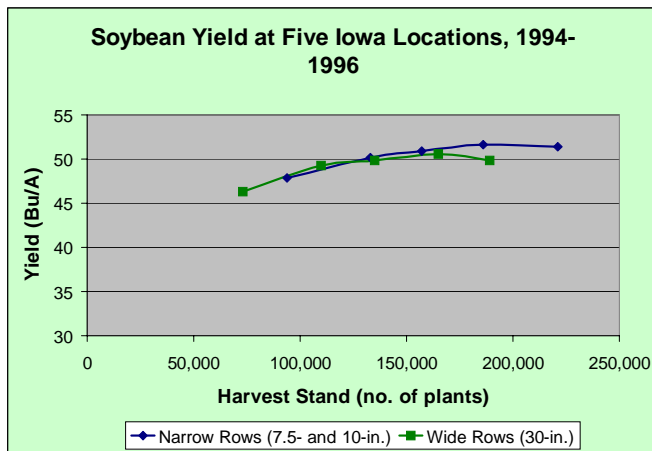


Agronomy 212 – Crop Growth, Productivity, and Management

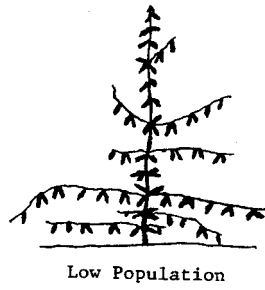
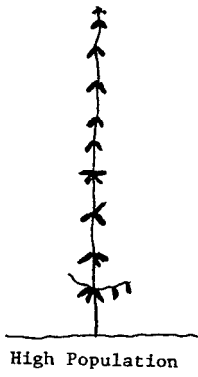
Soybean - Stand Density

Soybean Stand Density



Yield Compensation

Yield Component	Plant Population	
	Lower	Higher
Yield per plant		
Branches		
Pods/plant		
Pods on lower nodes		
Seeds/pod		
Seed size		



Compensation Has Limits

Yield Component	Plant Population	
	Lower	Higher
Seed cost		
Plant height		
Lodging		
Canopy disruption		
Pod height		
Branching		
Weeds		
Harvest losses		

Soybean Seeding Rate

$$\text{Seeds/foot of row} = \frac{\text{seeds}}{\text{acre}} \times \frac{1 \text{ acre}}{43,560 \text{ ft}^2} \times \frac{1 \text{ ft}}{12 \text{ in}} \times \frac{\text{row spacing (in)}}{1}$$

Rate (seeds/A)	Row Width (inches)		
	30	15	10
	----- (seeds/ft. of row) -----		
	7.2	3.6	2.4
	8.6	4.3	2.9
	9.5	4.7	3.2
	11.5	5.7	3.8

Rate (seeds/A)	Stand Density	
	Seedlings	Mature plants
	----- Plants/A -----	
125,000	112,500	
150,000	135,000	
165,000	148,500	
200,000	180,000	

Should soybean be planted at lower seeding rates?

Soybean Seeding Rate Recommendations

Summary