

Lectin from Wisteria sinensis absorbed by muscovy, turkey, ringneck doves, or pigeons is still reactive with guinea fowl, hog, rabbit erythrocytes, and those of some juvenile ringneck doves, 1/64 titer.

1. Only 2 doves >6 weeks of age possessed W+ reactivity, therefore, we concluded that it is a juvenile character.

2.

Number of Matings	Adult Parents Type	Progeny			Total
		+	±	-	
26*	- x -	46	20	200	266
<u>80</u> 106	- x -		7	452	<u>459</u> 733

*matings that produced one or more W+ progeny at 2-6 weeks of age.

$66/266 = .248 \sim 25\%$ or $\frac{1}{4}$; a typical frequency for a Mendelian recessive.

If so, an unbiased sampling of $7/97 W+ = q^2$; $q = \sqrt{.072} = .27$ W+ gene frequency

3. Also if so, W+ doves as juveniles, mated as adults, should breed true; i. e. all progeny of appropriate age should be W+!

6	+ x +	0	0	41	41
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Therefore, assume W+ is a "non-Mendelian character". It still may be gene controlled in production, but some unknown switch mechanism under environmental control is responsible for timing of specific carbohydrate presence on cell surface.

4. W+ reactors exhibit a clustering effect!

A. Seasonal? No. See two columns at right

B. "Near neighbor" analysis in egg clutches? See reverse.

J	5
F	4
M	2
A	2
M	5
J	5
J	3
A	4
S	2
O	5
N	6
D	3

Cluster effect of W+ offspring from W- parents contiguous or "near neighbor" analysis

<u>Mating Number</u>	<u>W+ Individual Squab Letter</u>	<u>Phenotype of Progeny</u>			<u>Total</u>	
		<u>W+</u>	<u>W+</u>	<u>W-</u>		
512	W ₃ , X ₃ , Y ₃	3	·	20	23	
528	U, V·, X	2	1	14	17	
532	Q·, T, U, V·, X	4	1	6	11	
539	G, H	2	·	11	13	
566	L, M	1	1	2	4	
J128	D, E, F, Y	4	·	7	11	
JD37	U, ·, W	2	1	16	19	
JD38	W, X	<u>2</u>	·	<u>3</u>	<u>5</u>	
		20	4	79	103	24/103 = .233
527	S, X, Q ₂ ·, S ₂	4	3	8	15	
J120	G, U, V	3	·	11	14	
JD36	G ₂ , J ₂ , L ₂ , M ₂ , N ₂ , Z ₂	<u>5</u>	<u>4</u>	<u>8</u>	<u>17</u>	
		12	7	27	46	19/46 = .41
				106	149	43/149 = .288
15 more matings	each	1	O, or 1 many			