KGML notebook

2025-03-12

Conversions

solving for the conversion factor from plot yield to kilograms per hectare

$$y = mx$$

where y is grain yield in desired unit, likely kg ha

where x is grain yield in grams per harvest area

where m is the conversion factor

Fert

corn and soy yields

$$\frac{\text{grain yield (g)}}{\text{plot}} \times \frac{\text{plot}}{4.572\,m^2} \times \frac{10000\,m^2}{1\,\text{hectare}} \times \frac{1\,\text{kg}}{1000\,\text{g}} = 2.187227$$

$$\text{plot yield (g plot}^{-1}) \times 2.187 = \text{plot yield (kg ha}^{-1})$$

$$y = 2.187\,x$$

IWG yields

$$\frac{\text{iwg weight } g}{\text{sample area}} \times \frac{\text{sample area}}{1.672\,m^2} \times \frac{10000m^2}{1hectare} \times \frac{1kg}{1000g} = 5.98$$

$$y = 5.98x$$

Issues with data

ORG (RESOLVED)

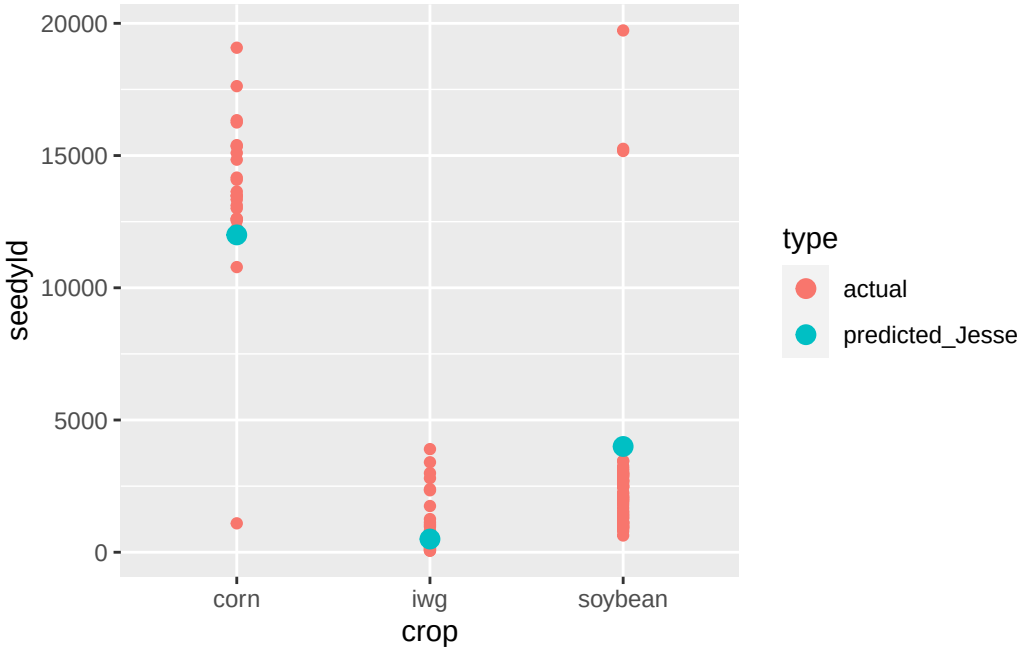

Table 1: estimated seed yield by crop in kg ha. I used a conversion from bushels acre yields + test weight to kg ha

Crop	Jesse	ChatGPT	Google
	seed yield kg ha	seed yield kg ha	seed yield kg ha
corn	12000	7000-12000	7000
soybean	4000	2000-45000	4000-11000
wheatgrass	500	600	600