

Table S1. The Experimental material.

Nr	Entry Name	Type of variety	Origin/Year of release	Genealogy	Phenology	Abbreviation
1	Ranghino	Old	1887	Selection from Giapponino	early	RA
2	Gritna	Old	1972	Selection from Rocca	intermediate	GR
3	Alpe	New	1993	unknown	intermediate	AL
4	Carmen	New	2005	unknown	intermediate	CA
5	Russo	New	-	unknown	very early	RU
6	Lomellino ^a	New	1980	unknown	early	LO
7	Titanio ^b	New	1980	Stirpe 153 x Lieto	early	TI
8	Rodeo	New	2003	unknown	early	RO
9	Italmochi	New	1996	unknown	intermediate	IT
10	Topazio	New	-	-	-	TO
11	Miara	New	1988	-	-	MI
12	Baldo	Old	1977	Arborio x Stirpe 136	intermediate	BA
13	RN seme ^c	New	-	-	-	RN
14	Novara	Old	1930	Lady Wright x Vialone nero	intermediate	NO
15	Corbetta	Old	1954	Selection from Franco Roncarolo	intermediate	CO
16	Bertone	Old	1829	unknown	intermediate	BE
17	Rosa Marchetti UG	Old	1972	unknown	intermediate	RM UG
18	Chinese Originario	Old	1904	unknown	late	ChO
19	Rosa Marchetti CO	Old	1972	unknow	intermediate	RM CO
20	Baldo_CO	Old	1977	Arborio X Stirpe 136		BA CO
21	Arborio	Old	1967	Vialone X Lady Wright		AR
22	Mixture ^d	Mix				MIX

^a Same as Comellino but Lomellino is assumed to be the correct name; ^b Same as Titano but Titanio is assumed to be the correct name; ^cVariety unknown, probably due to an error in name transcription at the gene bank; ^d composed of 15 varieties (Nano, Ranghino, Castelmochi, Chinese Originario, Vialone nero, Maratelli, Pierrot, Precoce Gallina, Bertone, Rosa Marchetti, Chinese Ostiglia, Dellarole, Lencino, Sancio P6 and Mirabelli)

Table S2. The four farms that hosted the trials

Farm Nr.	Farm Name	Farm Abbreviation	Agronomic management ^a	
			2019	2020
1	Cascine Orsine	CO	SD technique in dry paddy	Stale seedbed in flooded paddy
2	Terre di Lomellina	TL	Stale seedbed in flooded paddy	Green mulching
3	Marco Cuneo	MC	Stale seedbed in flooded paddy	Stale seedbed in flooded paddy
4	Una Garlanda	UG	Green mulching	Green mulching

^a see text for details

Table S3. Agronomic management in the four farms hosting the trials over the two years.

Farm No.	Year	
	2019	2020
1	<p>stale seedbed in dry paddy (SD) technique</p> <ul style="list-style-type: none"> - false seeding: 3 passages with harrow before sowing - sowing: 3 cm depth using (14 cm inter-row), at a rate of 20 g m⁻² - after sowing: 2 passages with comb harrow - field flooding 	<p>stale seedbed in flooded paddy (SF) technique</p> <ul style="list-style-type: none"> - false seeding: 2-3 passages with harrow before sowing - broadcasted at a rate of 20 g m⁻²
2	<p>stale seedbed in dry paddy (SD) technique</p> <ul style="list-style-type: none"> - sowing: 6 cm depth using (14 cm inter-row), at a rate of 20 g m⁻² - after sowing: 2 passages with comb harrow - field flooding 	<p>green mulching technique</p> <ul style="list-style-type: none"> - sowing a mixture of vetch and ryegrass (<i>Vicia villosa</i> and <i>Lolium multiflorum</i> Lam) the autumn before - sowing: in the standing cover crop in rows 3 cm depth at a rate of 20 g m⁻² - after rice germination the cover crops were cut - field flooding
3	<p>stale seedbed in dry paddy (SD) technique</p> <ul style="list-style-type: none"> - false seeding: 2-3 passages with harrow before sowing - sowing: 3 cm depth using (14 cm inter-row), at a rate of 20 g m⁻² - after sowing: 2-3 passages with comb harrow - field flooding 	<p>stale seedbed in dry paddy (SD) technique</p> <ul style="list-style-type: none"> - false seeding: 2-3 passages with harrow before sowing - sowing: 3 cm depth using (14 cm inter-row), at a rate of 20 g m⁻² - after sowing: 2-3 passages with comb harrow - field flooding
4	<p>green mulching technique</p> <ul style="list-style-type: none"> - sowing a mixture of vetch and ryegrass (<i>Vicia villosa</i> 30%, <i>Sinapis alba</i> 20% and <i>Lolium multiflorum</i> Lam 50%) the autumn before - sowing: in the crushed cover crop (roller crimper) broadcasting at a rate of 20 g m⁻² - field flooding - after 5-7 days, the rice field is drained, and kept dry for 7-14 days to allow rice germination - field flooding 	<p>green mulching technique</p> <ul style="list-style-type: none"> - sowing a mixture of vetch and ryegrass (<i>Vicia villosa</i> 30%, <i>Sinapis alba</i> 20% and <i>Lolium multiflorum</i> Lam 40%, <i>Secale cereale</i> 10%) the autumn before - sowing: in the mulched cover crop (flail-mower) broadcasting at a rate of 20 g m⁻² - field flooding - after 5-7 days, the rice field is drained, and kept dry for 7-14 days to allow rice germination - field flooding

Table S4. People who evaluated the individual plots classified by gender (upper part) and by profession (lower part) (F =farmers, T = technicians, H = hobbyists, R = researchers, S = Students.

Farm Abbrev	Women		Men		Total
	2019	2020	2019	2020	
CO	0	3	9	4	16
TL	4	5	9	2	20
MC	3	2	8	6	19
UG	8	6	15	6	35
Total	15	16	41	18	90

Farm Abbrev	F		T		H		R		S		Total
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	
CO	5	7	2	0	0	0	1	0	0	0	15
TL	5	3	2	1	2	0	3	1	1	2	20
MC	6	6	3	2	0	0	1	0	0	0	18
UG	9	8	7	2	2	0	2	1	1	1	33
Total	25	24	14	5	4	0	7	2	2	3	86

Table S5. Average grain yield (GY in kg ha⁻¹), plant height (PH in cm), peduncle length (PL in cm), heading time (HT), reaction to *Fusarium* (FUS), leaf blast (BLL) and neck blast (BLC) and participants' evaluation (EV= all participants; FEV = female evaluation; MEV = male evaluation) of the 22 entries listed in Table 1. Data are the means of two years and four farms*.

Entry Nr	Name	GY	PH	PL	HT	FUS	BLL	BLC	EV	FEV	MEV
1	RA	3305 fgh	80.9 j	18.3 fgh	2.980 cd	0.092	1.693 def	1.298	2.41 fghij	2.36 efg	2.47 defg
2	GR	3551 defg	88.1 g	18.6 efg	2.871 cd	0.214	3.188 fg	2.413	2.15 hijkm	2.13 fgh	2.17 ghi
3	AL	4235 bcde	85.0 h	15.4 j	3.130 cd	0.203	2.341 efg	3.785	2.31 fghijk	2.25 efg	2.33 fgh
4	CA	4180 bcde	76.2 l	18.3 fgh	3.068 cd	0.015	1.544 cdef	1.117	2.49 defgh	2.44 cdefg	2.58 cdef
5	RU	1829 i	76.3 k	17.6 hi	1.156 a	0.213	4.652 gh	5.408	1.39 o	1.52 i	1.32 k
6	LO	3310 fgh	72.2 m	17.3 i	2.306 b	0.224	2.704 efg	3.478	1.86 lmn	1.88 hi	1.83 ij
7	TI	2721 hi	66.2 o	12.9 k	1.968 b	0.747	8.615 i	2.743	1.831 mn	2.04 gh	1.82 ij
8	RO	3510 efg	68.6 n	15.7 j	2.270 b	0.858	9.104 i	8.358	2.123 ijkm	2.29 efg	2.05 hij
9	IT	3060 gh	70.9 m	17.4 i	2.081 b	0.016	1.308 cdef	0.506	2.08 jkmn	2.10 gh	2.13 ghi
10	TO	3607 defg	79.4 j	17.9 gi	2.815 c	0.461	6.554 hi	10.746	2.25 ghijk	2.22 efg	2.26 fgh
11	MI	3776 cdef	72.0 m	15.5 j	2.775 c	0.349	2.994 fg	8.671	2.01 kmn	2.07 gh	2.02 hij
12	BA	4729 ab	95.6 cd	19.0 ef	3.282 d	0.046	0.221 ab	0.969	3.18 a	3.34 a	3.23 a
13	RN	4164 bcde	93.2 ef	20.6 bc	2.912 cd	0.088	1.103 bcde	0.974	2.83 abcd	2.90 abc	2.81 bcd
14	NO	3881 cdef	98.5 b	22.4 a	2.877 cd	0.029	1.614 def	3.166	2.29 fghijk	2.61 bcde	2.14 ghi
15	CO	4236 bcd	93.9 def	19.4 de	2.775 c	0.361	1.138 bcde	4.775	2.47 efghi	2.37 defg	2.50 defg
16	BE	2141 i	82.9 i	18.7 efg	2.060 b	0.855	0.560 abcd	4.040	1.72 no	1.84 hi	1.67 jk
17	RM_UG	4977 a	94.3 de	20.5 bc	2.938 cd	0.049	0.618 abcd	1.732	2.93 abc	2.86 bc	3.01 abc
18	ChO	4041 cde	92.2 f	19.4 e	4.514 e	0.011	0.150 a	0.679	2.62 cdef	2.55 bcdef	2.63 cdef
19	RM_CO	4349 abc	92.6 ef	20.3 cd	2.966 cd	0.093	0.330 abc	1.571	2.79 bcde	2.65 bcde	2.82 bcd
20	BA_CO	4768 ab	95.2 cd	19.0 ef	3.099 cd	0.061	2.137 ef	0.905	3.05 ab	2.95 ab	3.05 ab
21	AR	3608 defg	96.3 c	19.1 ef	3.191 cd	0.225	2.579 efg	0.445	2.82 abcde	2.98 ab	2.76 bcde
22	MIX	4153 bcde	108.5 a	21.2 b	3.086 cd	0.0261	0.570 abcd	0.203	2.51 defg	2.83 bcd	2.36 efg

* means with letter(s) in common are not significantly different at P<0.05 based on LSD test. In the case of no letters, means were not significantly different at P<0.05.

Table S6. Average grain yield (GY in kg ha⁻¹), plant height (PH in cm), peduncle length (PL in cm), heading time (HT), reaction to *Fusarium* (FUS), leaf blast (BLL) and neck blast (BLC) and participants' evaluation (EV= all participants; FEV = female evaluation; MEV = male evaluation) of 22 varieties grown in the four farms listed in Table 2. Data are the means of two years and 22 varieties*.

Farm Abbrev.	GY	PH	PL	HT	FUS	BLL	BLC	EV	FEV	MEV
CO	1793d	93.6b	19.4b	3.22b	0.15b	3.52b	1.75b	2.18b	2.17c	2.13b
TL	4499c	100.6a	19.5b	3.49c	0.02a	0.00a	1.74b	2.73a	2.66b	2.80a
MC	4827b	89.8c	19.8a	2.81a	0.03a	3.68c	2.51b	2.80a	2.99a	2.74a
UG	5310a	85.6d	18.7c	3.47c	0.35c	0.01a	0.41a	2.81a	2.835a	2.81a
lsd 0.05	255.3	1.98	0.3132	0.170	0.013	0.062	0.098	0.133	0.172	0.151

* means with letter(s) in common are not significantly different at P<0.05 based on LSD test.

Table S7. Analysis of variance of grain yield (GY), plant height (PH), peduncle length (PL), heading time (HT), reaction to *Fusarium* (FUS), leaf blast (BLL) and neck blast (BLC) and participants' evaluation (EV= all participants; FEV = female evaluation; MEV = male evaluation) of 22 entries in four farms for two years. In the case of PH and SL data were collected on 20 plants/plot. Degrees of freedom are adjusted for missing data. Degrees of freedom for EV also apply for FEV and MEV.

S.V.	GY		PH		PL		HT		FUS		BLL		BLC		EV		FEV	MEV
	d.f	F pr.	d.f	F pr.	d.f	F pr.	d.f	F pr.	d.f	F pr.	d.f	F pr.	d.f	F pr.	d.f	F pr.	F pr.	F pr.
Entries (E)	21	<.001	21	<.001	21	<.001	21	<.001	21	0.09	21	<.006	21	0.16	21	<.001	<.001	<.001
Farms (F)	3	<.001	3	<.001	3	<.001	3	<.001	3	<.001	3	<.001	3	0.034	3	<.001	<.001	<.001
Years within Farms (Y _w F)	4	<.001	4	<.001	4	<.001	4	<.001	4	<.001	3	<.001	4	<.001	4	<.001	<.001	<.001
E x F	63	0.011	63	<.001	63	<.001	62	0.002	63	<.001	63	<.001	63	<.001	63	0.112	0.482	0.041
E x Y _w F	84	<.001	84	<.001	84	<.001	52	0.019	81	<.001	60	<.001	62	<.001	84	0.042	0.104	0.049
Residual	140		2903		2903		102		134		117		117		141			
Total	318		3117		3117		247		309		270		273		319			