

# Sicilian wheat varieties<sup>1</sup>

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## Summary

A brief historical background explains why Sicilian wheat germplasm has to be preserved. A catalogue of 32 cultivars collected throughout Sicily in 1973 is presented. Each cultivar is geographically and botanically identified. The presence of variability is discussed for several spike characters. The material is available for distribution.

## Introduction

In the past, for several reasons, all the Mediterranean wheats flowed together to Sicily. Many of them have been certainly broadly cultivated and by natural crosses they may have contributed to increase the variability of the local populations. The heterogeneity accumulated in this way must have reached a maximum at the beginning of this century, that is the time when the Italian plant breeders started the distribution of their selected varieties. This caused a progressive disappearance of the local populations and consequently a contraction of the genetic variability.

We do not know how large was the range of variability before the practice of distributing new varieties, though, after genetic erosion had taken place, PRESTIANNI (1926) and DE CILLIS (1942) were able to list out up to 52 and 45 varieties, respectively.

Today Sicily is still an important wheat production area. A little over a quarter of the total surface is cultivated with wheat every year.

In 1971 and 1973 two distinct expeditions for collecting wheat from Sicily were accomplished (PORCEDDU and SCARASCIA MUGNOZZA, 1972; SCARASCIA MUGNOZZA and PORCEDDU 1972; PERRINO and MARTIGNANO, 1973).

The first results, concerning mainly the presence and distribution of wheat varieties cultivated in the island and the probable amount of genetic erosion that took place since 1942 were presented and discussed in previous papers (PORCEDDU and BENNETT, 1971; PERRINO and MARTIGNANO, 1973; BOGYO et al., 1980; PORCEDDU et al., 1981).

Among other things it has been found that many varieties (*sensu stricto*) reported by DE CILLIS (1942) had most likely disappeared for ever. On the other

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hand, new varieties more recently distributed were the most frequent as uniform stands but also mixed with old varieties.

The main aim of this paper is to present an updated and illustrated inventory of wheat varieties cultivated in Sicily. Since more emphasis has been laid on old varieties and where they could still be found in the island, this paper can also be regarded as a useful reference for breeders and other specialists of wheat.

In the last years the collecting of land-races of cultivated plants in South Italy has been intensified and one collecting mission has also covered parts of Sicily (PERRINO et al., 1982). As a result, the authors have decided to make a general survey about germplasm of cultivated plants of South Italy (including Sicily) with this paper being the first in a series which is intended to be completed to a flora of cultivated plants of South Italy.

The Bari Institute may provide upon request small seed samples for each presented wheat variety.

### Collection and classification

From 120 wheat samples collected at different altitudes (table 1) and various geological, phytogeographical, and agricultural conditions, 72 morphological variants were recognized and selected. More than one spike per variant was classified according to the keys of U. DE CILLIS (1942), MANSFELD (1951), and DOROFEEV and DORONINA (1979). However, since „spikes collected in different environments could not provide a good base for a first rough classification“ (SCARASCIA MUGNOZZA and PORCEDDU, 1978), the use of the key was complemented by comparing each variant with cultivars provided in several occasions by different farmers during the same expedition. On the other hand, this classification on the original material may be supported by the finding that even when a wheat

Table 1

Site, field and MG numbers of wheat samples collected at different latitude, longitude and altitude (Sicily, 1973)

Site No.	Field No.	MG No.	Lat.	Long.	Alt.
1	652	7920	37.38	14.33	500
1	653	7921	37.38	14.33	500
2	654	7922	37.38	14.34	450
3	655	7923	37.23	37.26	000
4	656	7924	37.18	14.53	100
5	657	7925	37.17	14.48	380
6	658	7926	37.14	14.46	500
7	659	7927	37.12	14.40	470
8	660	7928	37.10	14.37	400
9	661	7929	37.04	14.34	120
10	664	7930	36.50	14.35	170
11	665	7931	36.45	14.45	100
12	666	7932	36.47	14.44	160
13	667	7933	36.50	14.49	450

Continued Table 1

Site No.	Field No.	MG No.	Lat.	Long.	Alt.
14	668	7934	37.01	14.49	300
15	669	7935	37.02	15.07	200
16	670	7936	37.15	15.02	120
17	671	7937	37.22	14.42	110
18	672	7938	37.25	14.36	140
19	673	7939	37.30	14.25	550
20	674	7940	38.05	13.03	000
21	675	7941	37.59	12.55	080
22	676	7942	38.09	12.45	000
23	677	7943	38.07	12.43	010
24	678	7944	37.52	12.32	000
25	679	7945	37.51	12.32	000
26	680	7946	37.47	12.40	100
27	681	7947	37.38	12.40	000
28	682	7948	37.39	13.00	300
29	683	7949	37.48	12.54	415
30	684	7950	37.52	12.47	000
30	685	7951	37.52	12.47	000
30	686	7952	37.52	12.47	400
31	687	7953	37.59	13.14	500
32	688	7954	37.54	13.09	280
33	689	7955	37.51	13.15	400
34	690	7956	37.43	13.14	600
34	691	7957	37.43	13.14	600
35	692	7958	37.42	13.15	640
36	693	7959	37.41	13.11	420
37	694	7960	37.31	13.11	080
38	695	7961	37.36	13.23	440
38	696	7962	37.36	13.23	440
39	697	7963	37.29	13.25	300
40	698	7964	37.25	13.29	420
41	699	7965	37.22	13.38	320
42	701	7966	37.25	13.35	420
43	702	7967	37.27	13.33	440
44	703	7968	37.32	13.35	620
45	704	7969	37.32	13.38	680
46	705	7970	37.13	13.45	280
47	706	7971	37.18	13.50	365
48	707	7972	37.20	13.52	380
49	708	7973	37.25	13.51	360
50	709	7974	37.27	13.56	420
51	710	7975	37.24	14.06	480
52	711	7976	37.06	14.12	030
53	712	7977	37.09	14.03	235
54	713	7978	37.13	14.05	270
55	714	7979	37.21	14.10	450
56	715	7980	37.19	14.21	540
57	716	7981	37.18	14.23	540
58	717	7982	37.28	13.39	120
59	718	7983	37.36	13.40	335
60	719	7984	37.39	13.32	830
61	720	7985	37.40	14.34	590
61	721	7986	37.41	13.36	560

Continued Table 1

Site No.	Field No.	MG No.	Lat.	Long.	Alt.
62	722	7987	37.41	13.39	430
63	723	7988	37.46	13.37	680
64	724	7989	37.51	13.37	300
65	725	7990	37.54	13.29	430
66	726	7991	37.57	13.41	280
66	727	7992	37.57	13.42	310
67	728	7993	37.54	13.43	460
68	729	7994	37.57	13.47	080
69	730	7995	37.31	14.34	160
70	731	7996	38.16	15.33	340
71	732	7997	38.08	15.24	330
71	733	7998	38.08	15.24	330
71	734	7999	38.08	15.24	330
72	735	8000	38.01	15.09	725
72	736	8001	38.01	15.09	725
73	737	8002	37.55	15.05	450
74	738	8003	37.56	15.02	580
75	739	8004	38.07	14.46	465
76	740	8005	38.00	14.35	450
77	741	8006	37.52	14.45	940
77	742	8007	37.52	14.45	940
78	743	8008	37.52	14.52	840
78	744	8009	37.52	14.52	840
78	745	8010	37.52	14.52	840
78	746	8011	37.52	14.52	840
79	747	8012	37.49	14.41	800
80	748	8013	37.49	14.32	945
81	749	8014	37.42	14.19	610
81	750	8015	37.42	14.19	610
82	751	8016	37.34	14.15	500
83	752	8017	37.34	14.15	350
84	753	8018	37.35	14.05	620
85	754	8019	37.39	13.53	500
86	755	8020	37.54	13.48	660
87	756	8021	37.41	14.05	450
88	757	8022	37.44	14.07	640
89	758	8023	37.50	14.08	940
90	759	8024	37.56	14.07	300
91	760	8025	37.49	13.57	360
92	761	8026	37.59	13.33	280
92	762	8027	37.59	13.33	280
93	763	8028	37.55	13.22	540
94	764	8029	37.44	13.22	680
95	765	8030	37.57	14.20	635
96	766	8031	37.51	14.25	925
97	767	8032	37.48	14.52	800
98	768	8033	36.57	14.41	480
99	769	8034	36.59	14.40	320
100	770	8035	37.13	14.46	350
101	772	8036	37.22	13.38	260
102	773	8037	37.39	13.09	180
103	774	8038	37.42	13.14	350
104	775	8039	37.42	13.10	420

variety is tested in different environments there is still an overlap in spike characters (BOGYO and PORCEDDU, 1973). The 72 variants were hence broken down in 17 botanical varieties and 32 main cultivars (Table 2).

Table 2

List of cultivars, species and botanical varieties described in the text (Sicily, 1973)

No.	Cultivar	Species, Botanical variety
		<i>T. durum</i> Desf.
1	Barbanera	var. <i>leucomelan</i> (Alef.) Koern.
2	Biancuccia	var. <i>leucomelan</i> (Alef.) Koern.
3	Bidi	var. <i>leucomelan</i> (Alef.) Koern.
4a	Capeiti	var. <i>leucurum</i> (Alef.) Koern.
4b	Capeiti	var. <i>affine</i> Koern.
5	Castiglione pubescente	var. <i>niloticum</i> Koern.
6	Chiattulidda	var. <i>leucomelan</i> (Alef.) Koern.
7	Francesa	var. <i>leucurum</i> (Alef.) Koern.
8	Garigliano	var. <i>leucomelan</i> (Alef.) Koern.
9	Gigante	var. <i>leucurum</i> (Alef.) Koern.
10	Gioia	var. <i>erythromelan</i> Koern.
11	Grifoni	var. <i>melanopus</i> (Alef.) Koern.
12	Realforte	var. <i>melanopus</i> (Alef.) Koern.
13	Russia	var. <i>hordeiforme</i> (Host) Koern.
14	Sammartinara	var. <i>leucurum</i> (Alef.) Koern.
15	Scavuzza	var. <i>reichenbachii</i> Koern.
16	Sicilia	var. <i>leucomelan</i> (Alef.) Koern.
17	Scutinichio	var. <i>reichenbachii</i> Koern.
18a	Timilia a reste bianche	var. <i>affine</i> Koern.
18b	Timilia a reste nere	var. <i>reichenbachii</i> Koern.
19	Trentino	var. <i>leucomelan</i> (Alef.) Koern.
20	Urria	var. <i>reichenbachii</i> Koern.
21a	Vallelunga glabra	var. <i>erythromelan</i> Koern.
21b	Vallelunga pubescente	var. <i>apulicum</i> Koern.
		<i>T. turgidum</i> L.
22a	Bufala nera lunga	var. <i>jodurum</i> (Alef.) Koern.
22b	Bufala bianca lunga	var. <i>jodurum</i> (Alef.) Koern.
22c	Bufala nera corta	var. <i>jodurum</i> (Alef.) Koern.
22d	Bufala rossa corta	var. <i>speciosissimum</i> Koern.
22e	Bufala rossa lunga	var. <i>martensii</i> Koern.
23	Ciciredda	var. <i>pseudosalomonis</i> Papad.
24	Grifone rosso <sup>1</sup>	var. not classified
		<i>T. durum</i> Desf.
25	Tangarò	var. <i>niloticum</i> Koern.
26	Tiradritto	var. <i>italicum</i> (Alef.) Koern.
		<i>T. aestivum</i> L.
27	Maiorca	var. <i>aureum</i> (Link) Mansf.
28	Maiorcone	var. <i>erythrospERMUM</i> (Koern.) Mansf.
29	Romano	var. <i>lutescens</i> (Alef.) Mansf.
30a	Sgango or Tinta	var. <i>erythrospERMUM</i> (Koern.) Mansf.
30b	Sgango or Tinta	var. <i>ferrugineum</i> Alef.
31	No name	var. <i>perivalii</i> (Flaksb.) Mansf.
32	No name	var. <i>nigrimelanopogon</i> (Gökg.) Mansf.

1 new form, not yet botanically classified

## Geographical distribution and botanical description

Throughout this paper the cultivars are grouped per species. *T. durum* is presented first, then *turgidum* and *aestivum*.

Within each species group the sequence of presentation of varieties is alphabetic. For variants of the same variety frequent throughout the Island a distinct description is given.

Names of cities, villages, mountains and others were used for geographical identification of each variety, while 36 spike characters (Table 3) were recorded for a botanical description. The most representative spikes were photographed (Fig. 1–31) and used for illustrating the respective cultivars.

Table 3

Details of spike characters studied in wheat (Sicily, 1973). (Caption relating to table 4)

Character		Type of classification
Spike	length	1: short; 2: medium; 3: long; 4: very long
	shape of face	1: oblong; 2: fusiform
	shape of profile	1: oblong; 2: fusiform; 3: elliptical
	transv. section	1: broader across the face; 2: square; 3: broader across the profile
Awning	density	1: lax; 2: semicompact; 3: compact
	persistence	1: absent; 2: persistent; 3: caduc
	length	1: short; 2: medium; 3: long
	color of base	1: white; 2: yellow; 3: yellow-reddish; 4: dark; 5: black
	color of tip	1: white; 2: yellow; 3: yellow-reddish; 4: dark; 5: black; 6: bluish
	angle waveness	1: adpressed; 2: parallel; 3: divaricate 1: straight; 2: partly undulated; 3: undulated
Glume	Barbing	1: barbed; 2: tip barbed
	length	1: over that of width; 2: twice longer than wide; 3: over twice that of width; 4: over three times that of width
	color	1: white; 2: white with yellow shades; 3: white with yellow and black shades and black striations; 4: reddish; 5: white or yellow with brown or black striations; 6: bluish; 7: yellow-brown with dark shades and striations; 8: reddish with brown venations; 9: black
Spike	pubescence	1: glabrous; 2: pubescent at the tip; 3: pubescent
Keel	smoothness	1: smooth; 2: barbed
	coursing	1: straight; 2: little curved; 3: curved
Beak	coursing	1: straight; 2: little curved; 3: curved
	length	1: short; 2: medium short; 3: medium long; 4: long; 5: very long
Shoulder	width	1: narrow; 2: medium; 3: medium large; 4: large
	shape	1: absent; 2: rounded; 3: square; 4: rounded to square; 5: elevated
Caryopsis	length	1: short; 2: medium; 3: long
	color	1: cream; 2: amber; 3: red; 4: brown; 5: dark; 6: dark-brown

Continued table 3

Character	Type of classification
shape	1: rounded; 2: oval; 3: elliptical
section	1: triangular; 2: heart; 3: trapezoidal
profile	1: normal; 2: medium gibbous; 3: gibbous
translucence	1: translucent; 2: medium translucent; 3: opaque
texture	1: vitreous; 2: semivitreous; 3: milly
Furrow	
width	1: narrow; 2: medium; 3: large
depth	1: shallow; 2: medium; 3: deep
edges	1: rounded; 2: medium; 3: sharp
Brush	
length	1: short; 2: medium; 3: long
extension	1: small; 2: medium; 3: large
density	1: low; 2: medium; 3: high
Scutellum	
shape	1: ovoidal; 2: circular
size	1: small or short; 2: medium; 3: large or long

## The presence of variability and some remarks

### Spike

**Length.** Short, medium, long and very long spikes were found in each of the three species.

**Face shape.** Oblong and fusiform shapes were present in each species group.

**Profile shape.** Oblong, fusiform, and elliptical shapes were recorded. The fusiform shape was the most common.

**Transverse section.** 21 cvs. were broad across the profile and narrow across the face, 13 cvs. showed square spikes and only 6 were broad across the face and narrow across the profile.

**Density.** 5 cvs. out of 7 *T. aestivum* were semicompact the other 2 being lax. All the *durum* and *turgidum* cvs. were compact with slight differences even among cultivars.

### Awning

**Presence and expression.** As it was expected none of the *Triticum durum* and *T. turgidum* found in Sicily was awnless. On the contrary 5 out of 7 *T. aestivum* were awned. One *T. durum* (cv. Tiradritto, Fig. 23) showed awns caduc and medium in length. No appreciable variation was found in awns expression between *T. durum* and *T. turgidum*. Studies on the inheritance of awning (WATKINS and ELLERTON, 1940) would suggest therefore for the sicilian varieties the existence of a high degree of recessive homozygosity and a low presence of awn inhibitors even in *T. aestivum*. The cv. Tiradritto with caduc awns could be a good source for awn modifiers.

**Color.** Black base and yellow-reddish tip was the most frequent association, though black base may be associated with white and light yellow tip. Only in cv. Ciciredda black base was associated with bluish-tip. Black awns on Lexaploid wheats is considered a rareness (AUSEMUS et al., 1967). This association was found for two awned *T. aestivum* (Figs. 30, 31).





**Coursing.** Awns may be adpressed, parallel and divaricate. Most of the Sicilian wheats showed divergent or adpressed awns.

**Undulation.** Awns may be straight, partly undulated and undulated. Most of the analyzed wheats showed straight or partly undulated awns.

**Barbing.** It is well known that awns on most wheats are barbed. The cv. Sammartinara was the only one with awns partly smooth. This material could be desirable for awned types of wheat when the straw and chaff are used for live-stock feed (AUSEMUS et al., 1967).

## Glume

**Color.** This ranged from white to black solid. Frequent were white, yellow or brown backgrounds with yellow brown, dark or blackish striations or venations. Varieties grouped for glume color associations would fall at least in 9 groups. No correlation was observed between species and glume color.

**Pubescence.** Most of the cvs. were glabrous (ca. 82 %). On the other hand the pubescent cvs. (ca. 18 %) showed glumes intensely covered by long or short hair. 4 *durum* cvs. out of 26 and 3 *turgidum* ones out of 7 were pubescent, while all the *aestivum* types were glabrous. Since pubescence is a dominant character (AUSEMUS et al., 1967) the distribution of haired glumes among Sicilian wheats, according to the allelic series Hg, hg, hg1 (SHEIBANY and JENKINS, 1961), would suggest the existence of different homozygous or heterozygous levels for tetraploid wheats and only one homozygous recessive level (hg1, hg1) for hexaploid wheats.

**Dimensions.** Four main length to width ratios were observed. The two lowest ratios corresponding to glumes as long as wide (class 1) and long twice that of width (class 2) were mainly observed in *T. turgidum* and *T. aestivum* cvs. The two highest classes corresponding to glumes long over twice (class 3) and three times (class 4) that of width were more typical of *T. durum* cvs.

**Keeling.** 3 *durum* cvs. out of 26 and 4 *turgidum* ones out of 7 were rugose. Most of the variability in keeling occurs among *durum* cvs. All *turgidum* cvs. except cultivar 'Grifone Rosso' (Fig. 21b) were very uniform showing little curved keel. Some variability also occurs in hexaploid cvs. though 4 cvs. out of 7 showed a somewhat curved keel.

**Beak.** Beak coursing ranged from straight to curved between as well as within species, though it was mostly straight in *turgidum* cvs. and mostly curved in *aestivum* cvs. Beak length ranging from short to very long showed the highest variability among varieties of *durum* and *aestivum* species. As expected the beak was short or medium short in all of the *T. turgidum* cvs. 'Timilia', 'Trentino', 'Maiorcone' and 'Sgango' showed the highest beak development.

**Shoulder width.** This character showed to be variable among varieties at any species level. Cultivars of *T. durum*, *T. turgidum* and *T. aestivum* could be splitted in 4, 3 and 2 distinct groups respectively.

**Shoulder shape.** 5 distinct shoulder shapes were recorded in *T. durum* cvs., of which 3 were almost absent in *T. turgidum* and *T. aestivum* cvs.

## Kernel

**Color.** Most of the cvs. showed red and cream kernels while a few ones showed darker colors. Though in Sicily *T. turgidum* and *T. aestivum* were less frequent

than *T. durum* cvs. The former showed for this trait more variability than the latter.

**Texture.** 22 out of 26 *durum* cvs. and all *turgidum* cvs. were vitreous, the rest being semi-vitreous. 2 out of 7 *aestivum* cvs. were milky, the rest being semi-vitreous. Since chromosome 5D is considered the main responsible for kernel hardness (MATTERN et al., 1963) the Sicilian *durum* and *turgidum* cvs. with semi-vitreous kernels may be exploited for further inheritance studies of this character.

**Length.** In general *aestivum* and *turgidum* cvs. showed caryopses medium in length while *durum* ones showed kernels of different length.

**Shape.** Rounded, oval and elliptical shapes occurred in all species.

**Dorsal profile.** The normal dorsal profile was more frequent among *durum* and *aestivum* cvs. while the gibbous profile was more typical of *turgidum* types.

**Transverse section.** Two cultivars showed a trapezoidal section, 19 a heart and 19 a triangular one.

**Translucence.** Most of the *durum* cvs. were translucent, whereas the majority of *turgidum* and *aestivum* cvs. was medium translucent. None of the cvs. was opaque.

**Furrow width.** Most of the *durum* cvs. showed a narrow and medium and exceptionally large furrow. On the other hand nearly all of the *turgidum* and *aestivum* cvs. showed a furrow with medium width.

**Furrow depth.** Nearly all cvs. showed a medium depth and exceptionally shallow and deep ones.

**Furrow edges.** 2 out of 26 *durum* cvs. showed sharp corners the rest being rounded and medium rounded. 2 out of 7 *turgidum* cvs. showed rounded corners the rest being medium rounded. Half of the *aestivum* cvs. showed rounded corners the other half showing medium roundness.

**Brush extension.** As expected the brush was, with only one exception little extended in *durum* cvs. and usually extended in *aestivum* cvs. 6 out of 7 *turgidum* cvs. were similar to *durum* cvs. and 1 more similar to the *aestivum* ones.

**Brush length.** Usually extended brushes were as well as long. However, cultivars with kernels showing little extended brushes but with medium or long hairs were found. *Turgidum* and especially *aestivum* cvs. showed a long or somewhat long brush. This character was therefore found more variable among *durum* cvs.

**Brush thickness.** The highest thickness was recorded for *aestivum* cvs. and the lowest for *durum* ones. There was more variability among *turgidum* cvs.

**Scutellum shape.** The scutellum was ovoidal for all *durum* wheats. Some *turgidum* and *aestivum* cvs. showed as well an ovoidal shape while some others showed a circular one.

**Scutellum length.** This was generally large or long in *turgidum*, medium in *aestivum* and of three different sizes among *durum* cvs.

## Description of the varieties

### *Triticum durum* Desf.

#### 1. 'Barbanera' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 1).

The race is very close to 'Garigliano' and other similar varieties. However typical spikes were found half way between S. Elisabetta and Castel-termini.

## Description:

- Spike:** Long (10 cm), spindle, profile a little larger than the face, compact.
- Awns:** Long, black base and reddish tip, divaricate, straight, persistent and barbed.
- Glumes:** Twice longer than wide, white with black shades and striations, **keel** smooth and lightly curved, beak straight, 1 mm long and with a black strip, **shoulder** elevated and medium in width.
- Caryopsis:** Up to 7 mm in length, amber, translucent, oval, heart shaped transverse section, dorsal profile normal or slightly gibbous, **furrow** narrow, medium in depth and semi-rounded edges, **texture** semi-vitreous, **brush** short, thin and semi-extended, **scutellum** ovoidal and medium in length.

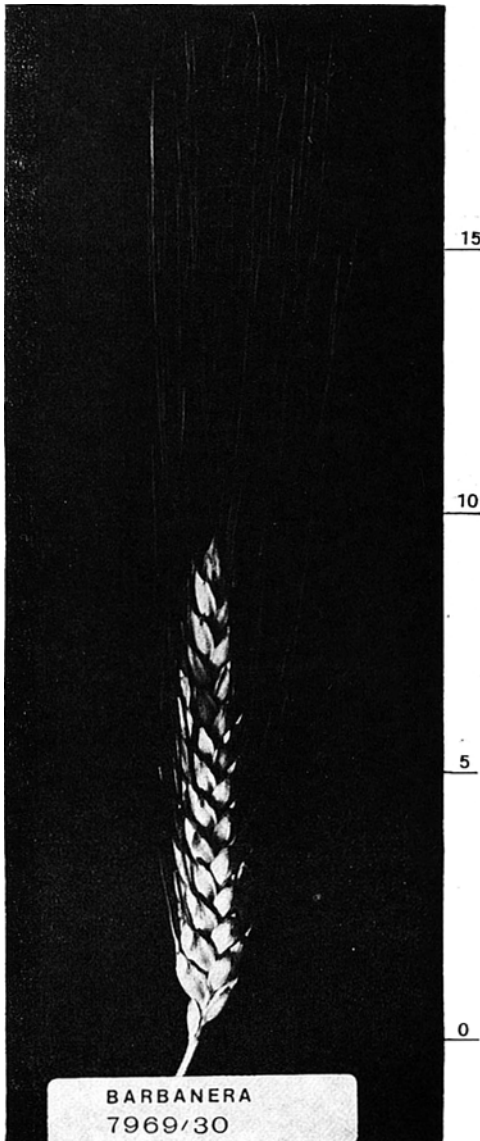


Fig. 1 *Triticum durum* var. *leucomelan* (Alef.) Koern.

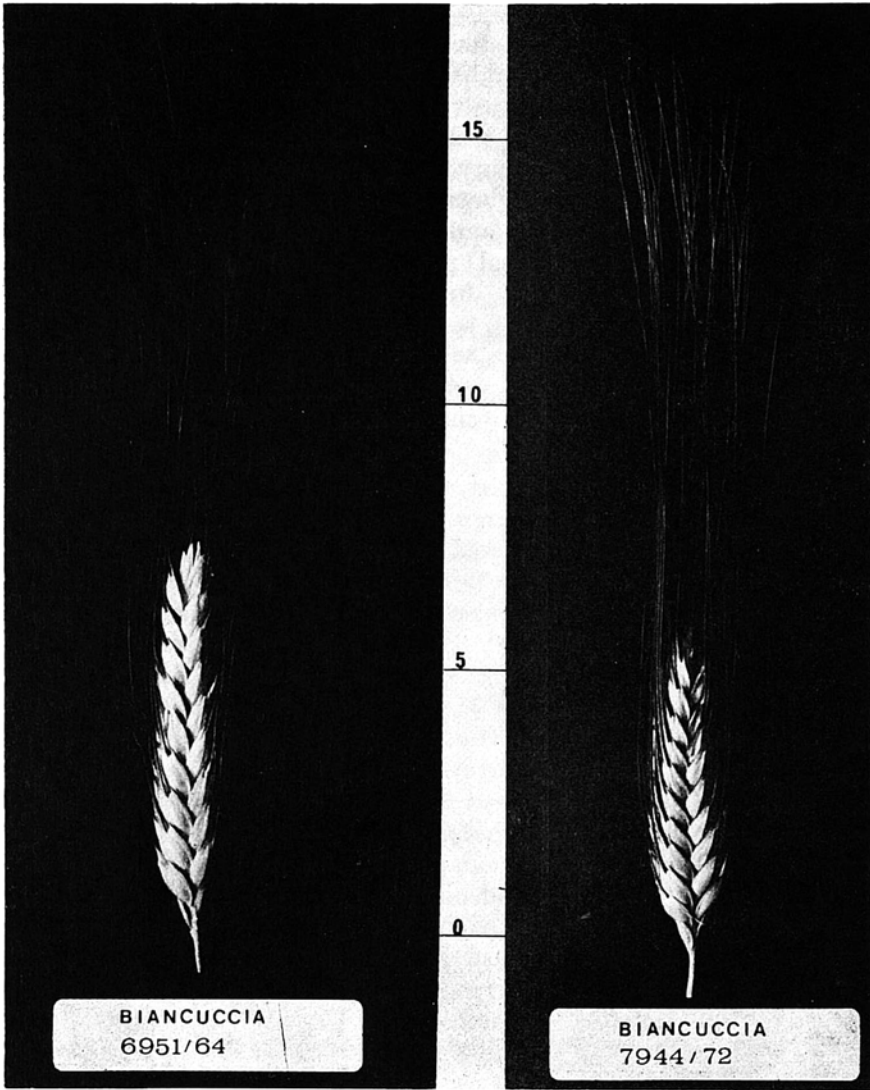


Fig. 2 *Triticum durum* var. *leucomelan* (Alef.) Koern.

2. '**Biancuccia**' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 2).

A few specimens given and classified as 'Biancuccia Cutrona' were found near Salemi and on a threshing floor, near Marsala.

Description:

- Spike:** Of medium length (7 cm) oblong or spindle across the face, spindle across the profile, compact.
- Awns:** Long, black base and yellowish tip, divaricate at the free end, partly undulated, persistent and barbed.
- Glumes:** Length over twice that of width, white with yellow shades and in many cases with black striations, **keel** smooth and slightly curved, **beak** slightly curved and 1 to 2 mm long, **shoulder** elevated and of medium width.
- Caryopsis:** 7 to 8 mm in length, amber or red, translucent, oval and elliptical, triangular or heart shaped transverse section, dorsal profile slightly gibbous, **furrow** medium in width, medium depth, with rounded or slightly rounded edges, **texture** vitreous, **brush** short, thin and little extended, **scutellum** ovoidal and medium in length.

3. '**Bidi**' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 3).

'Bidi' is often called 'Cappelli', 'Margherito' and 'Marrone'. The typical spikes were found in different locations on the Caronie, near Noto, Randazzo, between Cesarò and Troina, near Valguarnera, between S. Caterina and Villarosa. However, spike forms intermediate between 'Bidi' and 'Garigliano' were found on the Peloritani, near S. Giorgio and Bronte (foothill of Etna volcano). In some quite large valleys near Castelnuovo and Mussomeli, 'Bidi' cultivation is very uniform. Between Petralia and Ceraci spikes classified as 'Bidi' are locally called "Conca d'oro".

Description:

- Spike:** Medium to long (8 cm), oblong or spindle across the face and always spindle across the profile, broader across the two rowed profile than across the side and compact.
- Awns:** Long, black base and red-yellowish tip, divaricate, partly undulated persistent and barbed.
- Glumes:** Twice longer than wide, yellowish with black shades and or black striations, **keel** smooth and slightly curved, **beak** somewhat curved with a black line and 1 to 2 mm long, **shoulder** elevated pre-dominates and is mainly of medium width.
- Caryopsis:** 7.5 to 8.5 mm in length, amber or red, translucent elliptical rarely oval, triangular or heart shaped transverse section, dorsal profile normal, sometimes partly gibbous and rarely gibbous, **furrow** narrow to medium, of medium depth and with rounded edges, vitreous **texture**, **brush** short thin and little extended, **scutellum** ovoidal and long.

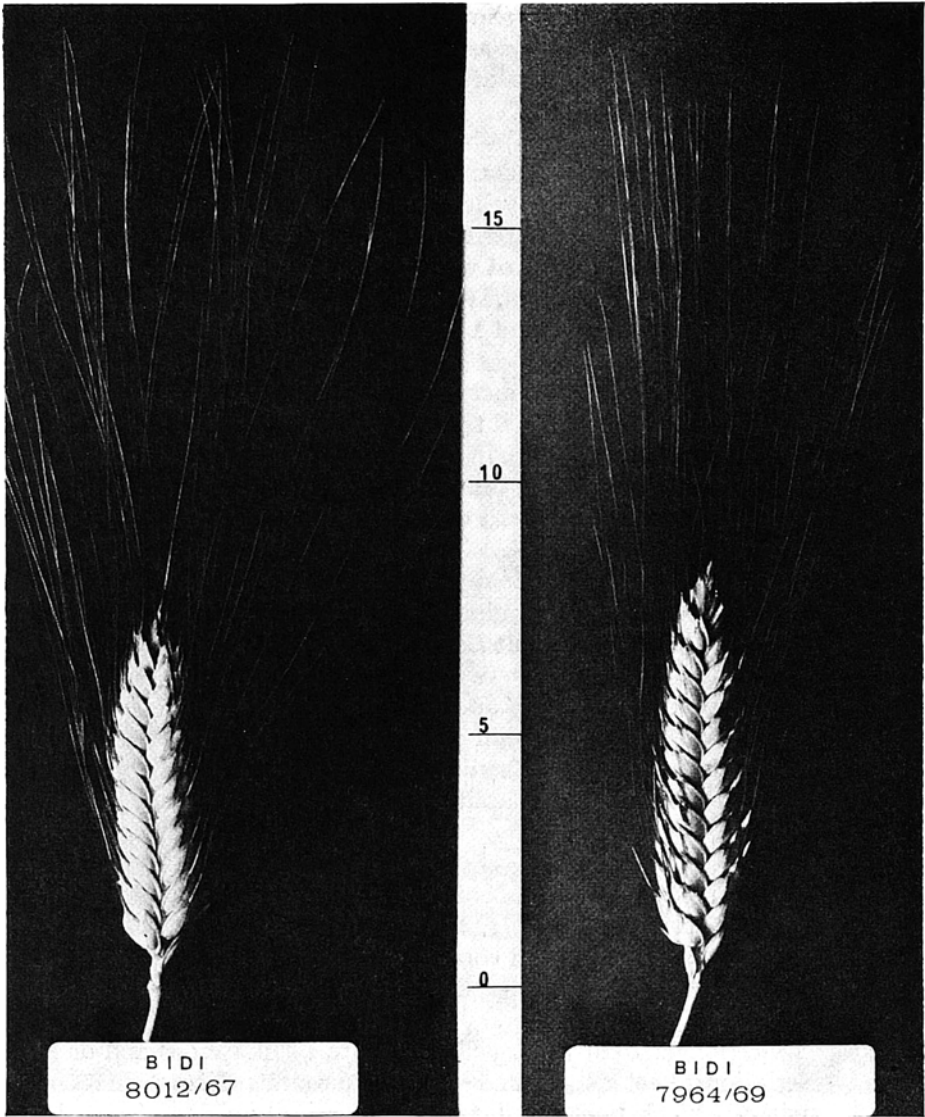


Fig. 3 *Triticum durum* var. *leucomelan* (Alef.) Koern.

4. **'Capeiti'** (*T. durum* Desf. var. *leucurum* (Alef.) Koern. and var. *affine* Koern., Fig. 4).

'Capeiti' is a relatively new selection which has been and still is replacing many other older varieties. However two main types were recognized. The rarer form, found only on the Iblei and near Sciacca, and the typical one which was very common over the island.

A few spikes resembling 'Capeiti' but pubescent, thus similar also to 'Grifoni', were found on the Peloritani (near Novara), Caronie (near Cesarò), and inland at Enna and between Recalmuto and Serradifalco. This pubescent type occurred, in all cases, together with the other two types.

Description:

- Spike:** Medium (7 cm), spindle, profile broader than face and compact.  
**Awns:** Long, white, divaricate, persistent straight and barbed.  
**Glumes:** Length over twice that of width, white **keel** smooth and straight, **beak** straight and 0.5 to 1 mm long, **shoulder** rounded or square and narrow or medium in width.  
**Caryopsis:** 6.5 to 7.5 mm in length, red, translucent, elliptical, heart or triangular transverse section, dorsal profile slightly gibbous, **furrow** narrow and shallow with somewhat rounded edges, **texture** vitreous, **brush** short, medium in density and semi-extended, **scutellum** ovoidal and medium in length.

5. **'Castiglione'** (*T. durum* Desf. var. *niloticum* Koern., Fig. 5).

Three or four different types were selected on the basis of the hair density on the glumes and the glume and awn colour intensity. A few specimens were found between Palermo and Corleone, on the Caronie, on the Iblei mountains and in a field between Petralia and Ceraci (on the Madonie).

Description:

- Spike:** Long (10 cm), spindle shaped, broad across the profile and compact.  
**Awns:** Long, black base and yellow-reddish tip, adpressed, partly undulated, persistent and barbed.  
**Glumes:** Three times longer than wide, largely pubescent, yellow with red shades and red striations, **keel** partly curved and pubescent, **beak** slightly curved and 2 to 2.5 mm long, shoulder rounded, square and with medium width.  
**Caryopsis:** 7 to 8 mm in length, amber or reddish, translucent, oval, heart shaped transverse section, dorsal profile partly gibbous, **furrow** narrow, of medium depth and with rounded edges, vitreous **texture**, **brush** short, thin and little extensive, **scutellum** ovoidal and medium or long.

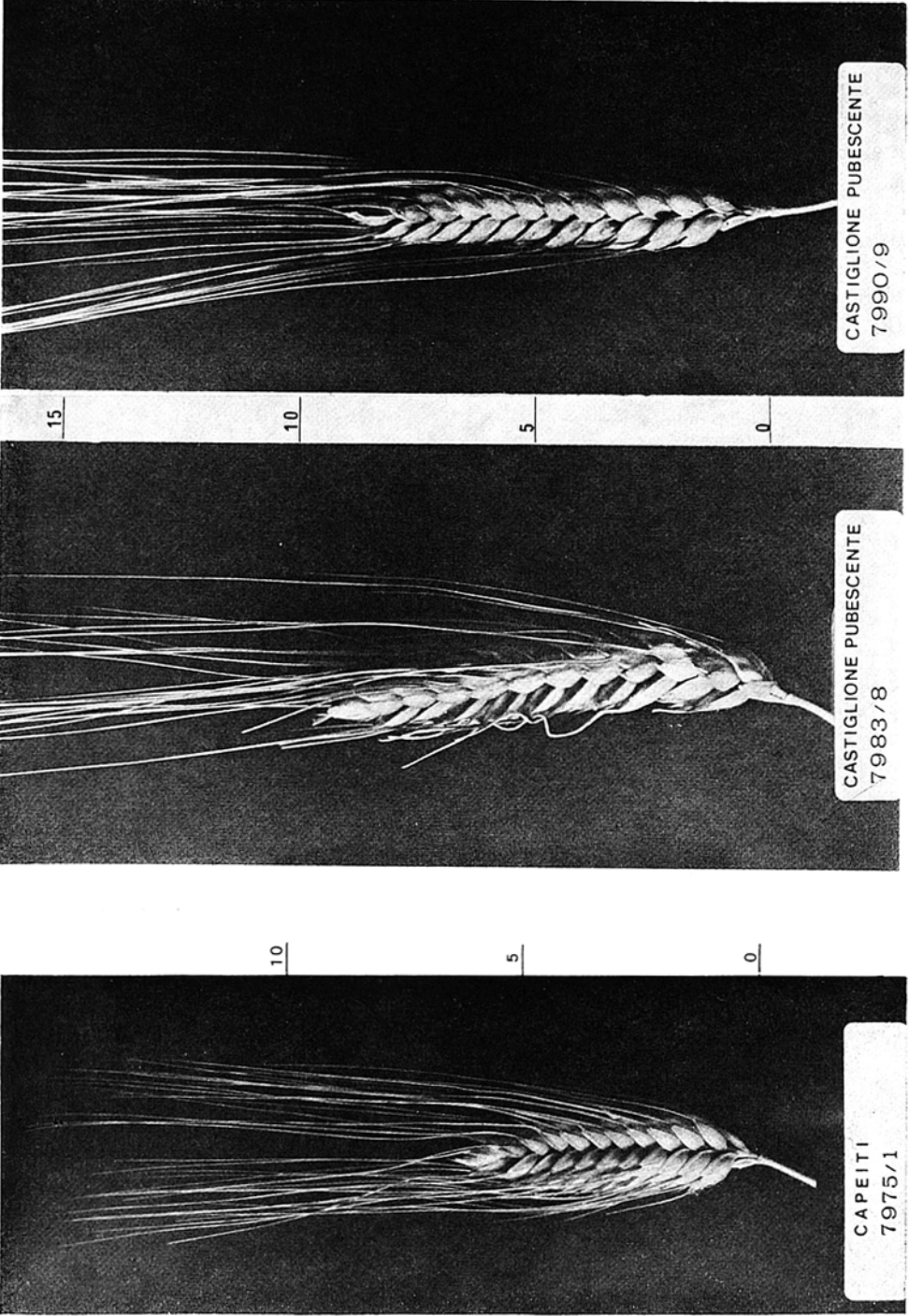


Fig. 4 *Triticum durum* var. *affine* Koern.

Fig. 5 *Triticum durum* var. *niloticum* Koern.



6. '**Chiattulidda**' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 6).

A sample of typical spikes of this race was collected between S. Elisabetta and Casteltermini (Agrigento), in a wheat field cultivated almost exclusively with 'Garigliano'.

Description:

- Spike:** Medium in length (7 cm), spindle shaped, evidently larger across the profile than across the face and compact.
- Awns:** Long, black base and yellow-reddish tip, divaricate, straight, persistent and barbed.
- Glumes:** Length over twice that of width, white with yellow and black shades and black striations, **keel** slightly curved and smooth, **beak** slightly curved, 1 to 2 mm long and with a black striation, **shoulder** elevated, narrow or medium width.
- Caryopsis:** Around 8 mm in length, amber, translucent, oval, heart shaped transverse section, dorsal profile normal, **furrow** medium in width and depth, with rounded edges, semi-vitreous **texture**, **brush** short, thin and little extended, **scutellum** ovoidal and medium in length.

7. '**Francesca**' (*T. durum* Desf. var. *leucurum* (Alef.) Koern., Fig. 7a).

A few spikes were found in a small field near S. Elisabetta.

Description:

- Spike:** Long (8 cm), oblong across the face and spindle across the profile, compact.
- Awns:** Long, black base and yellow tip, adpressed, partly undulated persistent and barbed.
- Glumes:** Length over twice that of width, white or yellow with brown striations, **keel** smooth and a little curved, **beak** somewhat curved, 2 mm long and with a black striation, **shoulder** elevated and medium in width.
- Caryopsis:** 7 to 8 mm in length, red, translucent elliptical, triangular transverse section, dorsal profile partly gibbous, **furrow** medium in width and depth, with partly rounded edges, **texture** vitreous, **brush** short, of medium density and little extended, **scutellum** ovoidal and medium in length.

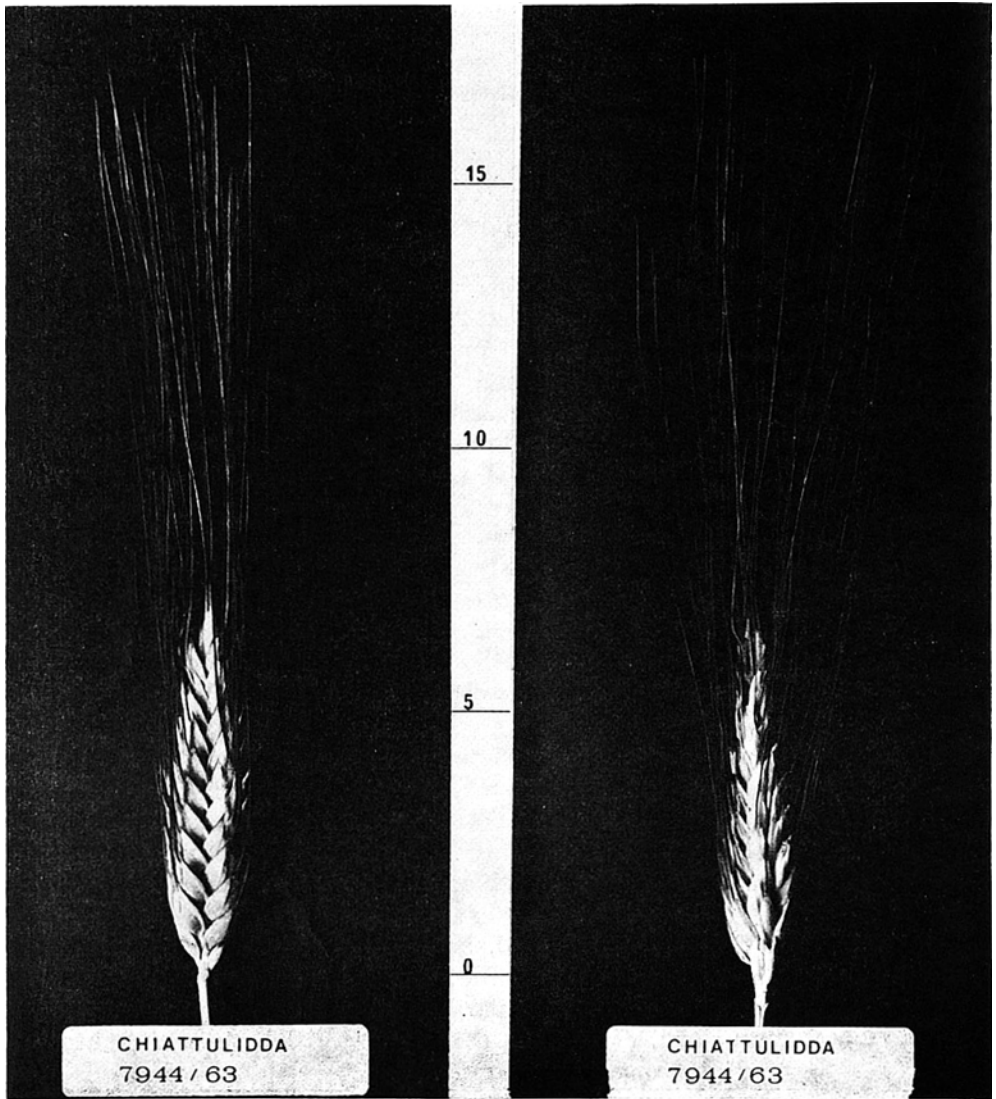


Fig. 6 *Triticum durum* var. *leucomelan* (Alef.) Koern.



Fig. 7 *Triticum durum* var. *leucurum* (Alef.) Koern. (left), *T. durum* var. *leucomelan* (Alef.) Koern. (right)

8. 'Garigliano' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 7b).

This race, found almost everywhere, was present in a higher frequency in the highest valleys of the centre of the island. Here it occurs in a large majority of wheat fields as a percentage of approximately 50 % of the total mixture.

Description:

- Spike:** Medium (6 cm) to long (8 cm), spindle and compact.  
**Awns:** Long, black base and yellow tip, divaricate, slightly undulated, persistent and barbed.  
**Glumes:** Twice longer than wide, white with yellow and black shades and black striations, **keel** smooth and straight, **beak** straight, 1 mm long and with a black strip, **shoulder** elevated and narrow or medium.  
**Caryopsis:** 8 to 8.5 mm in length, red, translucent, elliptical, triangular transverse section, gibbous, **furrow** narrow, medium in depth and with rounded edges, **texture** vitreous, **brush** short, thin and semi-extended, **scutellum** ovoidal and long.

9. 'Gigante' (*T. durum* Desf. var. *leucurum* (Alef.) Koern., Fig. 8a).

Several specimens were found, on the Iblei (near Ragusa, Gela and S. Croce) and to south of Casteldaccia (Palermo) only.

Description:

- Spike:** Long (10 cm) spindle and semi-compact.  
**Awns:** Long, white, divaricate upper part, straight, persistent and barbed.  
**Glumes:** Three times longer than wide, white, **keel** smooth and curved, **beak** little curved and 1 to 1.5 mm long, **shoulder** elevated and narrow.  
**Caryopsis:** Up to 7 mm in length, dark brown, semi-translucent, oval and heart shaped transverse section, dorsal profile normal, **furrow** narrow, medium in depth and with rounded edges, **texture** vitreous, **brush** short, thin and semi-extended, **scutellum** ovoidal and medium in length.

10. 'Gioia' (*T. durum* Desf. var. *erythromelan* Koern., Fig. 8b).

Some spikes were found in a field cultivated mainly with 'Garigliano' and 'Capeiti' and located between Salemi and Calatafimi.

Description:

- Spike:** Short or medium (6 cm), oblong across the face and spindle across the profile, larger on the profile than on the face and compact.  
**Awns:** Long, black base and yellow tip, adpressed, partly undulated, persistent and barbed.  
**Glumes:** Length over twice that of width, white with yellow shades, **keel** smooth slightly curved, **beak** curved and 0.5 to 1 mm long, **shoulder** elevated and medium in width.  
**Caryopsis:** 8 mm in length, red, translucent, elliptical, triangular transverse section, dorsal profile partly gibbous, **furrow** medium in width and depth, with partly rounded edges, **texture** vitreous, **brush** short and medium in density and extensiveness, **scutellum** ovoidal and medium in length.

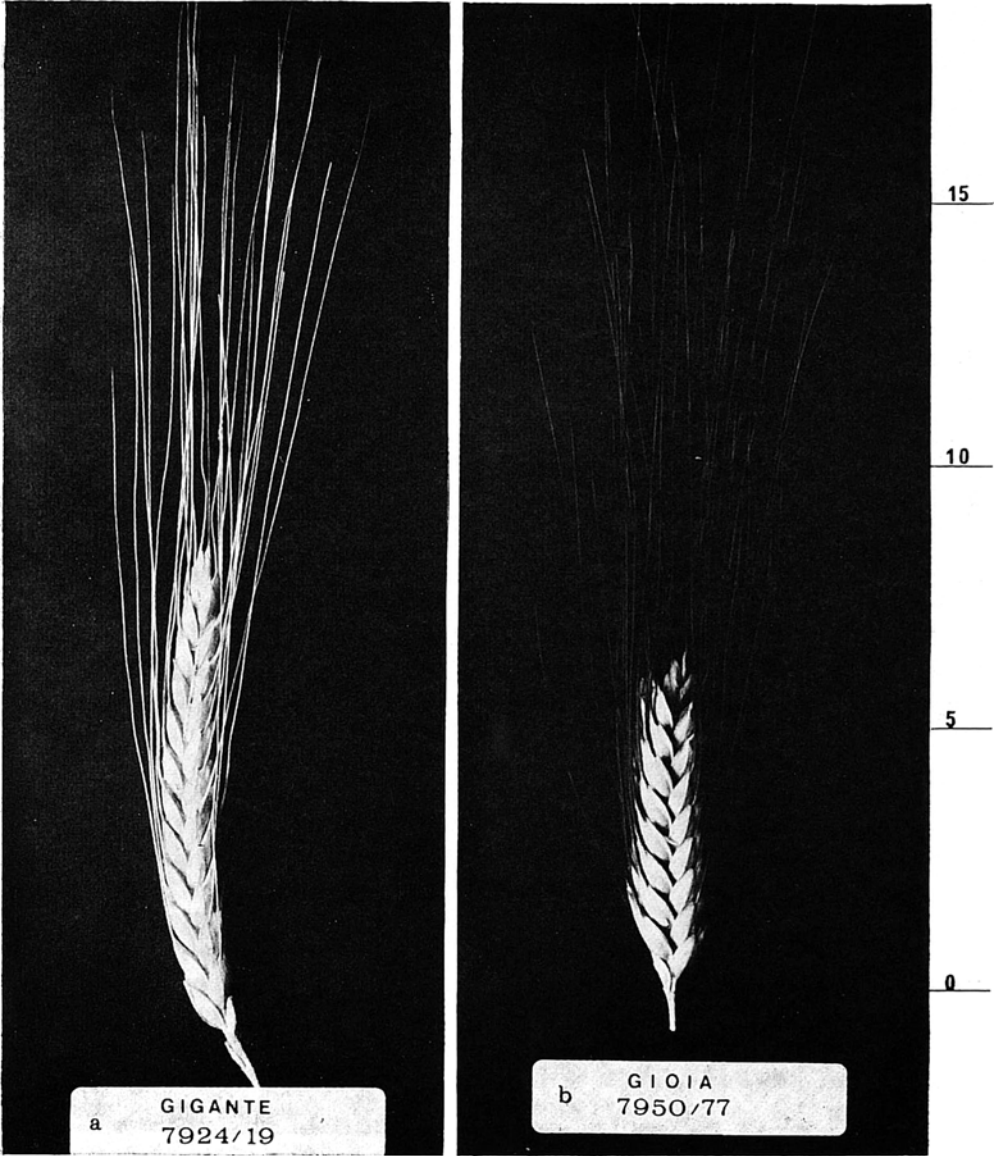


Fig. 8 *Triticum durum* var. *leucurum* (Alef.) Koern. (left), *T. durum* var. *erythromelan* Koern. (right)

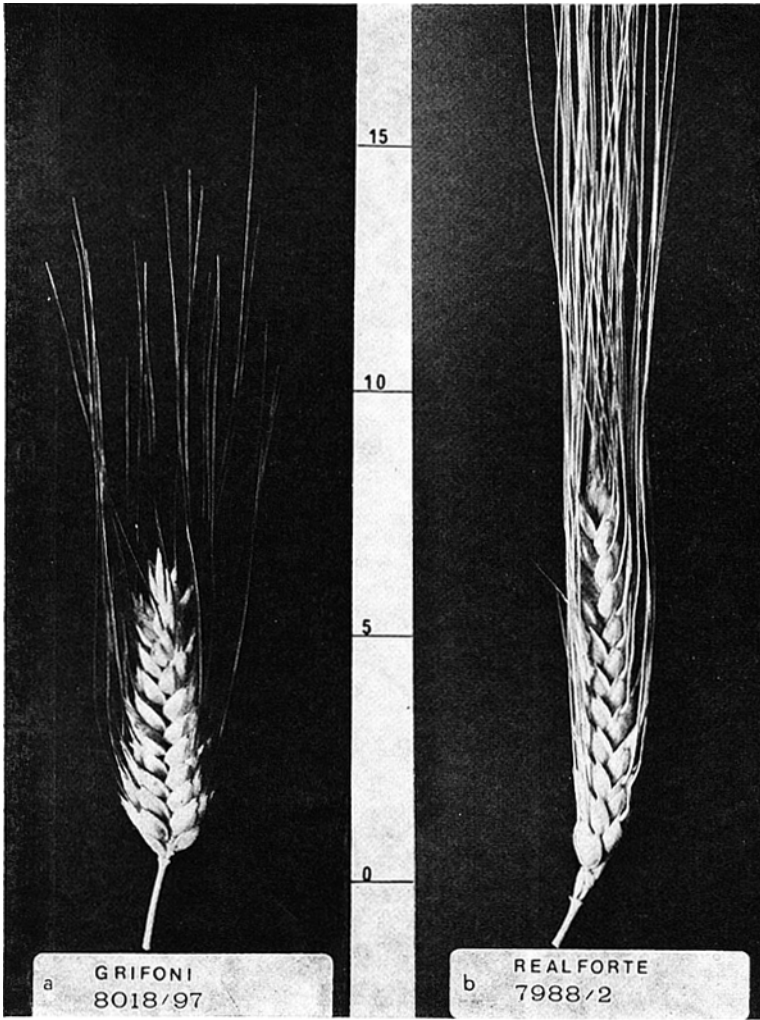


Fig. 9 *Triticum durum* var. *melanopus* (Alef.) Koern.

11. 'Grifoni' (*T. durum* Desf. var. *melanopus* (Alef.) Koern., Fig. 9a).

The majority of the typical spikes, with pubescent glumes and black awns occur together with other wheats, in the continental part of the island (near Serradifalco, Milena and Casteltermini) and on the Caronie (between Troina and Nicosia).

Description:

- Spike:** Short (5 cm) or medium in length (7 cm), spindle across the profile and oblong across the face, compact.
- Awns:** Long, black base and yellow-reddish tip, divaricate, semiundulated, persistent and barbed.
- Glumes:** Twice longer than wide, pubescent white with yellow shades, **keel** pubescent and slightly curved, **beak** somewhat curved and 0.5 to 1 mm long, **shoulder** elevated and narrow.
- Caryopsis:** 7 mm in length, red, translucent, oval heart shaped transverse section, gibbous, **furrow** medium in width and depth, slightly rounded edges, vitreous, **brush** short, medium in density and semi-extended, **scutellum** ovoidal and medium in length.

12. 'Realforte' or 'Semenzella' (*T. durum* Desf. var. *melanopus* (Alef.) Koern., Fig. 9b).

A few spikes classified as 'Realforte' and 'Semenzella' occurred, together with other varieties, near Godrano (Palermo) to the north of Nicosia (Caronie), to the south of Scicli (Ragusa) near Novara (Peloritani), between Aragona and S. Elisabetta (Agrigento) and between S. Michele and Piazza Armerina (Enna).

Description:

- Spike:** Long (9 cm), oblong, a little larger on the profile than on the side and semi-compact.
- Awns:** Long, white, adpressed, partly undulated, persistent and barbed.
- Glumes:** Twice longer than wide, pubescent, white, **keel** a little curved and pubescent, **beak** straight and 2 mm long, **shoulder** rounded or square and large.
- Caryopsis:** 7 mm in length, red medium translucence, elliptical, triangular and trapezoidal transverse section, dorsal profile partly gibbous, **furrow** large, of medium depth and angular edges, **texture** vitreous, **brush** short, thin and little extended, **scutellum** ovoidal and long.

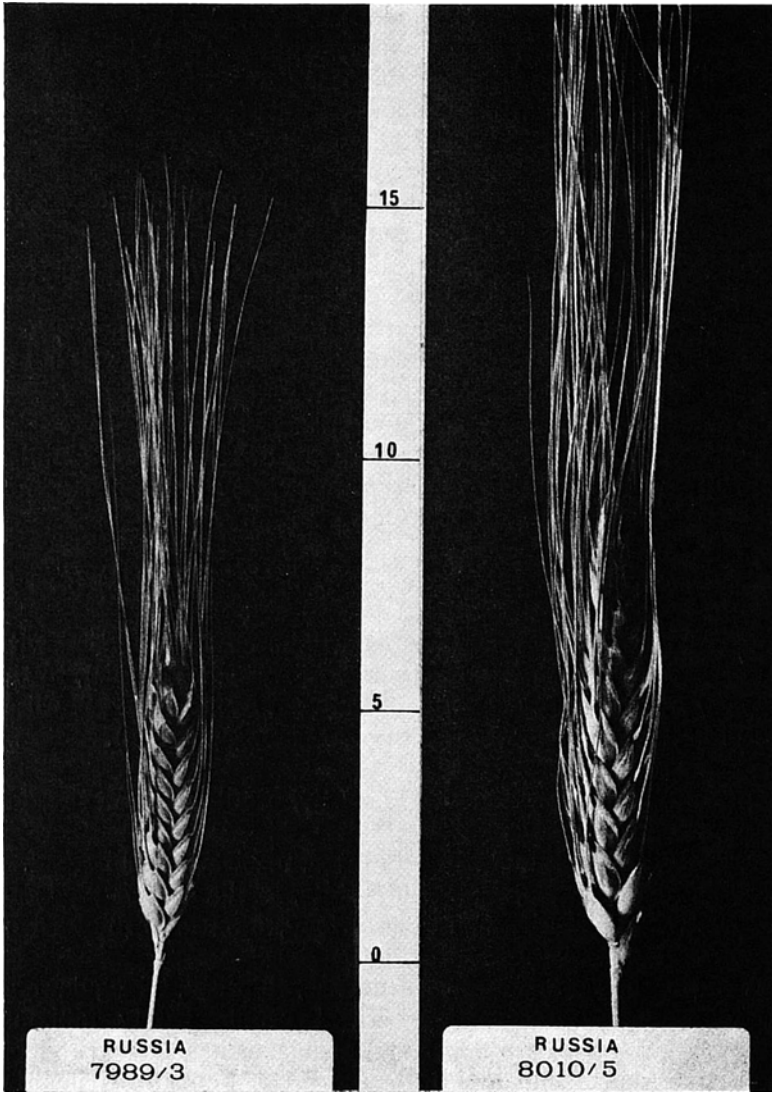


Fig. 10 *Triticum durum* var. *hordeiforme* (Host) Koern.



13. **'Russia'** (*T. durum* Desf. var. *hordeiforme* (Host) Koern., fig. 10).

Four variants were selected. They differed in form, magnitude, density of spikelets, presence or absence of wax and the degree of red coloration of the glumes and awns.

'Russia' is widespread over all the island; it was however recorded in a greater frequency and with a higher purity on the highlands of Enna and Caltanissetta, in the higher zones of Palermo province and in the Madonie and Caronie mountains.

On the Catania lowland, in the zone of Gela, on the Iblei and Peloritani mountains, 'Russia' was present in only small percentages whilst other wheats were more frequent. Other local names besides 'Russia' include 'Ruscia', 'Russello' and 'Priziusa'.

Description:

- Spike:** Usually long (10 cm), oblong on the face and spindle shaped on the profile, narrow across the face and broad across the profile, compact.
- Awns:** Long, black base and yellow-red tip, adpressed, persistent and barbed.
- Glumes:** Length over twice that of width, yellowish with reddish striations, **keel** smooth and somewhat curved, **beak** slightly curved and 1 to 2.5 mm long, **shoulder** shape varies on the same spike from rounded to square and it is medium or large in width.
- Caryopsis:** 6 to 7.5 mm in length, amber of medium traslucidity, oval, transverse section heart shaped, dorsal profile partly gibbous, **furrow** narrow of medium depth and with rounded edges; **texture** vitreous; **brush** short of medium density and little extended; **scutellum** ovoidal and long.

14. **'Sammartinara'** (*T. durum* Desf. var. *leucurum* (Alef.) Koern., Fig. 11 a).

Very few spikes were selected from two samples collected between S. Stefano and Castelnuovo and near Caltavuturo. In both samples 'Russia' was the prevalent variety.

Description:

- Spike:** Long (11 cm), oblong, and semi-compact.
- Awns:** Long and yellow or white, smooth at the base and rugose at the tip, divaricate and undulated.
- Glumes:** Two or three times longer than wide, yellow with red shades and striations, **keel** smooth and straight, **beak** curved and 2 to 2.5 mm long, **shoulder** elevated, rounded and large in width.
- Caryopsis:** Around 8 mm in length, red, translucent, elliptical, triangular transverse section, dorsal profile normal, **furrow** medium in length, depth and roundness, **texture** vitreous, **brush** short and medium in density and extensiveness, **scutellum** ovoidal and short.



Fig. 11 *Triticum durum* var. *leucurum* (Alel.) Koern. (left), *T. durum* var. *reichenbachii* Koern. (right)

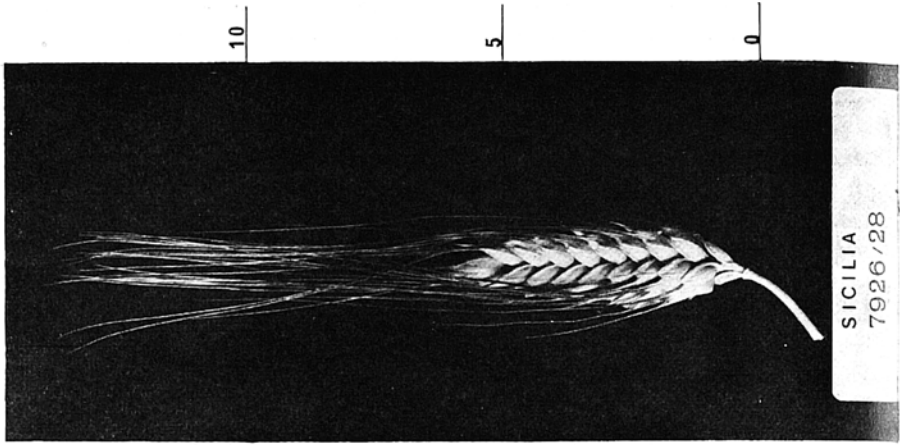


Fig. 12 *Triticum durum* var. *leucomelan* (Alel.) Koern.

15. 'Scavuzza' (*T. durum* Desf. var. *reichenbachii* Koern., Fig. 11b).

A sample, almost uniform, was collected near Castelnuovo. Some other spikes were found in a field near Corleone.

Description:

- Spike:** Long (10 cm), oblong across the face, spindle across the profile, a little larger than the face and semi-compact
- Awns:** Long, black base and yellow-reddish tip, adpressed, undulated, persistent and barbed.
- Glumes:** Twice longer than wide, white, **keel** smooth and curved, **beak** straight, 2.5 to 3.0 mm long and with a black striation, **shoulder** varies from rounded to elevated and usually medium width.
- Caryopsis:** 7 to 8 mm in length, red, translucent, elliptical, triangular transverse section, dorsal profile partly gibbous, **furrow** large and deep with angular edges, **texture** vitreous, **brush** short, thin and medium extended, **scutellum** ovoidal and medium in length.

16. 'Sicilia' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 12).

A race found only on the Iblei, near Lentini and usually associated with 'Timilia a reste bianche'. The race is very similar to 'Biancuccia' on the basis of spike features.

Description:

- Spike:** Short (5 cm or more) profile broader than face and compact.
- Awns:** Long, black base and yellowish tip, divaricate upper part, semi-undulated, persistent and barbed.
- Glumes:** Twice longer than wide, **keel** smooth and little curved, **beak** straight, 1 mm long and with a black striation, **shoulder** elevated and medium in width.
- Caryopsis:** Up to 7.5 mm long, amber or red, translucent oval, trapezoidal transverse section, dorsal profile partly gibbous, **furrow** medium in width and depth, with medium rounded and angular edges, **texture** vitreous, **brush** short, thin and semi-extended, **scutellum** ovoidal and medium in length.

17. 'Scutinicchio' (*T. durum* Desf. var. *reichenbachii* Koern., Fig. 13).

Only one sample, by the neighbourhood of Bisacquino (Sciacca) together with other spikes of 'Vallelunga pubescente', was found.

Description:

- Spike:** Long (10 cm), oblong, square transverse section and semi-compact.
- Awns:** Long, black base and yellow-reddish tip, divaricate, semi-undulated, persistent and barbed.
- Glumes:** Length over twice that of width, white with red-brown shades and brown striations, **keel** smooth and slightly curved, **beak** somewhat curved and 2 mm long, **shoulder** rounded and elevated with medium width.
- Caryopsis:** Up to 8 mm in length, red, translucent, elliptical, heart shaped transverse section, dorsal profile slightly gibbous, **furrow** medium in width and depth, with medium rounded edges, **texture** vitreous, **brush** short, semi-dense and extended, **scutellum** ovoidal and long.

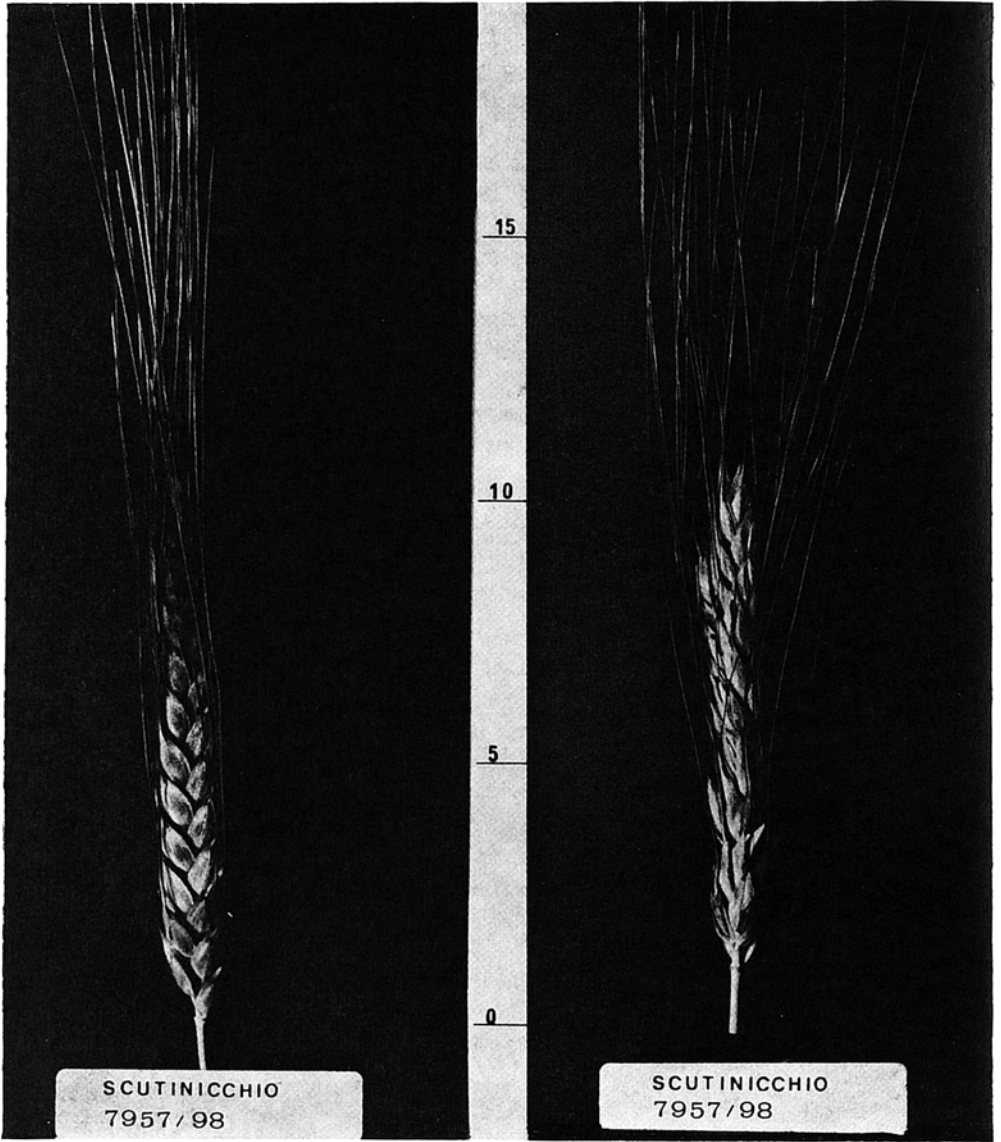


Fig. 13 *Triticum durum* var. *reichenbachii* Koern.

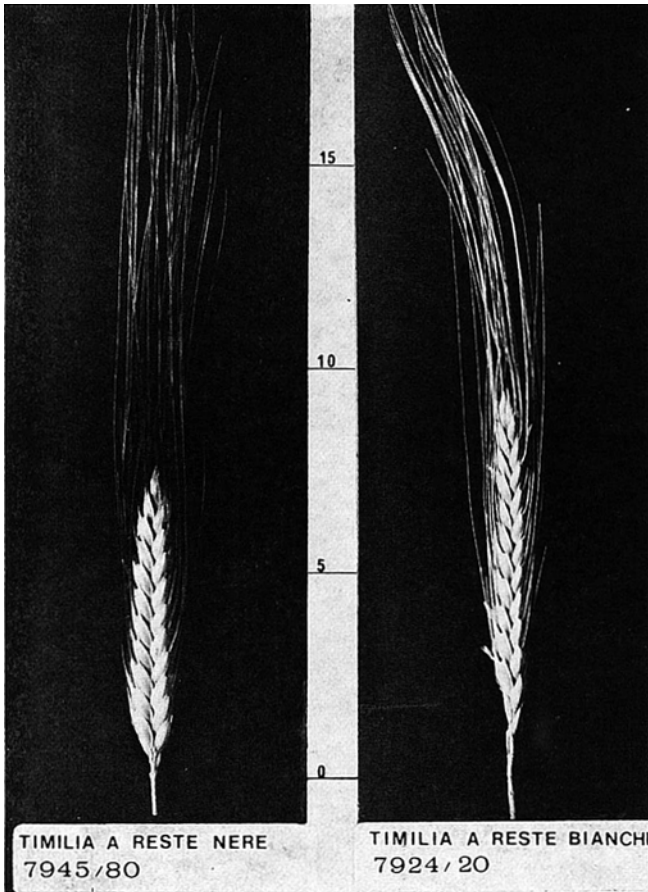


Fig. 14 *Triticum durum* var. *reichenbachii* Koern. (left), *T. durum* var. *affine* Koern. (right)

18. **'Timilia'** (*T. durum* Desf. var. *affine* Koern. and var. *reichenbachii* Koern., Fig. 14).

This race of wheat is highly uniform. It is known locally also as 'Tumminia' or 'Triminia'. 'Timilia a reste bianche' (var. *affine* Koern.) and 'Timilia a reste nere' (var. *reichenbachii* Koern.) are extensively cultivated between Piana degli Albanesi, Salemi, Sambuca, Corleone and Camporeale.

In other parts of the island and especially by Lentini and Vizzini (Iblei mountains) it is cultivated at a lower frequency. In those areas, still typical for 'Timilia', one can observe the contrast between wheat fields, sown in autumn, already mature, and those still green cultivated with 'Timilia' or other spring varieties.

Some spikes were to be classified as 'Tunisina' but finally they were included in 'Timilia a reste nere'.

Description:

**Spike:** From medium (7 cm) to long (9 cm), oblong, narrower on the face than on the profile and semi-compact.

**Awns:** Long, white ('Timilia a reste bianche') or black ('Timilia a reste nere') straight, persistent and barbed.



Fig. 15 *Triticum durum* var. *leucomelan* (Alef.) Koern.

- Glumes :** Three times longer than wide, white with yellow shades, **keel** curved and smooth, **beak** slightly curved or straight and 1 to 2.5 mm ('Timilia a reste nere') or 3 to 6 mm ('Timilia a reste bianche') long, **shoulder** square, seldom elevated, large sometimes medium.
- Caryopsis :** 6.5 to 7.5 mm in length, rarely amber, more frequently red or dark brown, of medium translucence, oval to elliptical heart transverse section, dorsal profile normal, sometimes slightly gibbous, **furrow** narrow from low to medium in depth and with rounded or medium rounded edges, vitreous **texture**, **brush** short, thin and medium or little extensive, **scutellum** ovoidal and short.

19. 'Trentino' (*T. durum* Desf. var. *leucomelan* (Alef.) Koern., Fig. 15).

Typical spikes were found between Barrafranca and Mazzarino (Enna) in a wheat field mainly cultivated with 'Garigliano', near Castelluzzo (Trapani province). The race is easily confused with 'Tripolino'.

Description:

- Spike :** Medium in length (7 cm), spindle shaped, square transverse section and compact.
- Awns :** Long, black base, yellow-reddish tip, divaricate from bottom, partly undulated, persistent and barbed.
- Glumes :** Twice longer than wide, white with yellow shades, **keel** slightly curved and smooth, **beak** curved, 2 to 5 mm long and with a black striation, **shoulder** elevated and from medium to large in width.
- Caryopsis :** 6 to 7 mm in length, amber, translucent rounded and with heart shaped transverse section, dorsal profile normal, **furrow** medium in width and depth and rounded edges, vitreous **texture**, **brush** short, thin and little extended, **scutellum** ovoidal and long.

20. 'Urria' (*T. durum* Desf. var. *reichenbachii* Koern., Fig. 16).

Spike classified as 'Urria' were recognized between Palma and Naro (Agrigento) in wheat fields cultivated with 'Garigliano'.

Description:

- Spike :** Medium in length (6 cm), spindle, profile a little larger than the side, compact.
- Awns :** Long, black base and yellow tip, divaricate at the upper part, partly undulated, persistent and barbed.
- Glumes :** Three times longer than wide, white or yellow with red shades, **keel** smooth and straight, **beak** a little curved, 1 mm long and with a black striation, **shoulder** elevated, narrow or medium in width.
- Caryopsis :** 7 to 8 mm in length, amber, translucent oval, triangular, transverse section, dorsal profile normal, **furrow** narrow shallow with rounded edges, **texture** vitreous, **brush** medium in length, density and extensiveness, **scutellum** ovoidal and medium in length.

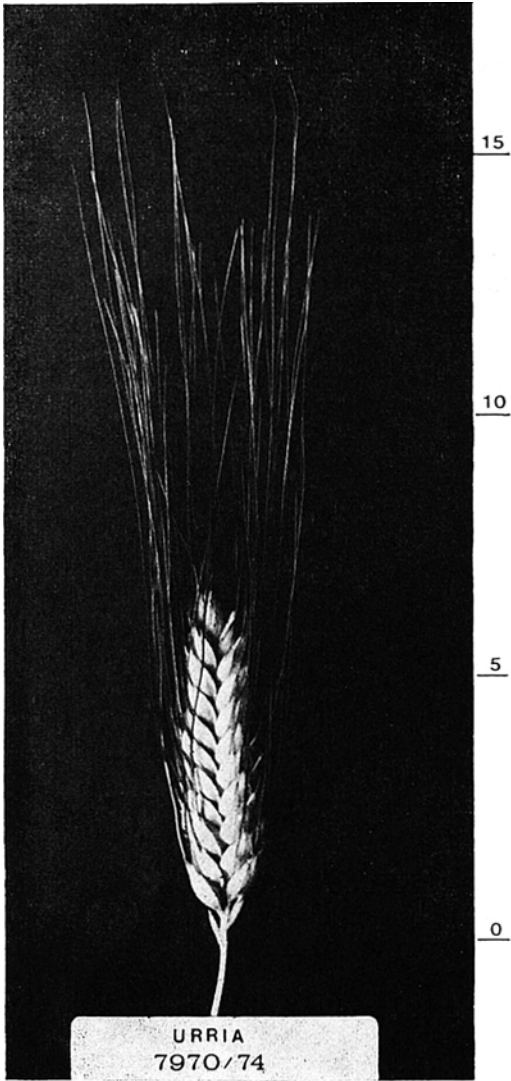


Fig. 16 *Triticum durum* var. *reichenbachii* Koern.



21. **'Vallelunga'** (*T. durum* Desf. var. *erythromelan* Koern., Fig. 17, and var. *apulicum* Koern., Fig. 18).

In all six variants were recognized of which three were pubescent (*T. durum* var. *apulicum* Koern.) and three glabrous (*T. durum* var. *erythromelan* Koern.). Because of the very black awns the glabrous variety is recognized, by the farmers, as "Coda di mulo". In some areas it is confused with 'Russia'.

The Vallelunga spikes were found in all the mixtures in only low proportions, except on the lowlands and the Peloritani massif, where they were totally absent. The pubescent forms seemed to be more frequent at higher altitudes (Caronie and Central massif between Palermo and Sciacca).

Description:

21a) **'Vallelunga glabra'**:

**Spike:** Usually long (9 cm), oblong, broad across the profile and semi-compact.

**Awns:** Long, black base and reddish tip, divaricate free tip, adpressed, persistent and barbed.

**Glumes:** Length over twice that of width, yellowish with reddish or slightly curved, **beak** 1.5 mm long, **shoulder** rounded and medium or large in width.

**Caryopsis:** 7 to 8 mm in length, red, translucent, oval, transverse section heart shaped, dorsal profile partly gibbous, **furrow** narrow, of medium depth and with rounded or partly rounded edges, vitreous **texture**, **brush** short, of medium density and extensiveness; **scutellum** ovoidal and medium in length.

21 b) **'Vallelunga pubescente'**:

**Spike:** Long (8 cm), oblong, broad across the profile and semi-compact.

**Awns:** Long, black base and yellow-reddish tip, adpressed, straight, persistent and barbed.

**Glumes:** Length over twice that of width, pubescent, yellow with reddish shades and striations, **keel** straight and pubescent, **beak** straight and 1 to 1.5 mm in length, **shoulder** rounded, square and large.

**Caryopsis:** 7 to 8 mm in length, red, translucent, oval, heart shaped transverse section, partly gibbous, **furrow** of medium width and depth with partly rounded edges, vitreous to semi-vitreous **texture**, **brush** short of medium density and extensiveness, **scutellum** ovoidal and long.

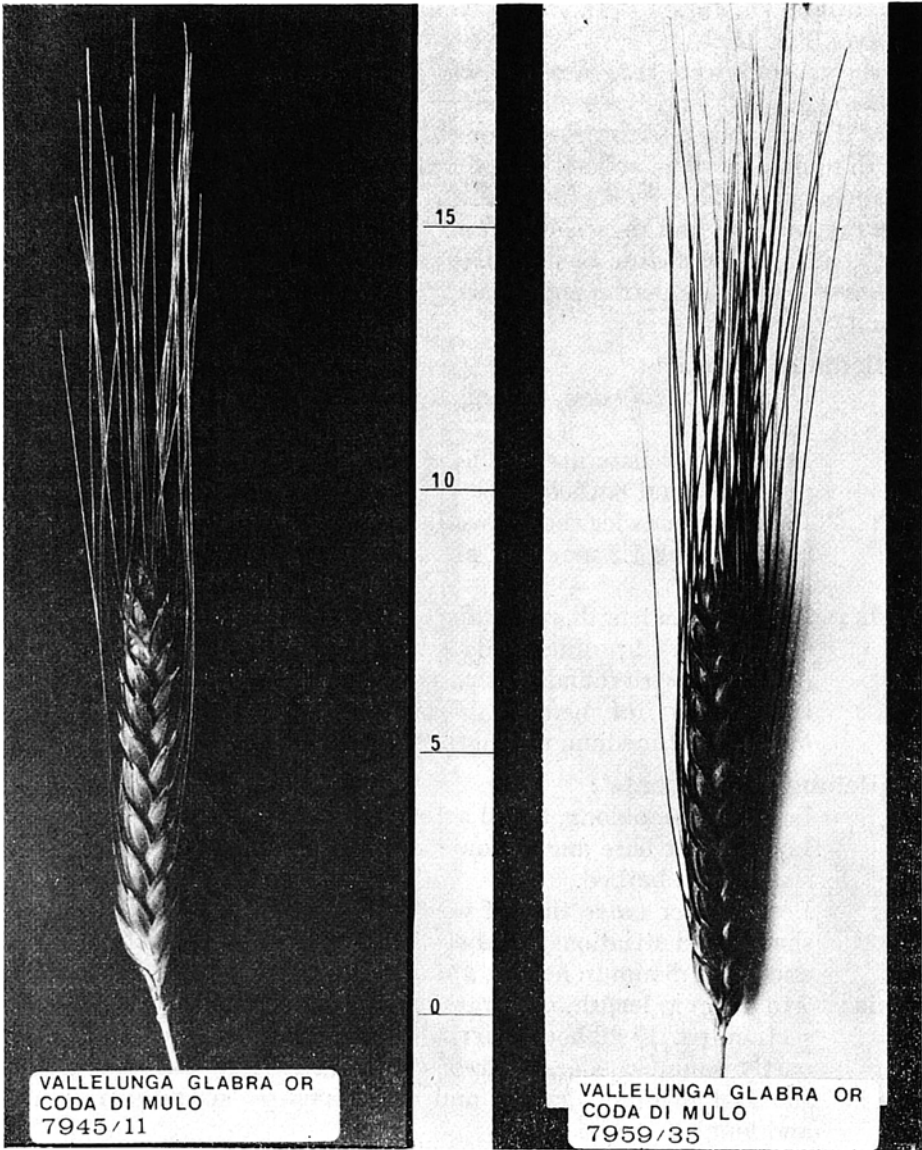


Fig. 17 *Triticum durum* var. *erythromelan* Koern.



Fig. 18 *Triticum durum* var. *apulicum* Koern.

***Triticum turgidum* L.**

## 22. 'Bufala' group (Fig. 19 and 20).

The following variants were collected:

'Bufala nera lunga' (*T. turgidum* L. var. *jodurum* (Alef.) Koern.)

'Bufala bianca lunga' (*T. turgidum* L. var. *jodurum* (Alef.) Koern.)

'Bufala nera corta' (*T. turgidum* L. var. *jodurum* (Alef.) Koern.)

'Bufala rossa corta' (*T. turgidum* L. var. *speciosissimum* Koern.)

'Bufala rossa lunga' (*T. turgidum* L. var. *speciosissimum* Koern.)

These are still very common especially on the Caronie (Cesarò, Bronte and Randazzo) and in some areas of the Peloritani (Novara di Sicilia). However 'Bufala bianca lunga' and 'Bufala rossa corta' are the most frequent forms. There is a large variability in colour and pubescence of the glumes and in awn colour. Some spikes classified as 'Bufala lunga' were very similar to 'Paola' (*T. turgidum* var. *speciosissimum* Koern.).

Description:

## 22a) 'Bufala nera lunga' (Fig. 19a).

**Spike:** Long (10 cm), oblong, profile a little broader than the face, semi-compact.

**Awns:** Long, black base and yellow tip, adpressed, straight, persistent and barbed.

**Glumes:** Twice longer than wide, black, **keel** smooth and slightly curved, **beak** straight and 0.5 to 1 mm long, **shoulder** rounded, square and large.

**Caryopsis:** Up to 7.5 mm in length, red, semi-translucent, rounded, heart shaped transverse section, gibbous, **furrow** of medium width and depth and somewhat rounded edges, **texture** vitreous, **brush** short, medium in density and semi-extended, **scutellum** rounded and long.

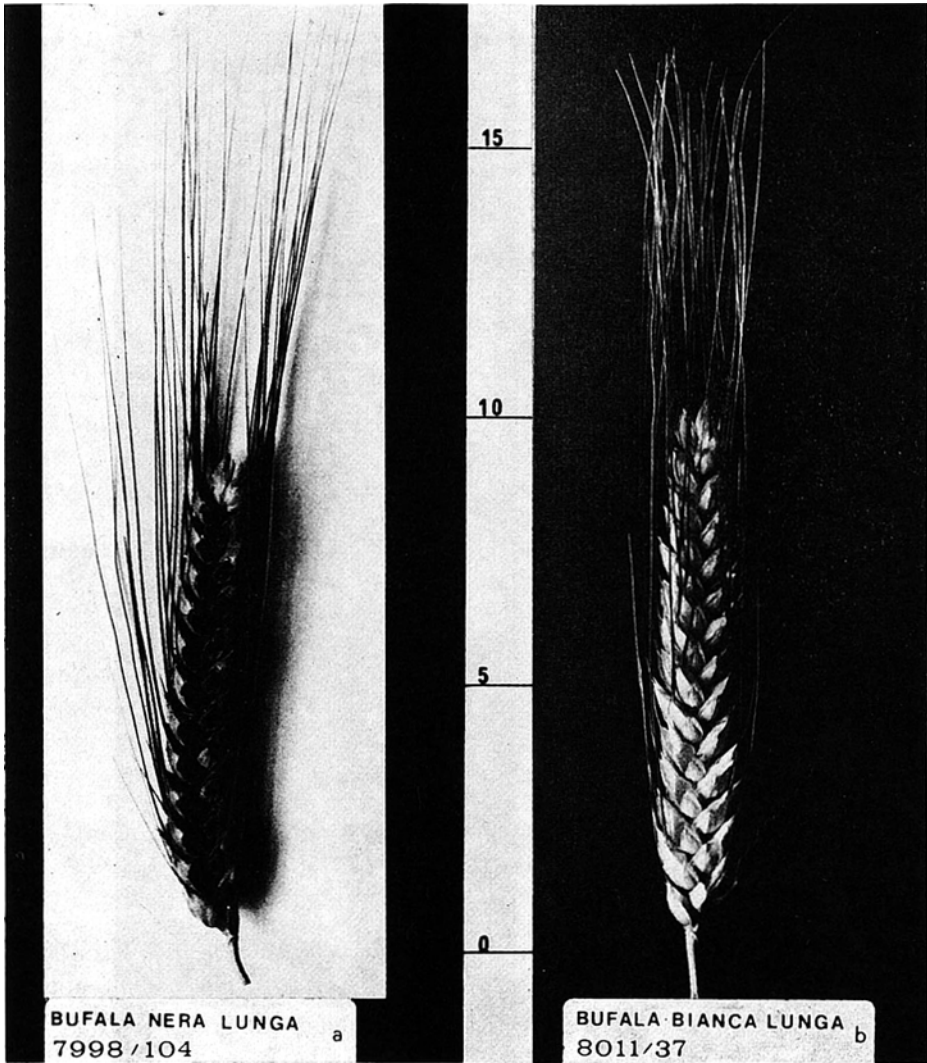


Fig. 19 *Triticum turgidum* var. *jodorum* (Alef.) Koern.



Fig. 20 *Triticum turgidum* var. *jodorum* (Alef.) Koern.

22b) '**Bufala bianca lunga**' (Fig. 19b):

- Spike:** Long (10 cm), oblong, profile slightly broader than the face and semi-compact.
- Awns:** Long, black base and white tip, adpressed, straight, persistent and barbed.
- Glumes:** Twice longer than wide, yellow with black striations, **keel** smooth and slightly curved, **beak** slightly curved and 1 to 1.5 mm long, **shoulder** rounded and medium in width.
- Caryopsis:** 6.5 mm in length, dark brown, semi-translucent, rounded, heart shaped transverse section, gibbous, **furrow** medium in width, deep and somewhat rounded edges, **texture** vitreous or semi-vitreous, **brush** short, dense and extended, **scutellum** rounded and long.

22c) '**Bufala nera corta**' (Fig. 20).

- Spike:** Long (8 cm), spindle, profile broader than face, compact.
- Awns:** Long, black base and white tip, adpressed, straight or semi-undulated, persistent and barbed.
- Glumes:** Twice longer than wide, pubescent almost black, very uniform or mixed with white shades and striations, **keel** pubescent and slightly curved, **beak** straight and 1.5 to 2 mm long, **shoulder** elevated and medium in width.
- Caryopsis:** 6.5 mm in length, amber, semi-translucent, rounded, heart shaped transverse section, gibbous, **furrow** medium in width and depth, with rounded edges, **texture** vitreous, **brush** short, medium in density and extended, **scutellum** rounded and long.

Note: 'Bufala rossa corta' and 'Bufala rossa lunga' have not been described since they differ from the previous forms only for the red color of the glumes, awns and kernels.

23. '**Ciciredda**' (*T. turgidum* L. var. *pseudosalomonis* Papad., Fig. 21a).

Some spikes were found in two samples collected on the Caronie (near to S. Fratello and Cesarò) together with other spike types. The whole mixture was locally called "Ntriziu".

Description:

- Spike:** Long (10 cm), spindle, square transverse section, semi-compact or compact.
- Awns:** Long, black base and yellow-reddish tip, divaricate upper part, semi-undulated, persistent and barbed.
- Glumes:** Twice longer than wide, pubescent, white with yellow shades, **keel** slightly curved and pubescent, **beak** straight, 1 mm long and with a black strip, **shoulder** rounded and large.
- Caryopsis:** Up to 7 mm in length, dark-brown, semi-translucent, elliptical, triangular or trapezoidal transverse section, dorsal profile gibbous, **furrow** large, medium in depth and semi-rounded edges, **texture** vitreous, **brush** medium to long, dense and extended, **scutellum** rounded and long.

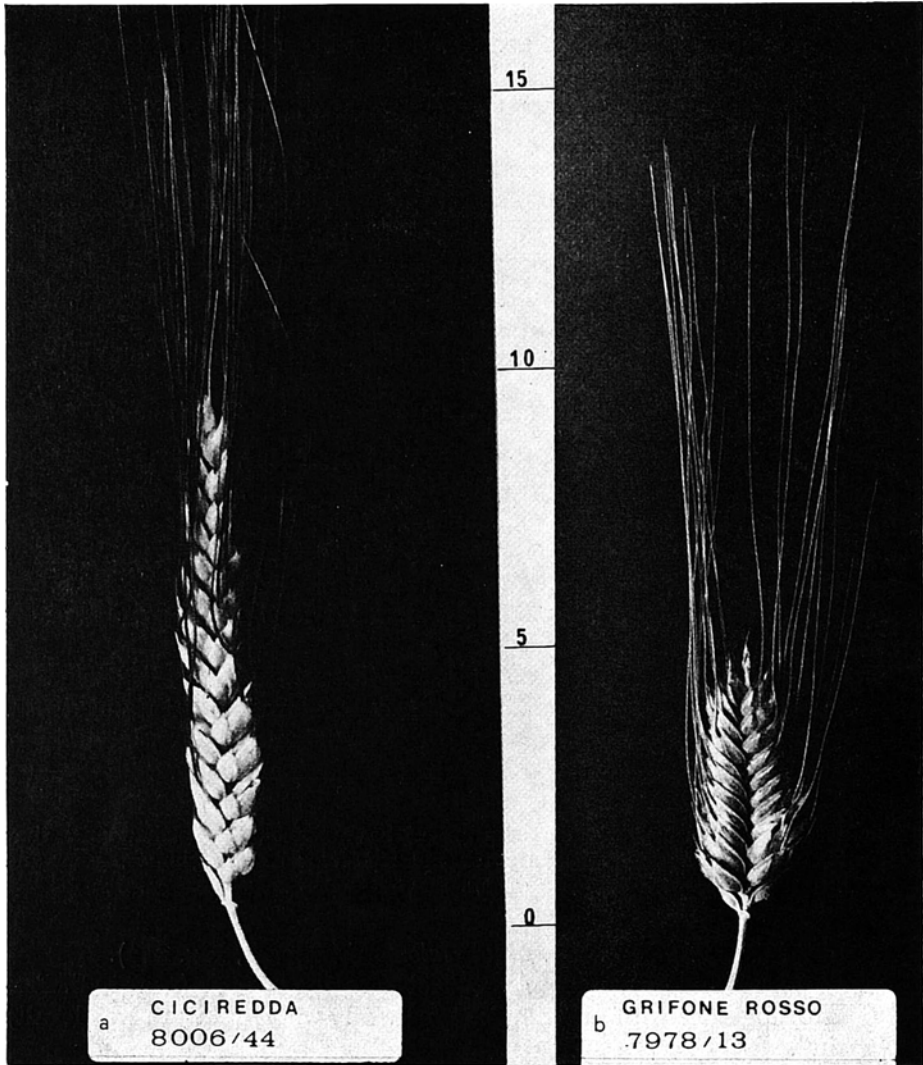


Fig. 21 *Triticum turgidum* var. *pseudosalomonis* Papad. (left), not yet botanically classified (right)



24. '**Grifone Rosso**' (Fig. 21 b).

This type was collected from one highly uniform field situated to the west of Butera. The race is probably a variant of 'Grifoni'.

Description:

- Spike:** Short (5 cm), spindle, profile larger than face, compact.  
**Awns:** Long, yellow, divaricate, straight, persistent, barbed.  
**Glumes:** Twice longer than wide, yellow with reddish shades, **keel** smooth and straight, **beak** straight and 0.5 to 1 mm long, **shoulder** elevated and narrow.  
**Caryopsis:** 7 mm in length, amber, translucent, oval, triangular transverse section, dorsal profile slightly gibbous, **furrow** medium in width and in depth and with slightly rounded edges, **texture** semi-vitreous, **brush** medium in length and density, semi-extended, **scutellum** ovoidal and medium in length.

*Triticum durum* Desf.25. '**Tangarò**' (*T. durum* Desf. var. *niloticum* Koern., Fig. 22).

'Tangarò' resembles 'Castiglone pubescente'. It is a wheat which was imported many years ago from the Black Sea coast. A few spikes were found in a field prevalently cultivated with 'Castiglione' and 'Vallelunga', between Caccamo and Sciara (Madonie).

Description:

- Spike:** Often long (9 cm), oblong, square transverse section and semi-compact or compact.  
**Awns:** Long, black base and yellow-reddish tip, divaricate, semi-undulated, persistent and barbed.  
**Glumes:** Twice longer than wide, pubescent, yellow-brown with dark shades and striations, **keel** pubescent and slightly curved, **beak** straight and 1 to 1.5 mm long, **shoulder** elevated and large.  
**Caryopsis:** 7.5 to 8 mm in length, red, semi-translucent, elliptical, trapezoidal shaped transverse section, dorsal profile normal, **furrow** semi-large, deep and angular edges, **texture** vitreous, **brush** medium in length and density, extended, **scutellum** ovoidal and long.

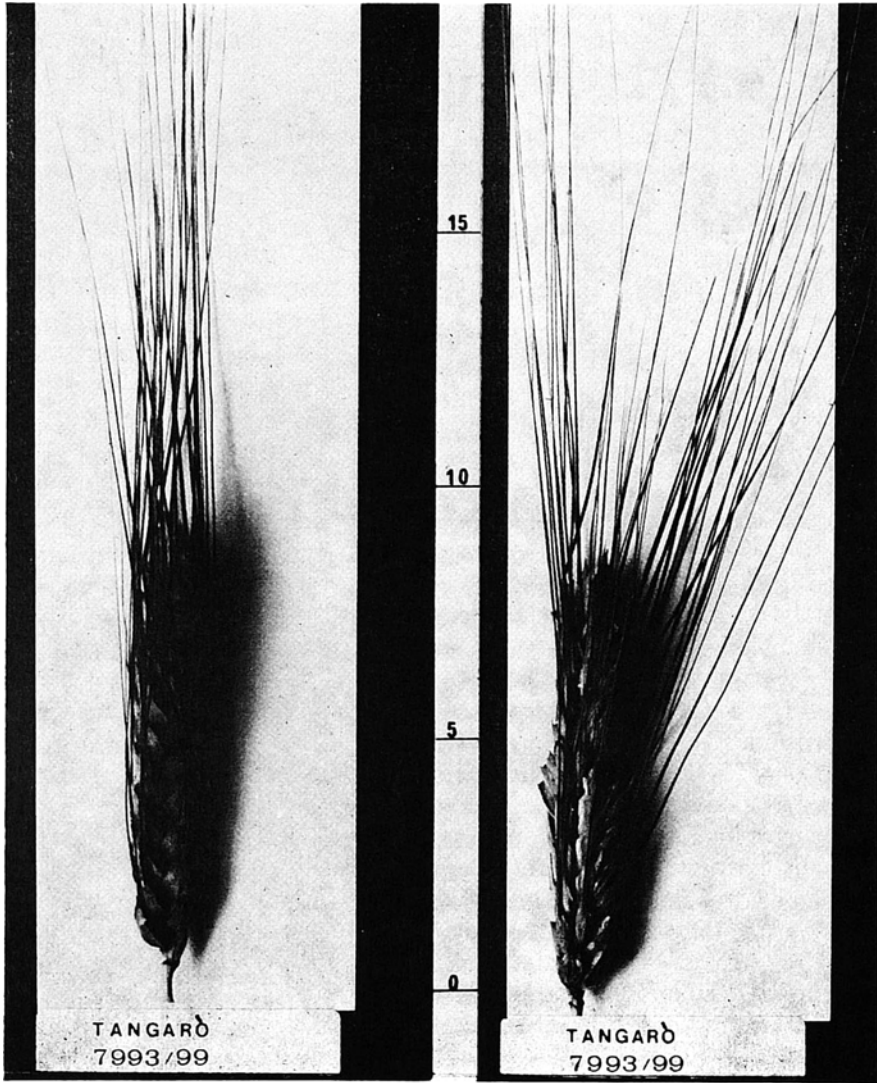


Fig. 22 *Triticum durum* var. *niloticum* Koern.

26. '**Tiradritto**' (*T. durum* Desf. var. *italicum* (Alef.) Koern., Fig. 23).

This race was collected from a highly uniform wheat field in the neighbourhood of S. Caterina. However in the surrounding fields 'Russia' was the prevalent variety. The race, red in colour, pubescent and with non-persistent awns was found only in another occasion, in a field (between Licata and Butera) mainly cultivated with 'Capeiti' and 'Garigliano'.

Description:

- Spike:** Short or medium in length (6 cm), spindle and compact.
- Awns:** Medium in length, yellow-reddish, divaricate, semi-undulated, caduc and barbed.
- Glumes:** Length a little over that of width, pubescent, yellow with reddish shades, **keel** pubescent and slightly curved, **beak** curved and 1 mm long, **shoulder** rounded and medium or large.
- Caryopsis:** 6.5 mm in length, amber, translucent, oval, triangular shaped transverse section, gibbous, **furrow** medium in width and depth, angular or somewhat rounded edges, **texture** vitreous, **brush** short, thin and semi-extended, **scutellum** ovoidal and medium in length.

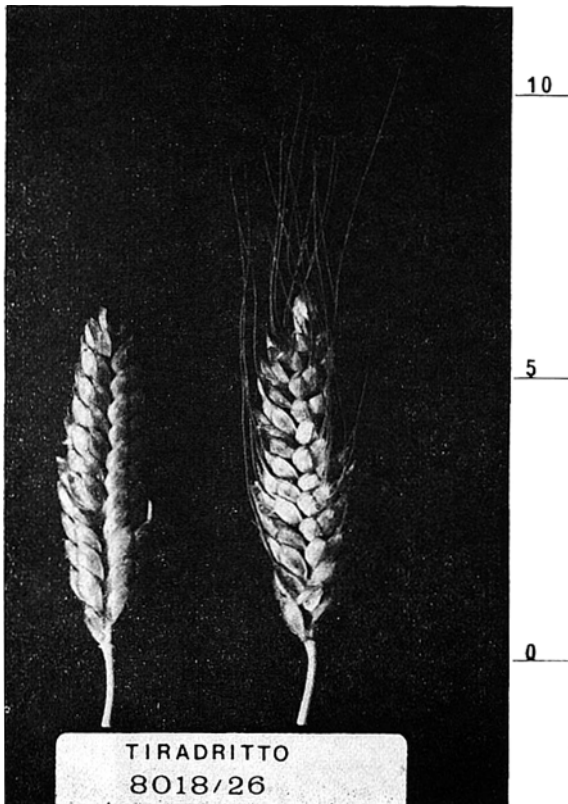


Fig. 23 *Triticum durum* var. *italicum* (Alef.) Koern.



Fig. 24 *Triticum aestivum* var. *aureum* (Link) Mansf.



Fig. 25 *Triticum aestivum* var. *aureum* (Link) Mansf.

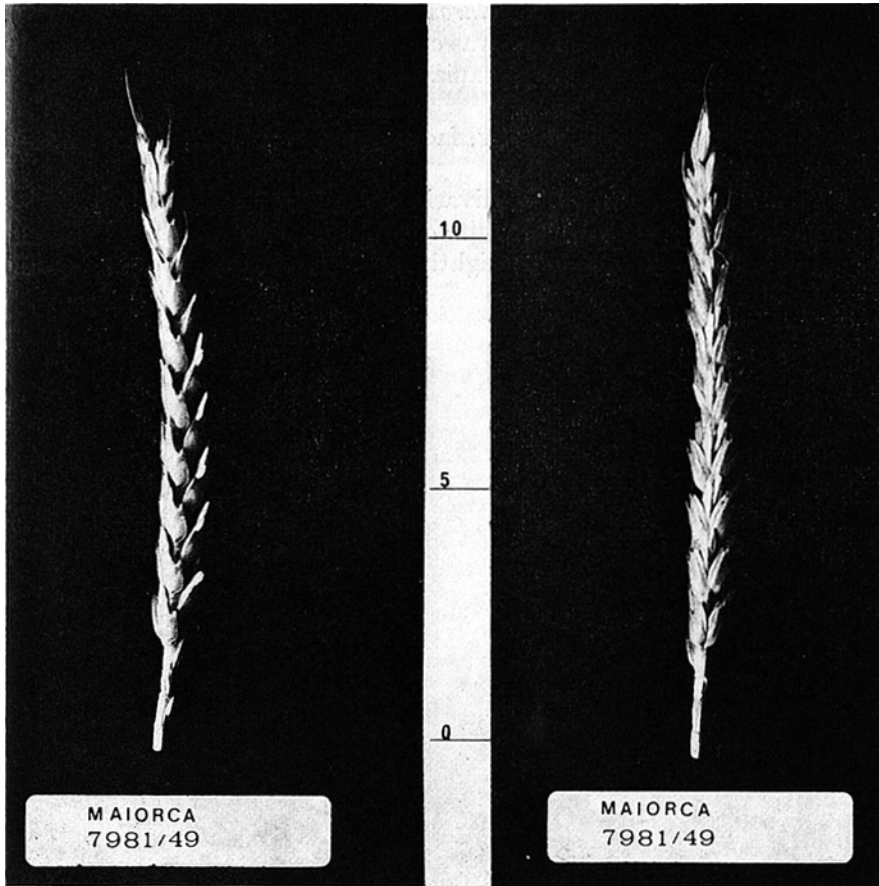


Fig. 26 *Triticum aestivum* var. *aureum* (Link) Mansf.

***Triticum aestivum* L.**

27. 'Maiorca' (*T. aestivum* L. var. *aureum* (Link) Mansf., Fig. 24, 25 and 26).

The race was almost ubiquitous. It shows a high variability in the following characters: colour of the glumes (colour may vary from brown to dark red), form and transverse section of the spike, presence and length of the short awns and spike density.

Description:

**Spike:** Long (10 cm or more), spindle, square, semi-compact or lax and awnless.

**Glumes:** Length over twice that of width, yellow with reddish shades and striations, **keel** smooth and straight, **beak** 1 mm long and straight, **shoulder** rounded or square and large.

**Caryopsis:** 6 mm in length, light amber, semi-translucent, oval, heart transverse section, dorsal profile normal, **furrow** medium in width and depth, with rounded edges, **texture** mealy, **brush** long, thick and extended, **scutellum** rounded and medium in length.

28. '**Maiorcane**' (*T. aestivum* L. var. *erythrospermum* (Koern.) Mansf., Fig. 27).

This race, characterised by long awns, was collected in a field cultivated mainly with 'Capeti' and 'Garigliano' on the Catania plain (near Raddusa).

Description:

**Spike:** Usually long (9 cm), oblong, face a little broader than profile, and semi-compact.

**Awns:** Medium in length, white, divaricate, persistent and barbed.

**Glumes:** Twice longer than wide, white or yellow, **keel** smooth and curved, **beak** 2.5 to 5 mm and slightly curved, **shoulder** elevated and medium in width.

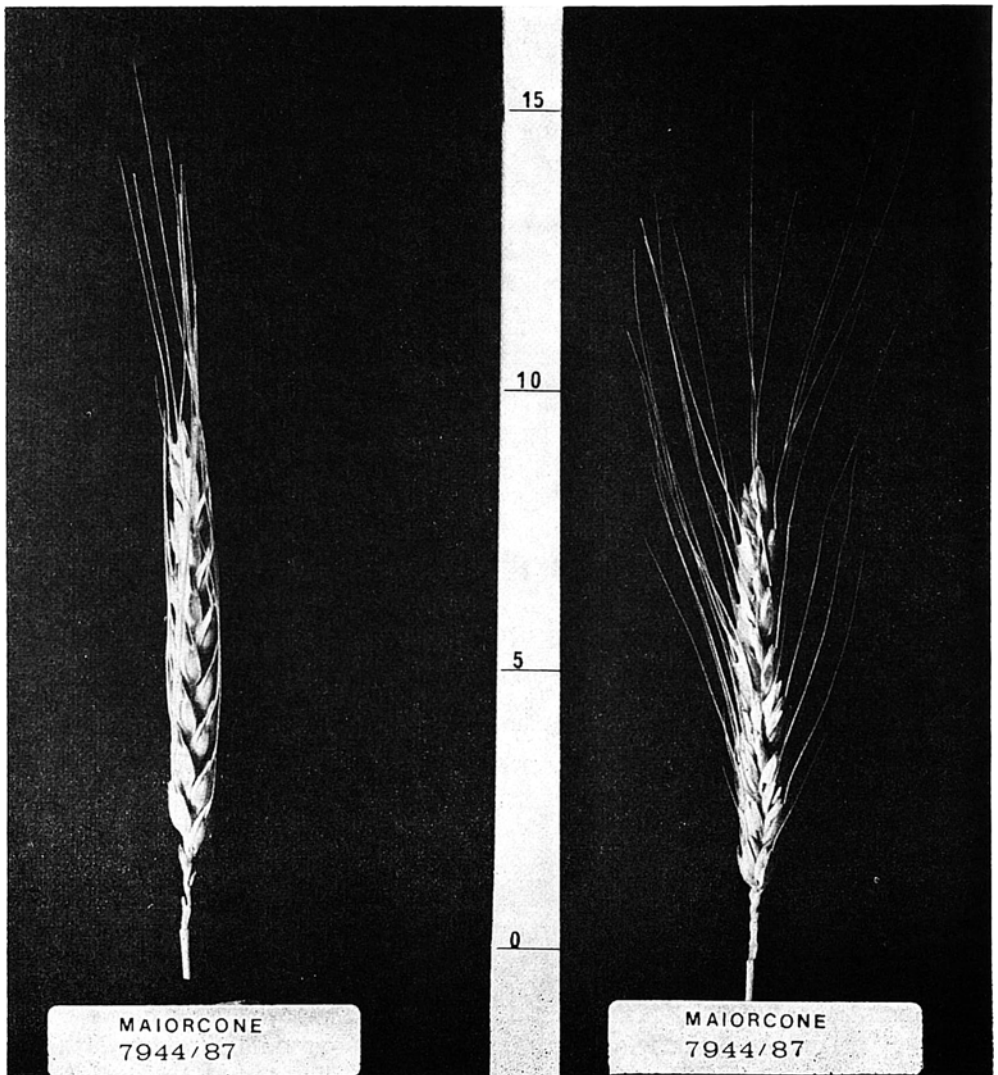


Fig. 27 *Triticum aestivum* var. *erythrospermum* (Koern.) Mansf.

**Caryopsis:** 6.5 to 7 mm in length, red, semi-translucent, oval, heart transverse section, dorsal profile normal, **furrow** medium in width and depth with rounded edges, **texture** semi-vitreous, **brush** long, thick and semi-extended, **scutellum** ovoidal and medium in length.

29. **'Romano'** (*T. aestivum* L. var. *lutescens* (Alef.) Mansf., Fig. 28).

Most of the spikes were collected near Bronte (Caronie). The race was more frequent in highly variable fields and where there was a high percentage of 'Bufala'. 'Romano' was always confused by farmers with 'Cuccitta' (*T. aestivum* L. var. *humboldtii* (Koern.) Mansf.

Description:

**Spike:** Short (5 cm) to medium in length, oblong across the face, clavated across the profile, compact and awnless.

**Glumes:** Twice longer than wide, white with yellow shades and striations, **keel** smooth and slightly curved, **beak** 0.5 mm long and slightly curved, **shoulder** rounded and medium or large.

**Caryopsis:** 6 mm in length, cream, semi-translucent, rounded, triangular transverse section, gibbous, **furrow** medium in width and depth with rounded edges, **texture** mealy, **brush** nearly long, thick and extended, **scutellum** rounded and long.



Fig. 28 *Triticum aestivum* var. *lutescens* (Alef.) Mansf. (left), *T. aestivum* var. *lutescens-compactoides* (Kob.) Mansf. (right)

30. 'Sgango' or 'Tinta' (*T. aestivum* L. var. *erythrospermum* (Koern.) Mansf. and var. *ferrugineum* Alef., Fig. 29).

This is a *T. aestivum* of a peculiar form. The main difference from 'Maiorcane' is that 'Sgango' has much longer glume apices. The form with red glumes was more frequent on the Peloritani, while a second form with white glumes was more widespread at lower altitudes (particularly on the plain of Catania). A third form, characterized by the presence of dark striations on the glumes and flowering glumes, was more frequent in the centre of the island, where 'Russia', 'Garigliano', 'Capeiti' and 'Bidi' were the main companions.

Farmers believe that 'Sgango' is a variant resulting from adverse climate. In some cases they distinguish a form called 'Sgango da Russello' (with red glumes and red awns) from 'Sgango da Maiorca' (with white glumes and white awns). Those who know the story of the wheat 'Denti de Cani' found in Sardinia (MELETTI, 1955 and 1959) may see a relationship with 'Sgango' found in Sicily. In fact, both are hexaploid, have some peculiar spike characteristics, are believed to grow spontaneously in cultivated wheat fields and are unwanted.

Description:

**Spike:** Long (10 cm) to very long (15 cm), oblong, face a little broader than profile and semi-compact or lax.

**Awns:** Short or medium, white, divaricate, straight, persistent and barbed.

**Glumes:** Twice longer than wide, white or reddish, **keel** smooth and curved, **beak** 4 to 8 mm long and mostly curved.

**Caryopsis:** 6.5 to 7.5 mm in length, red, semi-translucent, oval shaped transverse section, dorsal profile normal, or slightly gibbous, **furrow** medium in width and depth with semi-rounded edges, **texture** semi-vitreous, **brush** long, thick and semi-extended, **scutellum** ovoidal and medium in length.





Fig. 29 *Triticum aestivum* var. *erythrospermum* (Koern.) Mansf.

31. *Triticum aestivum* L. var. *percivalii* (Flaksb.) Mansf., (Fig. 30).

This is a wheat with black glumes, black awns and high spike density. A few spikes were collected in a wheat field near Bisacquino and some near Grammichele (on the Iblei). In both places they were found mixed with 'Russia', 'Gari-gliano' and 'Capeiti'.

Description:

**Spike:** Short (5 cm), square and compact.

**Awns:** Medium in length, black base and white or yellow tip, divaricate, semi-undulated persistent and barbed.

**Glumes:** Twice longer than wide, black dominant over yellow, **keel** smooth and curved, **beak** 2 mm long and curved, **shoulder** rounded or square and large.

**Caryopsis:** 7 mm long, dark-brown, semi-translucent or opaque, oval shaped transverse section, nearly gibbous, **furrow** medium in width and depth with semi-rounded edges, **brush** medium to long, thick and extended, **scutellum** ovoidal and medium in length.

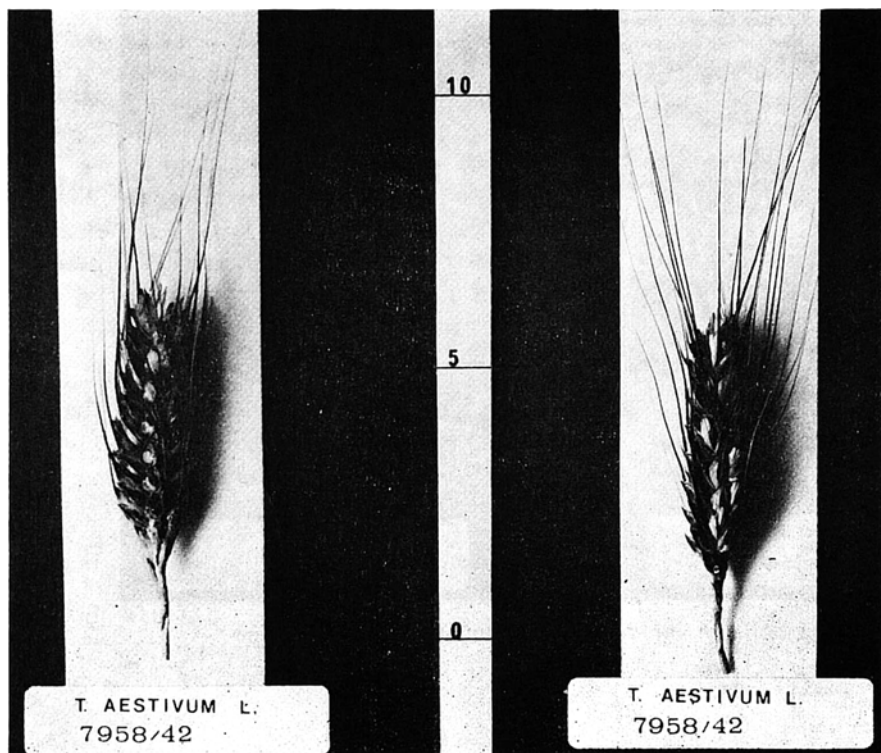


Fig. 30 *Triticum aestivum* var. *percivalii* (Flaksb.) Mansf.

32. *Triticum aestivum* L. var. *nigrimelanopogon* (Gökg.) Mansf., (Fig. 31).

This is also a hexaploid wheat with black awns but with a lax spike. A few spikes were found on the Peloritani (near Francavilla di Sicilia) and on the Caronie near Cesarò in wheat fields cultivated with 'Maiorca' and 'Vallelunga pubescente'.

Description:

- Spike:** Long (8 cm), oblong, square transverse section and semi-compact.  
**Awns:** Medium in length, black base and reddish tip, divaricate, undulated, persistent and barbed.  
**Glumes:** Twice longer than wide, **keel** smooth and curved, **beak** 3 mm long, slightly curved and with a black strip.  
**Caryopsis:** 6 mm in length, brown, semi-translucent, rounded, triangular transverse section, slightly gibbous, **furrow** medium in width and depth, with semi-rounded edges, **texture** semi-vitreous, **brush** medium in length, thick and extended, **scutellum** rounded and long.

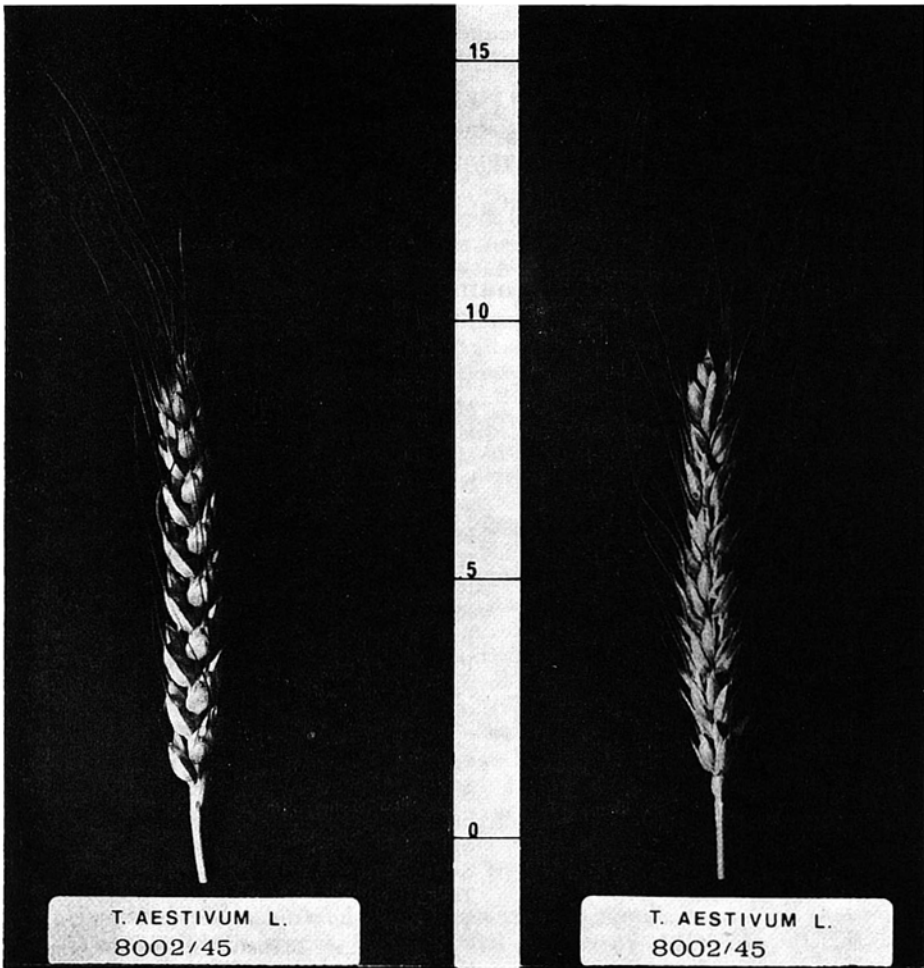


Fig. 31 *Triticum aestivum* var. *nigrimelanopogon* (Gökg.) Mansf.

## Zusammenfassung

### Sizilianische Weizensorten

Vor dem historischen Hintergrund wird die Notwendigkeit der Erhaltung der sizilianischen Ressourcen des Weizens erklärt. Ein Katalog enthält 32 Sorten, die 1973 in ganz Sizilien gesammelt wurden. Jede Sorte wird geographisch und botanisch eingeordnet. Die Variabilität mehrerer Ährenmerkmale wird diskutiert. Das Saatgut kann an Interessenten abgegeben werden.

## Краткое содержание

### Сицилианские сорта пшеницы

На фоне исторического развития объясняется необходимость сохранения сицилианских ресурсов пшеницы. В составленном каталоге перечисляются 32 сорта, которые в 1973 г. были собраны со всей территории Сицилии. Для каждого сорта приводятся географические и ботанические данные. Обсуждается изменчивость многих признаков колоса. Заинтересованные учреждения могут получить посевной материал.

## Appendix of local variety names (numbers are referring to table 2 and the text):

Barbanera	1	Maiorca	27
Biancuccia	2	Maiorcone	28
Biancuccia Cutrona	2	Margherito	3
Bidi	3	Marrone	3
Bufala	22	Ntriziu	23
Bufala bianca lunga	22b	Paola	22
Bufala nera corta	22c	Priziusa	13
Bufala nera lunga	22a	Realforte	12
Bufala rossa corta	22d	Romano	29
Bufala rossa lunga	22e	Ruscia	13
Capeti	4	Rusello	13
Cappelli	3	Russia	13
Castiglione	5	Sammartinara	14
Chiattulidda	6	Scavuzza	15
Ciciredda	23	Scutiniccio	17
Coda di mulo	21	Semenzella	12
Conca d'oro	3	Sgango	30
Cuccitta	29	Sgango da Maiorca	30
Denti de Cani	30	Sgango da Russello	30
Francesa	7	Sicilia	16
Garigliano	8	Tangarò	25
Gigante	9	Timilia	18
Gioia	10	Timilia a reste bianche	18
Grifone Rosso	24	Timilia a reste nere	18
Grifoni	11	Tinta	30

Tiradritto	26	Tunisina	18
Trentino	19	Urria	20
Triminia	18	Vallelunga	21
Tripolino	19	Vallelunga glabra	21 a
Tumminia	18	Vallelunga pubescente	21 b

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