Bt Corn Economics Trial

Julian L Henry

USDA –ARS SIMRU

Introduction:

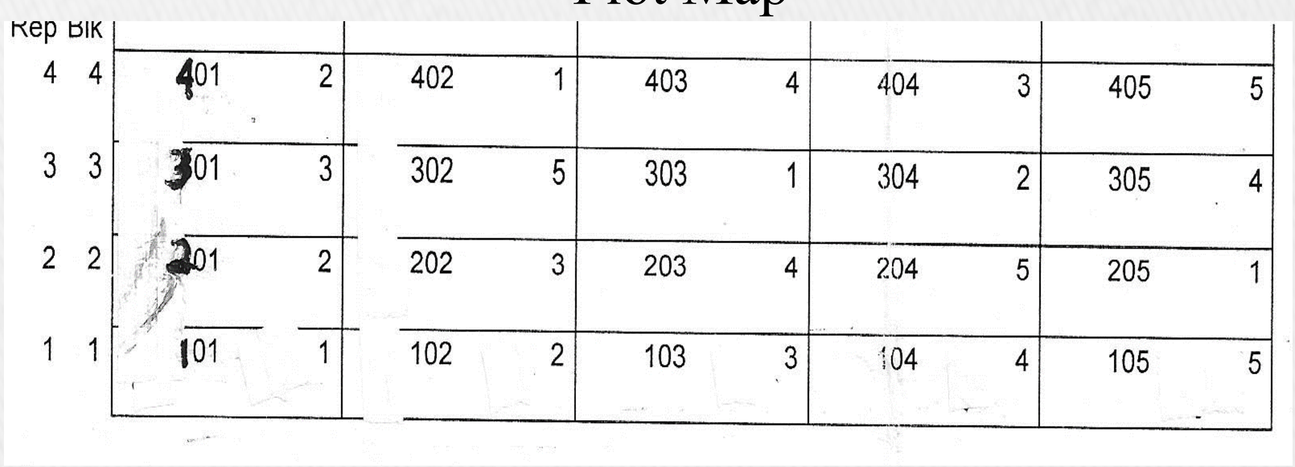
Five varieties of corn seed, which contained one, two, or no Bt genes, were randomly planted with a cone planter at a rate of 2.8 seeds per foot in fifty foot plots with ten foot alleys for a total of twenty plots. We elected to do a later planting date also with the same setup. Each plot was checked at the milking stage and also at the soft dough stage by pulling ten ears per plot. Moth traps were placed around the test to monitor for southwestern corn borer populations as well. All the input costs (herbicides, fertilizer, insecticides, etc…) were recorded and will be used to determine the economic benefits of growing Bt corn.

Materials and Methods:

SEED VARIETIES

- 1). DKC66-94RR2
- 2). DKC66-96VT3P
- 3). P1319R
- 4). P1319HR
- 5). PP1319VYHR

Plot Map



Rep	Blk										
4	4	401	2	402	1	403	4	404	3	405	5
3	3	301	3	302	5	303	1	304	2	305	4
2	2	201	2	202	3	203	4	204	5	205	1
1	1	101	1	102	2	103	3	104	4	105	5

Each seed variety was planted four times. Forty ears of corn were checked per variety per check date. To pull the sample ears of corn it simply took some old fashion elbow grease since we had to physically walk in and out of each plot. Then we checked each ear of corn individually:

- At **ca. milk stage**: for level of infestation, larval size, and lep species composition infesting ears.
- At **ca. dough stage**: to determine level of damaged kernels.

Results:

Bt Corn Economics Trial Result Totals per Forty Ears

Seed Variety	Milk Stage Number of larvae & Average size	Dough Stage Damaged Kernals and Average Total
DKC66-94RR2	19 Medium	587 / 147
DKC66-96VT3P	15 Medium	257 / 64
P131R	28 Large	709 / 177
P1319HR	27 Small	484 / 121
PP1319VYHR	4 Small	166 / 42