

RBR,WL1-
2066,
F2,*anl*,Hir(1/9),
mst2-,15DAS,
1st true leaf
removed for
counting.

Growing system
5x5 MCS



F2, *ani*, Hir(1/9), *mst2.1*st true leaf removed
for pressing and counting



Pressed first true leaves & plant press



PHW research notes on the RBR lot 1-2071

RBR notes

010608 PHW

Inheritance of hairs, Hir

- 1-2071 (22)m, Hir(9), Pan(7), [1-2014(14)] $\frac{10}{26} \frac{1}{13} \frac{1}{13}$

- 123107 PHW, $S \approx 100$, $\sim 4\%$, 2, 5×5 MCS, BSC

- seed generally weak - some full, most $\sim 50\%$, partially filled

- 010508 PHW, many weak seedlings, VCS, transplanted most regrows to fill 'empty' cells in 5×5 MCS.

- 010808 PHW, fert, counted good $V \geq 6$ + weak seedlings; $\frac{56}{100}$, $\frac{40}{56} V \geq 6$, $\frac{16}{56} V \leq 5$, regard 6

- 011508 PHW, fert

- 011908 PHW, 1st plants flowering = 19 DTF

- 012108 PHW, pollinated

- several Mst plants, massed with Mst

- regard ~ 15 off type plants, severe stunting + mflor

- counted Hir on 1st two leaves - pressed down if intermated plant of population ≈ 32
 $\frac{6}{32}$ are Mst.

- 012608 PHW - $\frac{26}{32}$ m are 1-2129 (26)m, Hir(9), Pan(7), [1-2071] $\frac{12}{31}$, $\frac{1}{19}$ $\frac{1}{26}$, Hir = [10]

- 1-2130 (6) or 1-2129 (26) Hir(9) $\frac{11}{31}$, Pan(7) [1-2071]
 - 013008 PHW count Hir
 = 201st #Hir leaf #Hir leaf #Hir leaf #Hir leaf #Hir leaf #Hir

1, 122 7, 136 13, 91 17, 199 25, 98

2, 109 8, 134 14, 155 20, 144 26, 117

3, 108 9, 76 ^{roll w side} 15, 142 21, 115 27, 139

4, 117 10, 131 16, 103 22, 107 28, 145

5, 114 11, 101 17, 80 23, 129 29, 99

6, 131 12, 74 18, 138 24, 92 30,

$n = 29$, $\bar{c} = 119$, $r = 125$ $S = 27$

Inheritance of hairs, H.ir.

- 1-2071 (22)m, Hir(9), Pan(7), [1-2014(4)m]
- grew + pol. ~ 32 pl. 1/c, 6x5, MCS.
- pollinated them as 1-2130(6)m 1-2131(24)
- sampled 1st true leaf + pressed. at ZIDAS.
- 013008PTHW counted H.ir.

- S+L of counts

- 7, 6, 4,

8, 0

9, 1, 2, 8, 9

10, 9, 8, 1, 3, 7,

11, 7, 4, 5, 7,

12, 2, 9

13, 1, 6, 4, 1, 8, 9

14, 9, 4, 5,

15, 5,

16

17

18

19, 9

Stem and Leaf Plot of
hair count data of hairs
on the margin of the
first true leaf of
RBR, WL1-2071

$n = 29$, $\bar{x} = 11.9$, $r = 125$, $S = 27$.

- Stem & Leaf plots of hair counts on the margin of the first true leaves of the P2, population, WL1-2014, (n=25), the purple, Pan(8), hairy, Hir(9), [x=115], male parent in the cross with a green, *anl*, hairless, Hir(1), [x=0], male sterile, *mst2*, female population, W1-2025, (n=25), and also hair counts of the F1 progeny of the cross.

RBR notes
012008 Pttw

- inheritance of Hir
- data from 111707 Pttw, hair counts on margin of 1st true leaf of Pttw lot. W1-2014 Hir (9). = P₂ in cross
- stem + leaf plot by decade frequency
- range 77-147 = 70, $\bar{x}=115$, S=18
- plot

7: 7, 9,
8: 7,
9: 8, 9,
10: 1, 9, 0, 5
11: 3, 5, 8, 9, 8
12: 2, 9, 9, 3, 6, 8,
13: 1, 4, 3, 4,
14: 7,

- data from 111707 Pttw, hair on marg. 1st true leaf (W1-2025(8) x W1-2014(9), F₁ Hir (1/4), $\frac{and}{-}$ $\frac{mst2}{+}$
- range 1-87=86, $\bar{x}=48$, S=26
- plot

0: 1, 8,
1: 2, 6, 1,
2: 5, 2,
3: 2, 7,
4: 4, 6,
5: 6, 5, 9,
6: 7, 9, 1, 2, 2, 0,
7: 3, 5,
8: 5, 0, 7,

- Stem & Leaf plots of hair counts on the margin of the first true leaves and of the segregation of the green plant marker, *anl*, of the F2, population, WL1-2066, (n=50), from the cross between the purple, Pan(8), hairy, Hir(9), [x=115], male parent with a green, *anl*, hairless, Hir(1), [x=0], male sterile, *mst2*, female population, W1-2025, (n=25). F2 was produced by intermating, the F1 without selection for hairiness.

RBR notes

012008 Pttw

- inheritance of *Hiv*

- data from 011408 Pttw, hair counts on 1st true leaf margin of Pttw 1-2066 (20), F₂ *Hiv* (1/2), $\frac{anl}{+}$, $\frac{mst2}{+}$

- stem + leaf plot by decade frequency.

- range = 0-120, $\bar{x} = 33$, $s = 33$

- plot.



- Notes on growing and data taking of WL1-2066, F2 anl, Hir(1/9), mst2, plus a few notes, on the bottom, of other crosses that were made, 012308PHW, with the F2 plants after the hair counts were made.

RBR notes

010808 PHW

- Inheritance of Hir, anl, mst₂
- 1-2066 (20)m, F₂ anl, mst₂, Hir(1/9), [1-2025], $\frac{10}{26}$, $\frac{11}{9}$, $\frac{11}{12}$.
 - 123107 PHW, S \equiv 50, 1/C, 2, 5x5 mcs, seed generally well formed + BSC
 - 010808 PHW, fert, g $\frac{50}{50}$, V 8, after $\frac{4}{50}$ V 25, $\frac{16}{50}$ anl, anl
 - 011408 PHW, sampled + pressed. 1st true leaf of 50 plants, see separate sheet for data
 - 011508 PHW - photos of plants
 - 011608 PHW - fert.
 - 011908 PHW, scored plants for mst₂, anl, leaf lamina necrosis, LLN, Hir(0-9) on plant minus 1st true leaf.
 - curled hairs on 1st true leaf (see sep page 011408 PHW)
 - 012008 PHW - stem + leaf plots of P₂, F₁, F₂ + frequency histograms of decade classes.
 - 012308 PHW - cross mst₂, anl Hir(0) x BRU-1
 - mst₂, anl, Hir(0) \ominus = 1-2123(1) x 1-2122(2)
 - mst₂, anl, Hir(6) - red \ominus = 1-2124(4) x 1-2122(2)
 - mst₂ anl Pan(6) Hir(0) \ominus = 1-2125(1) x 1-2122(2)
 - mst₂ anl Pan(0) Hir(6) \ominus = 1-2126(4) x 1-2122(2)

- Segregation data of 50 plants of WL1-2066, F2 *anl*, *Hir*(1/9), *mst2*, scored for the expression of green, anthocyaninless, *anl*, and purple, *anl*+, male sterility, *mst2*, and hair count on the margin of the first true leaves. Plus notes on LLN, leaf lamina necrosis, a physiological disorder of some leaves on some plants. Note: when growing RBR as a population, one often observes the occurrence of 'new' phenotypes such as LLN. Such is the nature of working at the population level with this self incompatible, 'out breeding' organism. In some respects, at the population level, RBR resembles the genetic structure of human populations.

RBR notes - M011408 Pflanz
1-2066 F₂ *Hir*(1/9) *anl*, *mst2* [1-2025]

① Pla#	<i>anl</i>	<i>mst2</i>	<i>Hir</i> #	② Pla#	<i>anl</i>	<i>mst2</i>	<i>Hir</i>	#		
1	+	LLN	0	13	1	+	0	0		
2	+		0	0	2	+	-	0		
3	+		5	70	3	<i>anl</i>	3	44		
4	+	LLN	3	54	4	+	LLN	6	117	
5	<i>anl</i>	<i>mst2</i>	6	77	5	+	<i>mst2</i>	7	61	
6	+		0	6	6	+		6	38	
7	+		4	17	7	+		7	120	
X 8	+	<i>mst2</i>	2	5	8	+		4	68	
9	<i>anl</i>	<i>mst2</i>	3	28	9	<i>anl</i>		0	2	
10	+		4	29	10	<i>anl</i>		5	9	
11	<i>anl</i>		0	1	11	+	<i>mst2</i>	3	46	
12	+	LLN <i>mst2</i>		8	12	<i>anl</i>		0	0	
13	+		8	80	13	<i>anl</i>	<i>mst2</i>	7	72	
14	+		0	7	14	+	<i>mst2</i>	3	66	
15	<i>anl</i>		5	59	15	+	<i>mst2</i>	0	0	117
16	<i>anl</i>	<i>mst2</i>	5	81	16	<i>anl</i>		9	89	
17	<i>anl</i>		3	23	17	+		5	67	
18	<i>anl</i>		0	4	18	+		0	1	
19	+	LLN	0	0	19	+		7	90	
20	+		6	3	20	+		0	17	
21	+	<i>mst2</i>	0	0	21	+	<i>mst2</i>	0	6	X
22	+		2	28	22	+		3	31	
23	<i>anl</i>		5	4	23	+		5	83	
24	+		0	0	24	+	LLN <i>mst2</i>	4	32	✓
25	<i>anl</i>		0	1	25	<i>anl</i>	<i>mst2</i>	0	0	✓

$r_1; n=25, \bar{x}=24, r=80, s=28$ $r_2; n=25, \bar{x}=42, r=120, s=38$
 LLN = Leaf Lamina Necrosis, $\sum r_i r_i = n = 50, \bar{x} = 33, r = 120, s = 33$

- Graphic characterization of data of plant color and of hair counts from populations of P1(maternal), P2(paternal) parents, & F1 & F2 progeny, scored for the expression of green, anthocyaninless, *anl*, and purple, *anl+*, and hair count on the margin of the first true leaves.

