

Angers 6 december 2018

LIVESEED, ECO-PB & CPVO Workshop on Heterogeneous Material and Organic Varieties

**Participation by Italy to the
Commission Implementing Decision (2014/150/EU)
temporary experiment for the marketing of
populations of the plant species wheat, barley,
(oats and maize)**

Pier Giacomo Bianchi & Maria Losi

2015/2016 - Expression of interest by producers

2016/2017 - 8 applications (Barley, wheat, durum wheat) no production - field inspection

2017/2018 - 8 applications (Barley, wheat, durum wheat) - field inspection (17 hectares) and post control & lab testing (germination, purity, other seeds determination)

2017/2018 - Number of populations

- 1 Barley (**642** kg certified)
- 3 wheat (**71.800** kg certified)
- 4 Durum wheat (**8,35** kg certified)

**2018/2019 - 8 applications (Barley,
wheat, durum wheat) -
field inspection
(29 hectares)**

**Estimation of seed
production:
94.000 kg**

Wheat

1. SOLIBAM tenero FLORIDDISIA
2. SOLIBAM tenero LI ROSI
3. BIOADAPT

Durum wheat

1. SOLIBAM DURO RECCHIA
2. SOLIBAM DURO PETACCIATO
3. SOLIBAM DURO FLORIDDISIA
4. EVOLDUR13a

Barley

1. MIX48



- **Traceability of seed used**
- **Previous cropping**
- **Isolation**
- **Identification of the population**
- **General conditions of the crop**
- **Other species, lodging**
- **Plant health, pests, weeds**
- **Estimation of seed production**
- **Reporting**

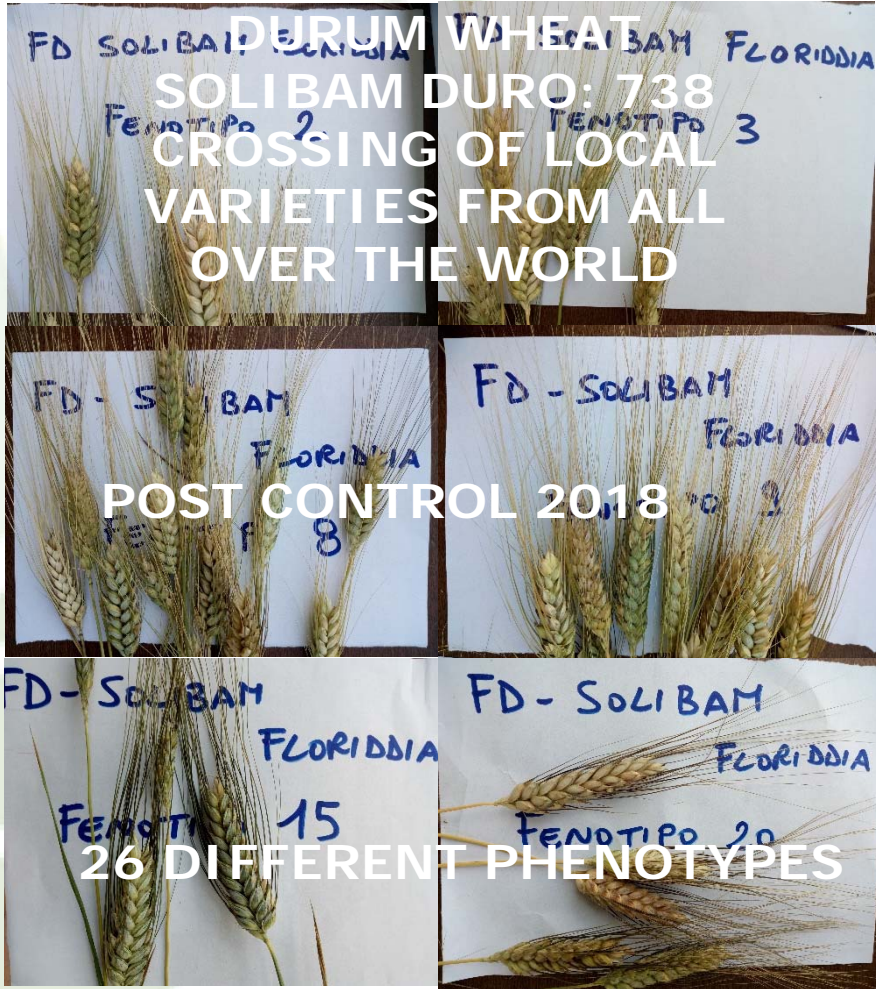
Comparative trials: post control (untreated, no fertilization)

Characters used for observations:

- **plant height**
- **time of flowering**
- **glaucosity stem**
- **glaucosity ear**
- **shape ear**
- **awns/scurs (presence/absence/colour)**



PLANT NUMBER	EARS NUMBER	%	PHENOTYPE NUMBER
74	120	17	1
57	80	13	2
55	71	13	3
10	18	2	4
1	1	0	5
1	1	0	6
15	19	3	7
16	16	4	8
30	33	7	9
4	4	1	10
10	10	2	11
56	58	13	12
9	9	2	13
9	10	2	14
9	13	2	15
54		13	NOT EVALUABLE PLANTS
19	20	4	STRONG PRESENCE OF FUSARIUM
0		0	DURUM WHEAT
2		0	BARLEY
431	483		



PLANT NUMBER	EARS NUMBER	%	PHENOTYPE NUMBER
16	22	6	1
28	31	10	2
7	7	2	3
4	7	1	4
4	6	1	5
12	14	4	6
12	22	4	7
9	17	3	8
9	11	3	9
5	5	2	10
20	26	7	11
3	3	1	12
15	18	5	13
14	18	5	14
4	4	1	15
2	2	1	16
3	3	1	17
11	13	4	18
9	12	3	19
5	6	2	20
3	4	1	21
4	4	1	22
4	4	1	23
10	11	4	24
19	21	7	25
6	9	2	26
17	9	6	NOT EVALUABLE PLANTS
17	19	6	STRONG PRESENCE OF FUSARIUM
12	13	4	SOFT WHEAT
1	1	0	BARLEY
285	342		

**SOFT WHEAT
BIOADAPT: CROSSING AND
NEGATIVE SELECTION OF 5
VARIETIES**

**POST CONTROL
2018**

**5 DIFFERENT
FENOTYPES**

PLANT NUMBER	EARS NUMBER	%	PHENOTYPE NUMBER
151	228	47	1
52	56	16	2
43	49	13	3
22	25	7	4
27	34	8	5
20		6	NOT EVALUABLE PLANTS
4	5	1	USTILAGO
0		0	DURUM WHEAT
319	397		



PLANT NUMBER	EARS NUMBER	%	PHENOTYPE NUMBER
32	37	8	1
23	25	5	2
21	24	5	3
26	31	6	4
4	6	1	5
87	7	21	6
5	6	1	7
9	10	2	8
7	7	2	9
5	6	1	10
49	58	12	11
22	24	5	12
11	13	3	13
7	7	2	14
12	12	3	15
12	13	3	16
13	14	3	17
12	17	3	18
7	7	2	19
57	28	13	NOT EVALUABLE PLANTS
421	352		

BARLEY

MIX48: MULTICROSSING FROM 7 VARIETIES

POST CONTROL 2018

13 DIFFERENT
PHENOTYPES



PLANT NUMBER	EARS NUMBER	%	PHENOTYPE NUMBER	
47	85	13	1	
7	19	2	2	
18	28	5	3	
24	35	6	4	
20	31	5	5	
135	174	36	6	
29	35	8	7	
7	12	2	8	TWO ROW
52	111	14	9	TWO ROW
5	8	1	10	TWO ROW
15	34	4	11	TWO ROW
7	12	2	12	TWO ROW
2	6	1	13	TWO ROW
0	0	0	NOT EVALUABLE PLANTS	
7	10	2	USTILAGO	
375	600			

Main reason for rejections in field inspection

- Mixture of durum and soft wheat
- Presence of other species or weeds
- Diseases (*Ustilago*)

Looking forward



- **Surface is increasing**
- **Field inspection, lab testing and post control continuing**
- **More experience is needed**
- **Exploring stability of frequency of character expression**
- **Tuning on checks to be carried out by the Seed certification Agency**
- **Joint comparative trial including German and Italian population (wheat durum wheat and barley)**

Comparative trials 2019

- **Wheat (3 ITA – 3 DEU)**
- **Durum wheat (3 ITA)**
- **Barley (1 ITA)**

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