



Quick Guide for Soybean Production in the Texas Panhandle and South Plains

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Soybean Variety Classification

- ✓ **Indeterminate** - Plants bloom and produce pods while still growing vegetative plant parts. Group 00 - IV soybeans are mostly this type.
- ✓ **Determinate** - Plants finish vegetative growth, then go to reproductive stage. Group V - VIII soybeans are mostly this type.
- ✓ More than ½ of soybeans in Texas are Group IV (primarily indeterminate).

Planting

- ✓ Planting date ranges from May 15 to July 1, depending on the variety.
- ✓ Rate 120,000-130,000 seed/acre (approximately 56 lbs of seed per acre depending on seed size).
- ✓ If planting with a drill, increase seeding rate to 150,000-190,000 seed/acre.
- ✓ Seeding rate more critical on indeterminate non-branching varieties.
- ✓ Soil temp 60° is optimum. Germination will occur at 52-53° - but slow.
- ✓ Early planting seldom an advantage for determinate varieties.

- ✓ Yield advantage for early planting of indeterminate varieties.
- ✓ If a determinate variety is planted too late pods may develop close to the ground, making harvest difficult.

Variety Selection

- ✓ Will depend on planting date. A group IV bean generally works the best. However, group III or V beans can be considered. Lots of variability in Group IV class (as much as 25 days in maturity).
- ✓ Plant soybeans with different maturity lengths when planting large acreage. This will help with harvest.
- ✓ Consider water availability (shorter maturing varieties will require less water).
- ✓ Make sure variety is adapted to this area.

Row Spacing

- ✓ Narrow rows promote quicker canopy formation.
- ✓ Branching type bean (bushy) will aid in canopy formation on wide rows.
- ✓ Multiple rows/bed is option.

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Inoculum

- ✓ Inoculum - Live bacteria; must take care of it. Hot, dry conditions and sunlight will kill bacteria.
- ✓ Takes 3-4 weeks for soybean plant to begin fixing N. In some instances, soybeans may benefit from 15-20 lbs N applied at planting.
- ✓ Must coat seed with inoculum. A sticker such as Coke works well while also serving as a sugar source for bacteria.
- ✓ Avoid Captan use because it injures bacteria. Try to avoid long-term exposure to other fungicides.
- ✓ Granular inoculum costs more (\$5.00/A) but works well when put in seed furrow with seed.
- ✓ Slurry mixes cost \$1.00 for 1 X rate.
- ✓ Consider 2X inoculum rate if land has not been planted to soybeans for a number of years.
- ✓ Commercial liquid inoculums are available that contains stickers. Only use 1X rate of this material to avoid over wetting the seed.

Land Management

- ✓ Must avoid plow plan, soybeans will utilize H₂O from at least 5 ft.

Fertility Needs for 40 Bu. Bean/Acre			
Element	Stubble	Seed	Total
N	80	150	230
P ₂ O ₅	20	35	55
K ₂ O	50	55	105
Mg	15	7	22
S	10	4	14
Zn	0.15	0.04	0.17

- ✓ Iron chlorosis may be problem in calcareous soils or high pH's. Best to choose a variety that can tolerate soils low in iron.
 - If a foliar iron application is made, good coverage is essential. Usually one application is sufficient for beans to overcome iron deficiency.

Irrigation

- ✓ Yield not limited with 20-24 inches of water and a full profile at planting.
- ✓ Water requirement will be somewhat dependent on maturity length.
- ✓ Greatest irrigation efficiency was 0.7 of PET at Halfway.
- ✓ At Halfway, no difference between watering interval of 3.5 days to 14 days as long as adequate amount of water was applied.

Critical Growth Stages

- ✓ Vary with plant growth habit - (indeterminate vs determinant)
- ✓ Bloom
- ✓ Seed fill
- ✓ It takes approximately 35 days to go from bloom to mature seed. Must keep wet during this period.
- ✓ Disease pressure is minimal on new soybean land.

Harvest

- ✓ Harvest at 13% moisture. Soybeans split and shatter as moisture drops below 10%.
- ✓ Reduce cylinder speeds to 450 to 500 rpm, slightly higher on high moisture soybeans.
- ✓ Reduce field speeds to 3 mph.
- ✓ Evaluate harvest loss when setting combine. Four beans per square foot is equal to one bushel/acre.