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

Growing system 5x5 MCS

F2,*anl*,Hir(1/9),*mst2*.1st 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)m], 10/26 11/13 11/17
- 123107 PHW, S ≈ 100, ~4/C, 2, 5×5 MCS, BSC
  - seed generally weak - some full, most ~50%, partially filled
- 010508 PHW, many weak seedlings, V≤5, transplanted most vigorous to fill 'empty' cells in 5×5 MCS.
- 010808 PHW, fert, counted good V≥6 + weak seedlings; g 56/100, 40/56 V≥6, 16/56 V≤5, rogued 6
- 011508 PHW, fert
- 011908 PHW, 1st plants flowering = 19 DTF
- 012108 PHW, pollinated
  - several Mst plants, massed with MEts
  - rogued ~15 off type plants, severe stunting + yellow
- counted Hir on 1st true leaves - pressed leaves of intermated plant of population ≈ 32
  - 6/32 are Mst.
- 012608 PHW - 26/32 m are 1-2129 (26)m, Hir(9), Pan(7), [1-2071], 12/31, 1/19 1/26, Hir=[x̄=]
- 1-2130(6)m 1-2129(26) Hir(9), [x̄=119], Pan(7), [1-2071]
- 013008 PHW count Hir

leaf#	#Hir	leaf#	#Hir	leaf#	Hir#	leaf	Hir#	leaf	#Hir	leaf#	Hir
1,	122	7,	136	13,	91	19,	199	25,	98		
2,	109	8,	134	14,	155	20,	144	26,	117		
3,	108	9,	76 rolled edge lft.	15,	149	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,	135	12,	74	18,	138	24,	92	30,			

n = 29, x̄ = 119, r = 125, s = 27

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

RBR notes 013008PHW

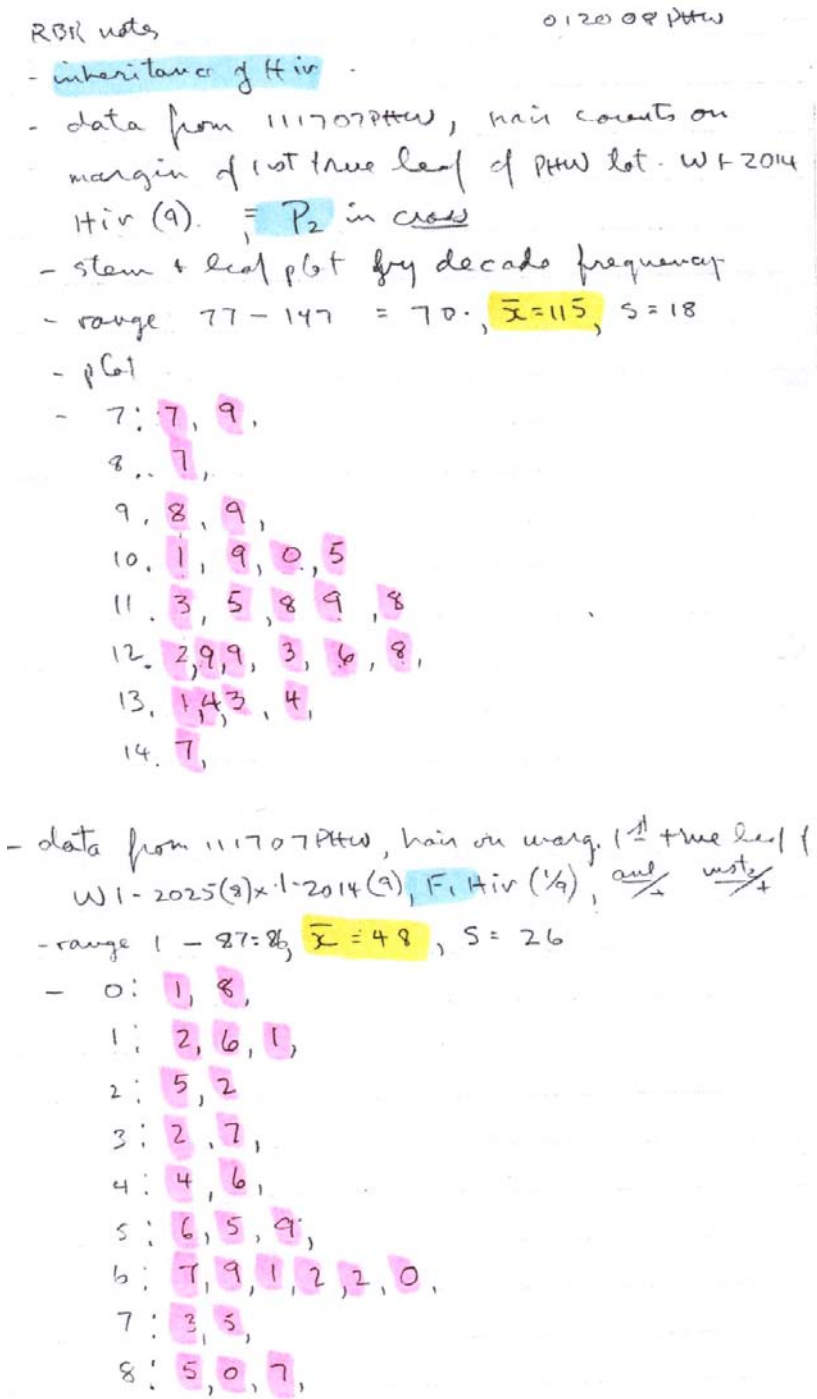
Inheritance of hairs, Hir.

- 1-2071 (22)m, Hir(9), Pan(7), [1-2014(44)m]
- grew & pol ~ 32 pl. 1/c, 5"x5" MCS
- pollinated them as 1-2130(6) m 1-2131(25)
- sampled 1st true leaf + pressed at 21DAS
- 013008PHW counted Hir
- S+L of counts

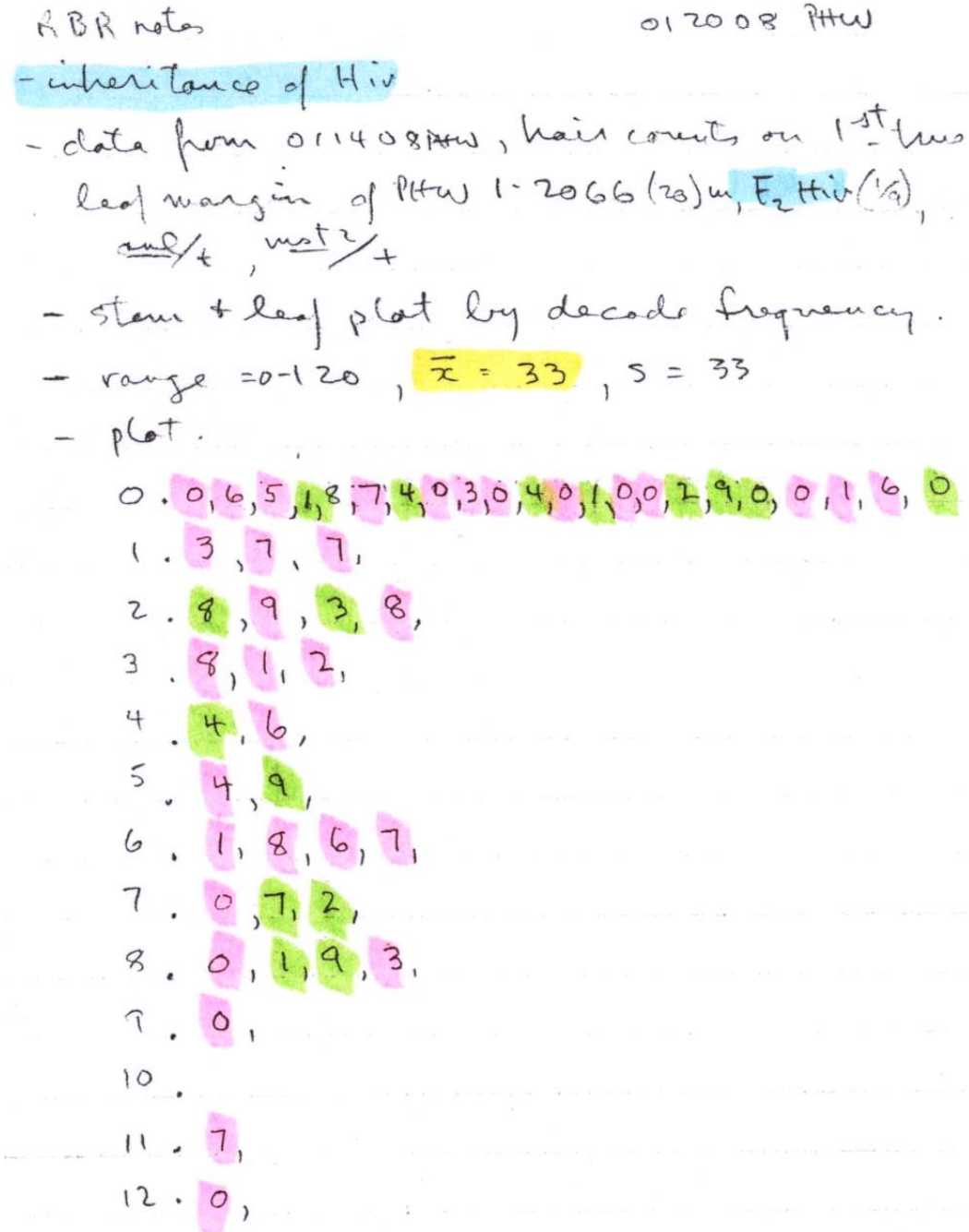
7	6, 4,
8	0
9	1, 2, 8, 9
10	9, 8, 1, 3, 7,
11	7, 4, 5, 7,
12	2, 9
13	1, 6, 4, 1, 8, 9
14	9, 4, 5,
15	5,
16	
17	
18	
19	9

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

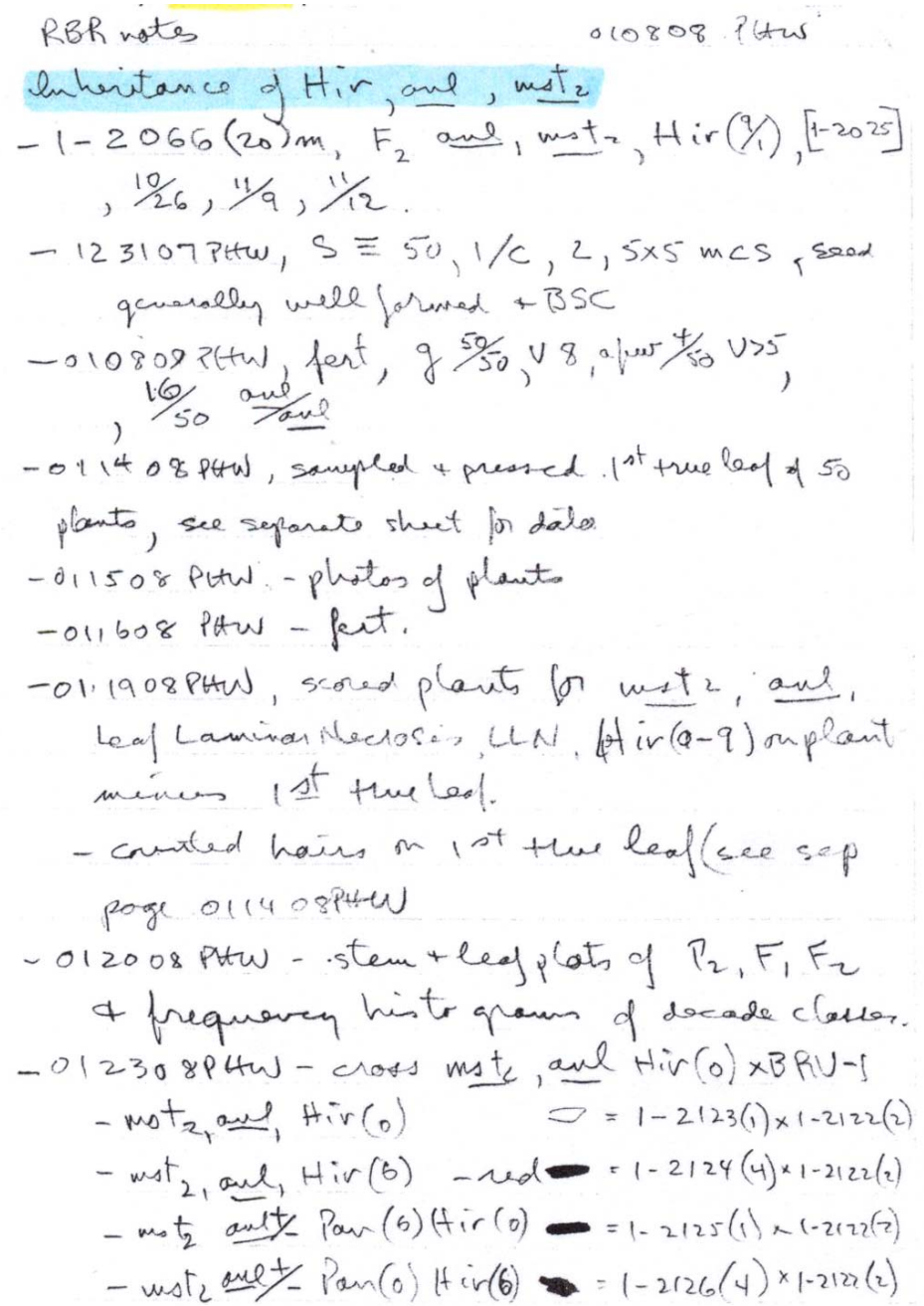
- Stem & Leaf plots of hair counts on the margin of the first true leaves of the P2, population, WL1-2014,(n=25), the purple,Pan(8), hairy, Hir(9),[x=115], male parent in the cross with a green, *anl,* hairless, Hir(1),[x=0], male sterile,*mst2,* female population,W1-2025,(n=25), and also hair counts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



- 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.



- 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.

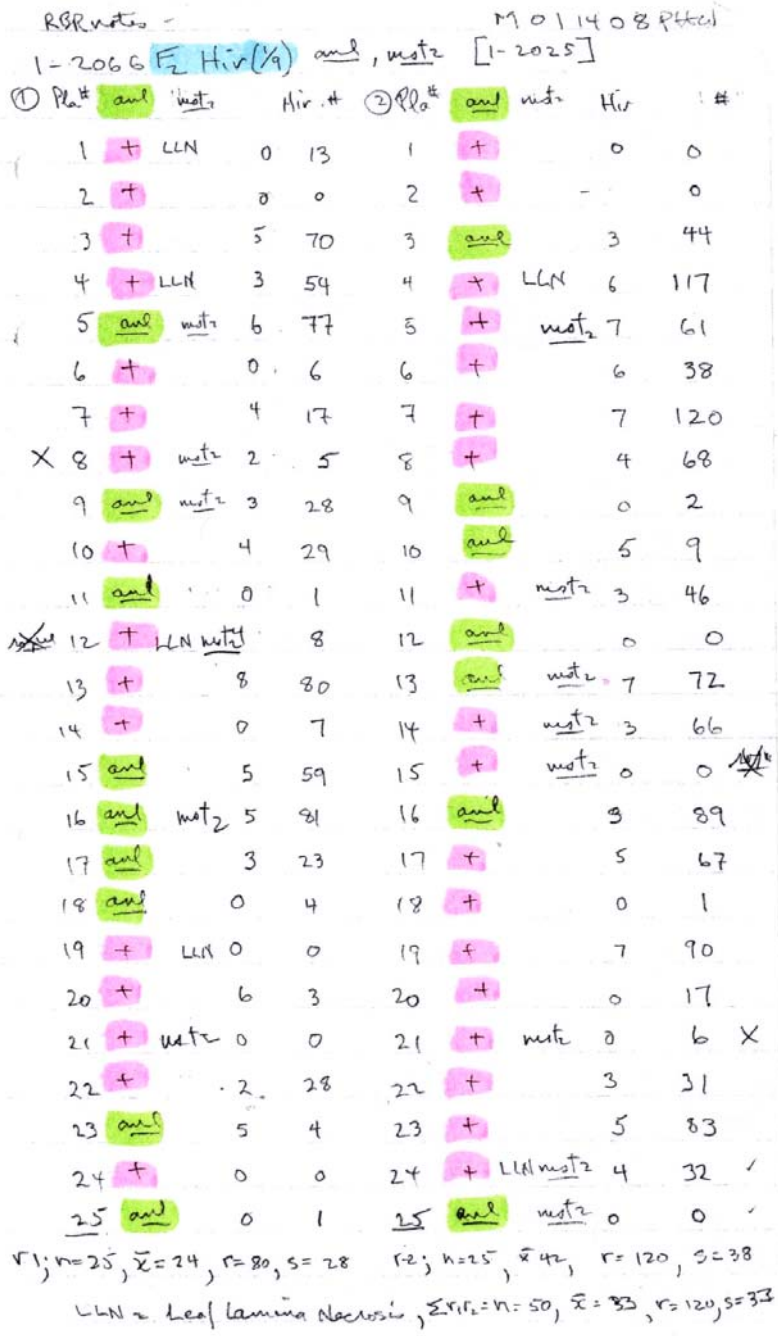


RBR notes 010808 PHW

Inheritance of Hir, anl, mst2

- 1-2066 (20)m, F_2 anl, mst2, Hir(9/1), [1-2025], 10/26, 11/9, 11/12.
- 123107 PHW, S ≡ 50, 1/C, 2, 5x5 mcs, seed generally well formed + BSC
- 010809 PHW, fert, g 50/50, V 8, apex 4/50 V55, 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 Laminar Necrosis, LLN, #Hir(0-9) on plant minus 1st true leaf.
- counted hairs on 1st true leaf (see sep page 011408 PHW)
- 012008 PHW - stem + leaf plots of P_2, F_1 F_2 + frequency histograms of decade classes.
- 012308 PHW - cross mst2, anl Hir(0) x BRU-1
  - mst2, anl, Hir(0) = 1-2123(1) x 1-2122(2)
  - mst2, anl, Hir(6) - red = 1-2124(4) x 1-2122(2)
  - mst2 anl+/- Par(6) Hir(0) = 1-2125(1) x 1-2122(2)
  - mst2 anl+/- Par(0) Hir(6) = 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.



- 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.