

SUMMARY OF VIGNA YIELD REGRESSION:

1.) ORIGINAL DATA SET: 34 cases

2.) CULLING THE DATA SET:

a) INVALID DATA:

- questionable data for yield, density or area
- cases where sample did not come from the Vigna field but from a nearby field with similar history
- fields less than 0.5 ha in area
- fields with yields estimated prior to sacking (no actual cases)
- fields with incomplete data for yields, area, disease or pH

b) EXCLUDED CATEGORIES OF VALID DATA:

- fields with disease
- fields with germination problems reported (no actual cases)
- fields with rabbit attack of intensity 3 or 4

3.) ADJUSTMENTS AND TRANSFORMATIONS OF DATA: none

4.) VIGNA YIELD REGRESSION:

$$\begin{array}{l} \text{Vigna yield} \\ \text{(kg/kg seed} \\ \text{sown)} \end{array} = 20.81 \cdot \text{pH} - 84.40$$

$$p = 0.0535$$

$$r = 0.8726$$

$$r^2 = 0.7614$$

$$SE = 13.895$$

$$N = 5$$

SCATTER PLOT ACTUAL VS PREDICTED

N= 5 OUT OF 6 S003.YLD-KGSD VS. S600.PR.09USE

YLD-KGSD

66.000

+

Vigna actual yields vs yields  
predicted from regression

\*

+

53.933

+

+

41.867

+

+

29.800

+

\*

\*

+

17.733

+

+

5.6667

++

\*

9.2422

19.231

29.220

39.209

49.198

PR.09USE

59.186

predicted yield (kg/kg seed sown)

actual yield (kg/kg seed sown)

VIGNA

Disease multiplier ← 1.0  
Rabbits multiplier ← 1.0

SEEDS  
(kg/hectare)  
 $\bar{X} = 8.10$  kg/ha  
SD = 7.82

Regression  
Predicted  
Yield  
(kg/kg seed  
sown) ←  $20.81 * pH - 84.40$   
SE = 13.90

DISEASE  
?

T

14.3%

Disease  
Multiplier  
← 0.09

F

85.7%

