

SUNBOW FARM 2010 BEAN AND GRAIN RESEARCH REPORT
by Harry MacCormack

Project Practices

We dry-farmed five bean varieties this season. We planted on two-foot centers. The dry farming and wider spacing seem to be typical of the practices of the larger farms in the bean and grain project. We previously used 18 inch centers.

We bought a 1 hp Honda cultivator-tiller to use between the bean rows. We also did one hand weeding between plants. These practices confront weed conditions on both homestead and very large farms. We observed between plant weed problems on two larger farms' bean plantings this season. We were able to get pretty clean weed control with two cultivations and one hand weeding between plants.

When the beans were up and standing several inches high, we used a foliar application of compost tea with fish and kelp. All beans responded with a growth spurt (even in cool damp weather). We did this again ten days later. This growth spurt ended with blossoming on all plants at about the same time. That was our total fertilization program. I would highly recommend this practice for any size dry or irrigated bean planting.

Compost tea has been shown to bring grapes to full maturity 1-2 weeks earlier than grapes that did not receive compost tea applications. The same appeared to be true with our dry beans. All five varieties were dry in the field before the first rains hit at the end of August. This is crucial for commercial production.

We also grew eleven very small experimental patches of varieties of beans provided by Andrew and Sarah of the Seed Ambassadors Project and Open Oak Farm. These eleven varieties were intentionally irrigated. We found one, maybe two, that might be worth commercial production. We will do further evaluation on four or five of these varieties next season, on larger plots. Fertilization and cultivation were the same as the dry-farmed beans.

As a general concept for home gardens and homestead plots of beans, one cup of dry beans weighs about ½ lb. In our pressure cooker we usually use 2 cups for a cooked batch. For two older people that batch usually lasts a week. Which means we are eating 52 batches or about 52 lbs. of beans per year. We alternate bean varieties. But for storage purposes, 25 lbs. of each variety would give us a

two-year supply when thinking about food security. You'd want to have a little more if you are saving your own seed for planting. As you will see from our data, germination rates weren't that great where we counted actual seeds planted.

Project Data

Fava Beans - 10' x 80' : 10 rows

- planted February 15
- harvest 1st stage green bean May 12, 2nd stage June 10 – July 15, 3rd dry stage July 27
- yield, green stages 50 + lbs.
- yield, dry stage 78 lbs.
- comments: highly recommended for homestead use and storage
- may be useful as a commercial bean for small farms marketing locally. We sell any that we have available at \$2 lb.

Garbanzo Beans – 29' x 100 ' : 13 rows

- Blanca variety planted March 24, 2 rows: @300 seeds = 123 plants
- harvest August 20 : @ 38 – 70 beans per plant
- yield 22 ½ lbs

- Blanca planted April 23, 2 rows @ 300 seeds = 139 plants
- harvest August 20 : @ 40 – 97 beans per plant
- yield 16 ½ lbs

- Willow's seed variety planted April 23. 1 row
- harvest August 20
- yield 5 ½ lbs
- much smaller plants than early Blanca planted same day

- Blanca planted May 14, 8 rows
- row 1 = 398 seeds @ 175 plants, @ 10 -15 beans per plant
- row 2 = 385 seeds @ 207 plants, @ 10-15 beans per plant
- harvest August 23

- yield 28 pounds

Garbanzo Project Total yield 72 ½ lbs.

We did a lot of observation on our Garbanzo grow outs. Conclusions :

- (1) Garbanzos can be planted March – April using either a very shallow hoe-trench/ no till method, or simply pushing them into wet soil. They could be drilled by larger farms as soon as equipment can be on soil.
- (2) Early planting yields much larger plants, more beans per plant, and far fewer weeds.
- (3) Garbanzo's are chick peas, and because of leaf structure can withstand frosts. Lentils may show similar results.
- (4) Early planting requires slightly more seed expense, offset by yield and plants that could be combined straight-up, before fall moisture.

Red Chile Bean 16' x 130', 6 rows

- planted May 14
- harvested August 26
- yield 30 lbs.
- comments: very small plants this year, perhaps because of the cool, damp, season

Black Bean (from Al Dong 2009 harvest) 22' x 130 ' , 10 rows

- planted May 14, row 1 = 895 seeds, row 2 = 928 seeds
- harvested August 26
- rows 1 and 2 = 16 ³/₄ lbs.
- total yield 71 lbs.
- comments: fairly large plants, but dry beans a little smaller when dry-farmed compared to previous irrigated grow-outs

Pinto Bean – Sunbow 2006 seed 17' x 100' = 9 rows

- planted May 14 (using one row seeder)
- harvested August 23
- yield 46 lbs (lower than in other years)
- comments : first beans out of ground in May planting; very small plants but loaded with large pods; would be very difficult to cut with a windrower or to combine straight – up without sucking up soil. Shattered beans re-germinated in September rains and were still growing into late October frosts. Very hardy.

IRRIGATED TEST PLOT BEANS

- planted May 24

- harvested August 24 : various stages of dry-down

- 1- Buckskin : 60 seeds =42 plants - 1 lb 7 oz. yield. Nice yellow color. Good genetics. Even dry-down on plants. Commercial possibility.
- 2- Early Warwic : 60 seeds = 47 plants - 1 lb. 8 oz. Uneven dry-down in field.
- 3- Brightstone : 30 seeds = 28 plants – 1 lb. 10 oz. Uneven dry-down in field.
- 4- Peregrin (Oregon Heirloom) 60 seeds – 1 lb 8 oz. Genetic variability in seed color. Rangy plant. Slower dry-down. Poor thrashing characteristics.
- 5- Nodak Pinto (San Juan Island Strain) “extra early” : 100 seeds = 63 plants – 1lb. 6 oz. Early ripening claim isn’t different from our Pinto strain.
- 6- Early Waric: 60 seeds = 51 plants – 1 lb. 8 oz. Large plant. Uneven ripening in field. Tendency for pods to drop seed in the field.
- 7- Indian Woman Yellow: 60 seeds= 45 plants - 2 lbs. 15 oz. Some crossing from previous proximity to black beans. Nice compact plants with good yields and excellent dry-down and threshing characteristics. Could be a good commercial yellow bean.
- 8- Flor de Mayo (Warren Creek Strain): 60 seeds= 45 plants – 2 lbs. 2 oz. red, 3 oz. yellow-white, 2 oz. black -white. Shattered in the field. A few Green plants at harvest, or green stem on dry plant.
- 9- Andino (Warren Creek Strain) : 60 seeds = 45 plants – 2 lbs. 4 oz. Pods never dried. Beans did dry in October under cover of hoop house.
- 10- Black Co Co: 60 seeds = 44 plants – 5/8 lb. Never dried- down in field or under cover. Low yield per plant. Not a bean for this climate.
- 11- Hei Mei Cho Soybean: 2 100 ‘ rows. Did not want to come up in cool late Spring weather. Never became large plants, which they have for us in the past. Never matured in field. Finally dried-down in hoop house late October.

Concluding Remarks regarding eleven test plot bean varieties:

This was a very strange growing year. Some of these beans may have been chosen because of their viability during hotter drought years. The two most impressive beans from this group of tests were Indian Woman Yellow, and possibly Buckskin, which yielded lower, is a little paler in color, but has a similar stature to Indian Woman Yellow.

We will grow out several of these varieties next season on larger plots and do flavor tests along with yield and other characteristics.

GRAINS AT SUNBOW IN 2010

We grew very small patches, over half of which froze out with December 2009, 8 degree weather. From those small patches we harvested the following in August:

-Golden Rye – 34lbs.

-Maris Widgeon Wheat 11 ½ lbs. (this English wheat never came up until after the cold had passed. Interesting.)

-Pearl Triticale – 47lbs. (Some drown-out in a very low area)

-Canadian Triticale - @300lbs. from two different areas, one quite low.

-Marks Red Wheat mixed with Lithuanian Dark Rye - 50 lbs. An interesting accident resulting from planting grain behind grain which shattered . Might be an interesting unique bread mix.

-Marks Red Wheat mixed with Maris Widgeon – 32lbs. Another interesting mix of wheat, both good bread wheats.

- Tim Peters Red Wheat (not cleaned)

-797 Wheat mixed with Tim Peters Perennial Rye – (not cleaned)

Conclusions:

1. Plant before October 15, and hope that severe cold doesn't hit until late December.
2. If you plant grain after grain, shattered seed will come up in the second planting. Interesting mixes result.
3. Organic grain fields will have a lot more weed seed to clean out.