοι Σερρών																															
147		*Αγναδίτι Αιτωλίας																															
148		Αεθάρης Αχαΐθου																															
149		Κουρούλιας >																															
150		Καραβέας Αιθιοπείχου																															
151		Κίοςας Καθάλας																															
152		Κοντομεντάνα Καρπίνης																															
153		> >																															

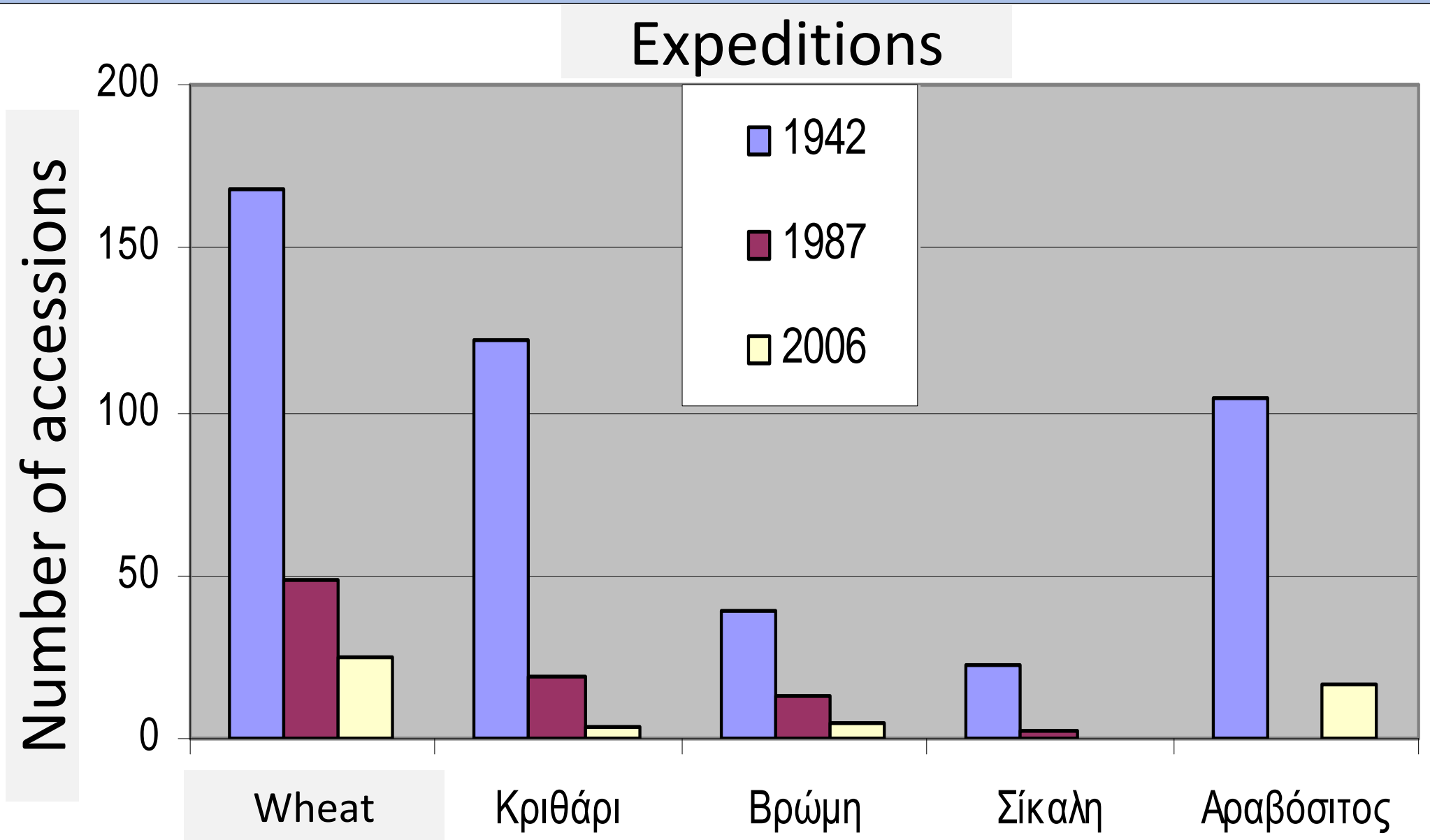
Kokolios (1948): Composition of wheat varieties in Greece

Varietal composition of Lesvos' wheat landraces (adapted from Kokolios 1948, based on Percival, 1921)

Landrace	English translation	Composition (%)								
		<i>durum</i>						<i>aestivum (vulgare)</i>		
		<i>affine</i>	<i>hordei- forme</i>	<i>leuco- melan</i>	<i>leucu- rum</i>	<i>mela- nopus</i>	<i>murciense</i>	<i>reichen- bachii</i>	<i>albo- rubrum</i>	<i>erythro- leucon</i>
Mavragani (I)	Black awned				16	78				6
Mavragani (II)	Black awned	5	4					87	4	
Asprostaro	White wheat		3	3	94					
Kokkinostaro	Red wheat						84	6		10
Diminitis	Two months wheat	99							1	

Past and
present?

Cereals' genetic erosion in Peloponnese



Wheat accessions in National Greek Gene Bank

Species	No of acc.	Collection years
<i>T. aestivum</i>	126	1982-2005
<i>T. boeoticum</i>	50	1995-2005
<i>T. durum</i>	154	1982-2005

(Source: Katsiotis et al. 2009)

AUA (some) expeditions

Region	Year	Number of acc.	Ομάδες			
Total		1439	Cereals	Pulses	Vegetables	Others
Λήμνος	2009-10	146	12	32+3	88	11
Λευκάδα	2010, 2012	101	10	42+1	38	10
Λέσβος	2011	312	9	48+0	253	2
Σκύρος	2012	50	13	11	24	2
Κύθηρα	2010	182	3			
Μεσσηνία	2013	260	31	81	161	5
Κεφαλονιά	2013	78	18	14	56	1
Άνδρος	2013-14	310	14	108	187	1

Greek reality

- **Still we collect rarely
wheat populations/landraces**
- **In farmers' stores and in fields...**

The fact (from one field-today)



The classical questions:

- **How to treat the samples?**
- **How to analyze accessions?**
- **How to conserve diversity on farm?**



Structure of durum wheat landraces in Lemnos Island

by

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(unpublished)

Lemnos island (North Aegean)

- Entries of wheat populations from three villages:

Village	No of selections
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Atsiki	5
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Moudros	4
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Kontopouli	5
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Distance:

Atsiki-Moudros: 11 km

Kontopouli-Atsiki: 11,5

Moudros-Kontopouli: 9 km

Awnedness	Awn color	Lower glume color	Lower glume hairiness on external surface	Morphotype
Present	White	White	Absent	A
Present	Black	White	Absent	B
Present	White	White	Present	C
Present	Black	White	Present	D
Present	Black	Brown-Red	Absent	E
Present	Brown-Red	Brown-Red	Absent	F
Present	Black	Brown-Red	Present	G
Present	Brown-Red	Brown-Red	Present	H
Present	Black	Black	Absent	I
Present	Black	Black	Present	J
Absent		White	Absent	K
Absent		White	Present	L
Absent		Brown-Red	Absent	M
Absent		Brown-Red	Present	N

Selection	Morphotype
Atsiki	A C F
Atsiki-1	A C D F
Atsiki-4	A B C D E F G I J
Atsiki-15	A C D G H I J K
Atsiki-6	A C H I
Kontopouli	A C E F G H I J K L M N
Kontopouli -16	A C F G H I J
Kontopouli -17	A C E F G J
Kontopouli -2	A C F G H I J
Moudros-5	A B C E H J
Moudros-11	A C E H I J

Kontopouli



Kontopouli A C E F G H I J K L M N



Kontopouli -2 A C F G H I J



Kontopouli -16 A C F G H I J



Kontopouli -17 A C E F G J

Atsiki



Atsiki A C F

Atsiki-1 A C D F

Atsiki-6 A C H I

Atsiki-15 A C D G H I J K



Main conclusions of durum wheat landraces in Lemnos Island

- the structure of the examined durum wheat entries was determined mainly by the initial ancestral genetic material and by farmers selection pressure
- landraces were characterized by high phenotypic diversity values but there was not a representative morphotype for all landraces

Final conclusions

- Wheat diversity exists:
- Both in gene banks and
- On farm
- Research on diversity-taxonomy
- Policies on farm conservation

Thank you

