

Chi-square GOF test: pea flower color

The FREQ Procedure

type	Frequency	Percent	Test Percent
red	705	75.89	75.00
white	224	24.11	25.00

observed percentages

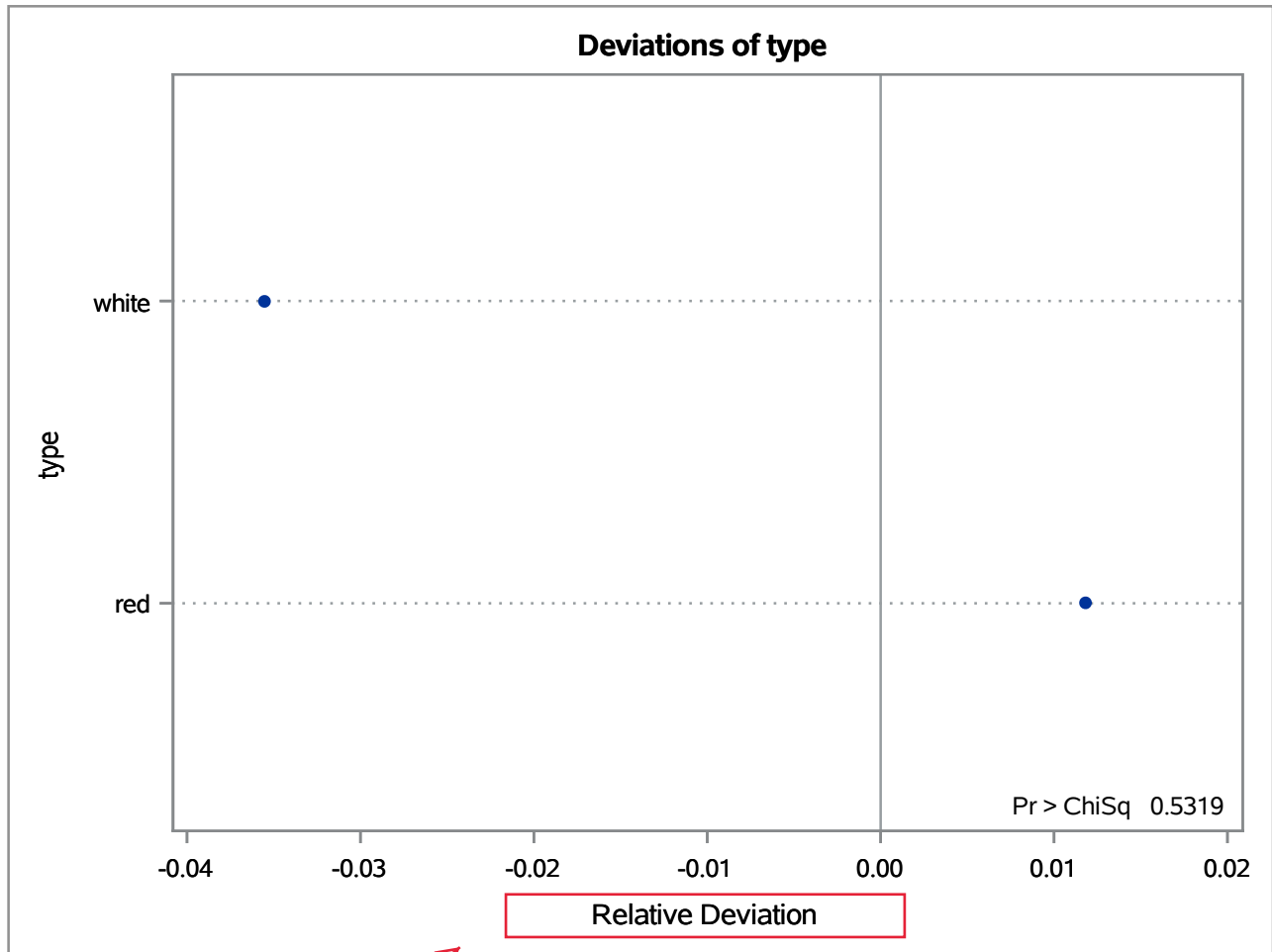
hypothesized percentages
3:1

Chi-Square Test for Specified Proportions

chi-square test statistic

Chi-Square	0.3907
DF	1
Pr > ChiSq	0.5319

Large P-value = .5319 shows no evidence that the probability of red is not 3/4



Sample Size = 929

These are the relative deviations $(\hat{p} - p_0)/p_0$, where \hat{p} is the observed proportion and p_0 is the hypothesized proportion

The FREQ Procedure

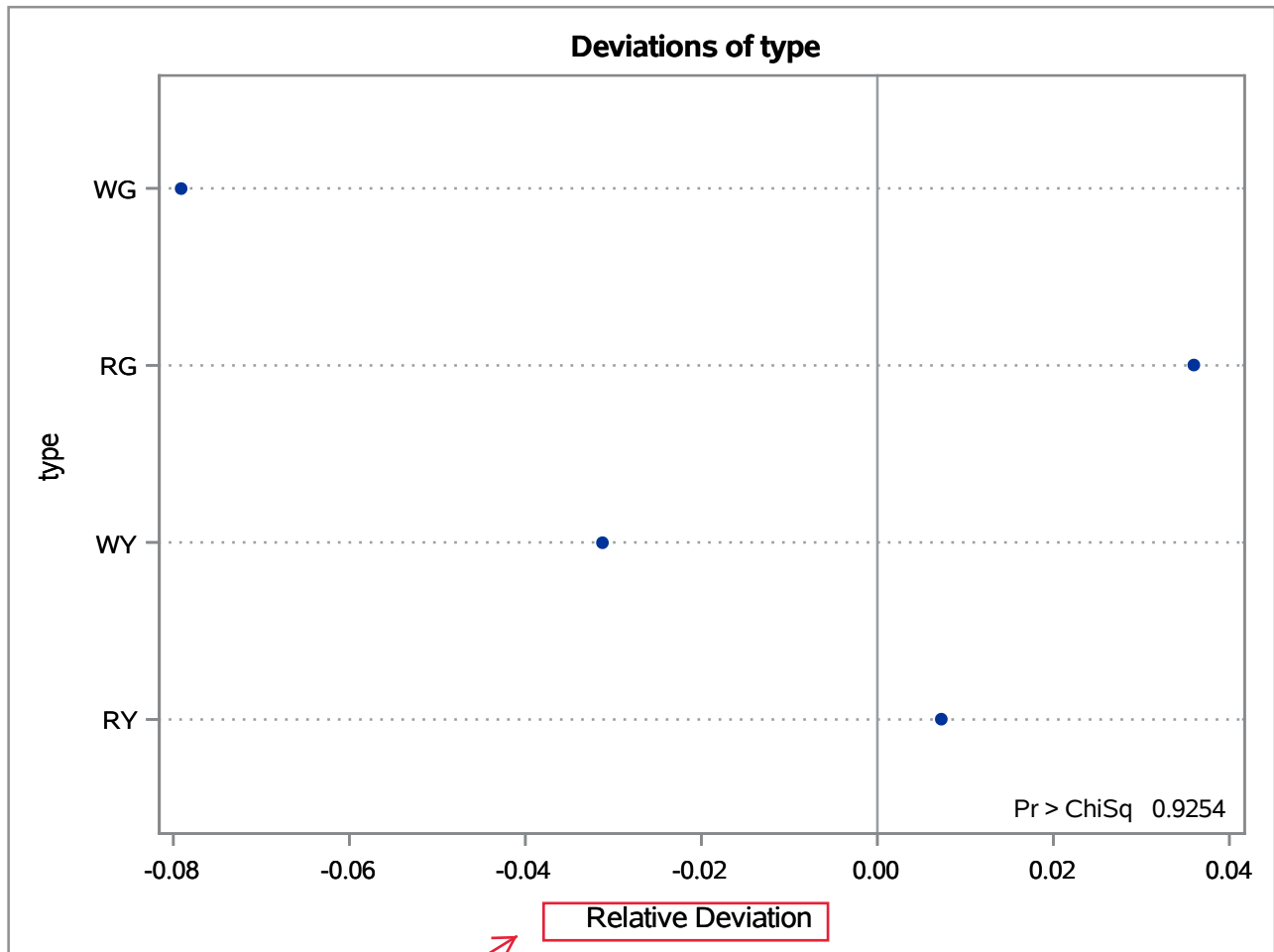
observed percentage

type	Frequency	Percent	Test Percent
RY	315	56.65	56.25
WY	101	18.17	18.75
RG	108	19.42	18.75
WG	32	5.76	6.25

hypothesized percentages
9:3:3:1

Large P-value .9254
shows no evidence against the
hypothesized 9:3:3:1 model

Chi-Square Test for Specified Proportions	
Chi-Square	0.4700
DF	3
Pr > ChiSq	0.9254



Sample Size = 556

These are the relative deviations $(\hat{p} - p_0)/p_0$, here \hat{p} is the observed proportion and p_0 is the hypothesized proportion

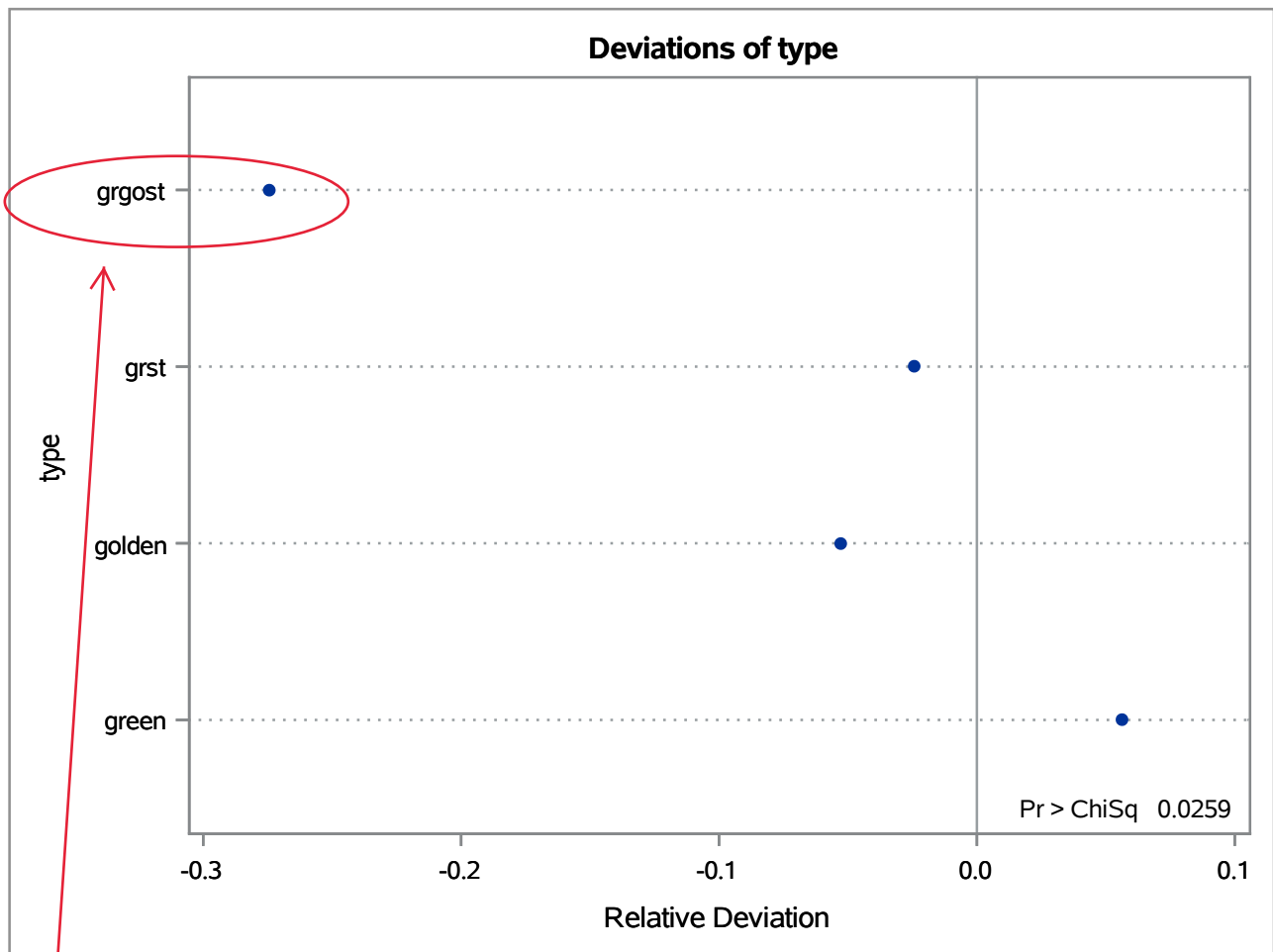
The FREQ Procedure

type	Frequency	Percent	Test Percent
green	773	59.42	56.25
golden	231	17.76	18.75
grst	238	18.29	18.75
grgost	59	4.53	6.25

hypothesized percentages
9:3:3:1

Chi-Square Test for Specified Proportions	
Chi-Square	9.2714
DF	3
Pr > ChiSq	0.0259

Small P-value .0259
shows strong evidence against
the hypothesized 9:3:3:1 model



Sample Size = 1301

The number of plants with green golden striped leaves is much smaller than the model predicts! See the text for discussion of this point. See also the next page of the output.

Chi-square GOF test: maize leaf type (omitting green-golden-striped)

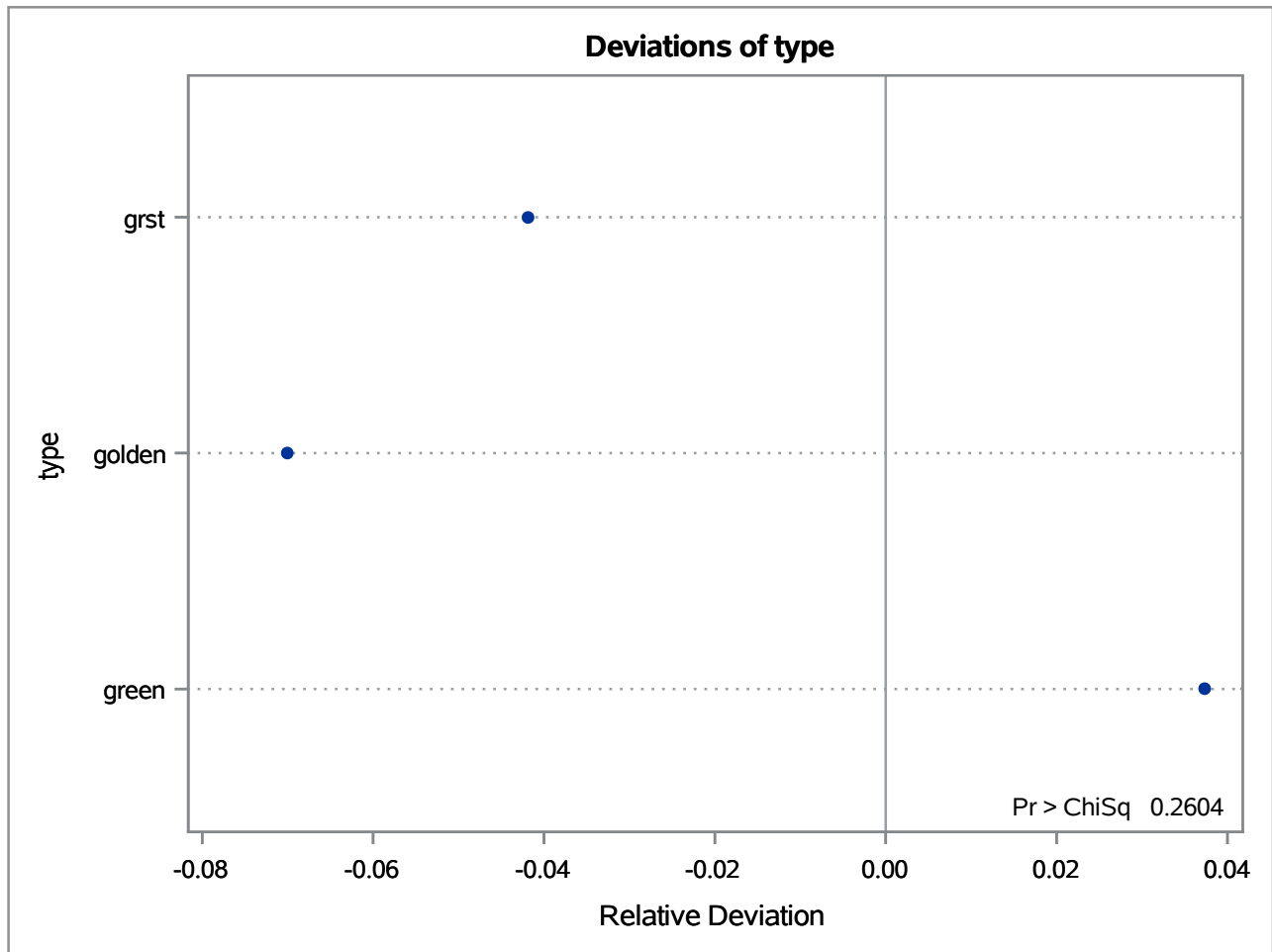
The FREQ Procedure

type	Frequency	Percent	Test Percent
green	773	62.24	60.00
golden	231	18.60	20.00
grst	238	19.16	20.00

This large P-value .2604 supports 9:3:3 part of the model and the claim that the reason the 9:3:3:1 model does not fit properly is due to the unexpectedly small number of green golden striped plants

Chi-Square Test for Specified Proportions	
Chi-Square	2.6914
DF	2
Pr > ChiSq	0.2604

modified hypothesized percentages to test the 9:3:3 part of the model.



Sample Size = 1242