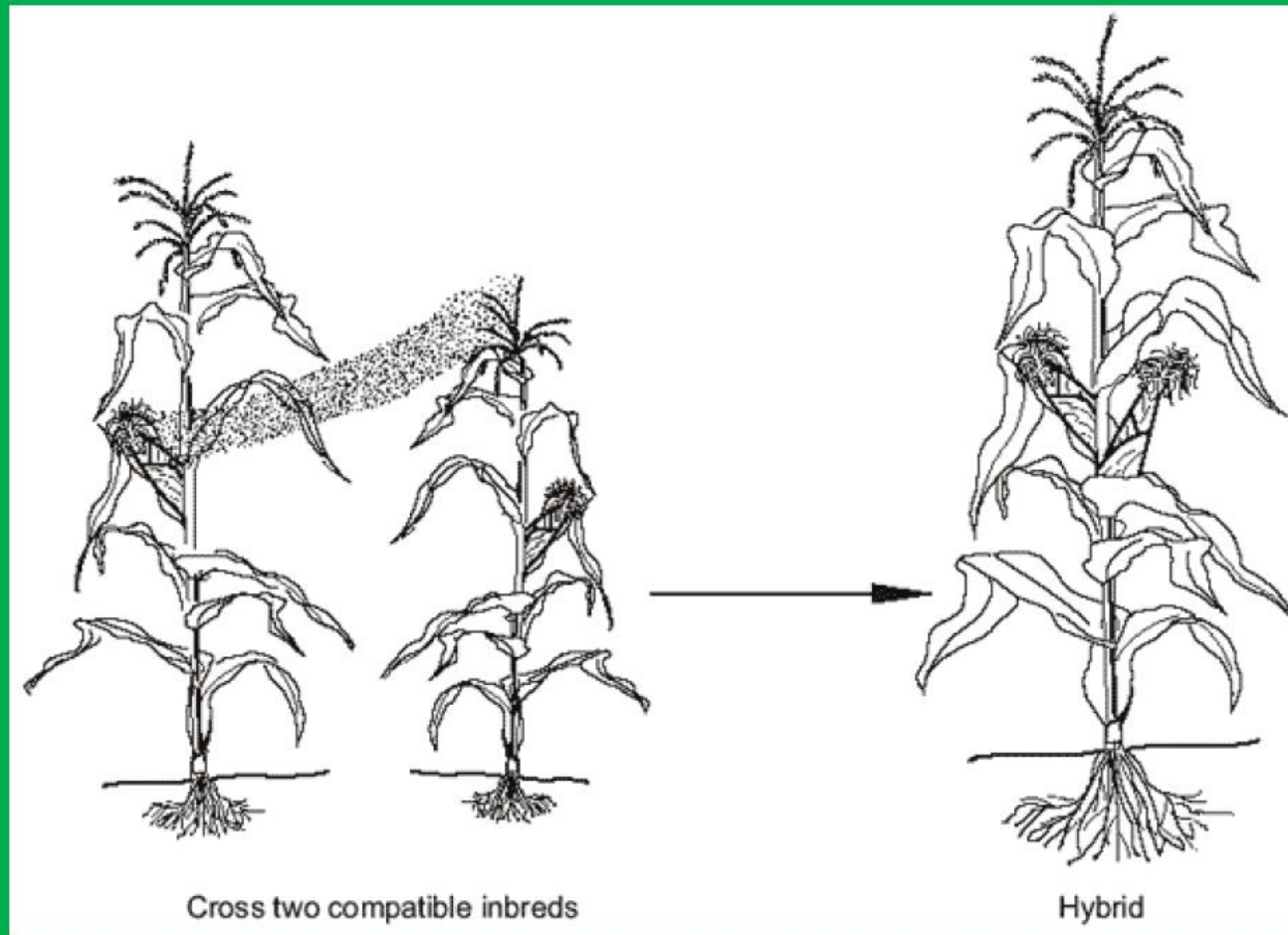


# Developing Affordable Seed Corn for On Farm Production and Sales

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Hybrids yield well, most OP corn often doesn't

## Hybrid Corn: Can we save this?



Hybrids yield well, most OP corn often doesn't

**How do we get a diverse population that is worth growing and closer to our goals?**

**“Composites”**

**“Synthetics”**

$$\mathbf{F2 = F1 - ((F1-P)/N)}$$

Wright's formula (1922)



Field selection is the only way to be sure of good seed corn adapted to Colorado conditions. Robert Moreland of Sligo, Weld County, selecting registered Minnesota 13 seed.

“results indicate definitely also that synthetics may be expected to perform better than the open-pollinated variety from which they are selected and in some comparisons equal to or better than comparable double crosses [hybrids].”

H.K. Hayes, 1963  
A Professor's Story of  
Hybrid Corn

**An example of a “Synthetic”:**

**Pa91, B73, B84, B77**

**H100, Mo17, N152, B79**

**79% of best hybrid yield**

# Major Heterotic Groups in Modern Maize:

- B73
- B14
- B37
- Iodent
- Mo17
- Oh43
- Pioneer Mixed
- MN13
- Northern Flint

Averages across Sites from North Dakota to Vermont							
PEDIGREE	YIELD	RANK	LODGING	% MOIST	Y/M	%Cpro	%Cfat
B73s/Dairyland	155	6	4.0	20.4	7.52	9.45	5.23
B37s/Dairyland	133	12	2.3	21.0	6.39	9.68	5.55
Iodents/Dairyland	149	8	1.4	21.3	6.94	10.03	5.70
Pioneer Mixed/Dairyland	153	7	3.8	20.6	7.13	9.10	5.35
Mo17s/Dairyland	149	8	2.7	20.1	7.17	9.45	5.50
MN13s/Dairyland	129	16	3.9	19.7	5.99	9.48	5.13
EP1/CO255//Dairyland	109	22	3.8	20.1	5.31	10.43	5.68
80-1/No. 380//Dairyland	113	23	11.4	21.1	5.25	10.33	6.30
Pete Seeger Cross/Dairyland	114	22	5.7	19.9	5.35	9.85	6.13
Wachichu/Compton's Early//Dairyland	115	19	11.8	21.1	5.72	9.90	6.35
Dairyland/(FBHJ/Euro Flint S3)	116	19	3.8	19.6	5.66	10.15	6.23
ND2004/Dairyland	133	13	0.9	20.3	6.55	9.45	5.25
ND2006/Dairyland	115	20	7.9	19.3	5.70	9.93	5.25
(CG-BS16/Syn A-NL)/Dairyland	102	25	8.0	19.4	5.11	9.90	5.90
Cateto Cross/Dairyland	97	27	4.6	20.9	4.29	9.75	5.83

Averages across Sites from North Dakota to Vermont							
PEDIGREE	YIELD	RANK	LODGING	% MOIST	Y/M	%Cpro	%Cfat
NDBSK/Dairyland	130	14	4.6	22.1	5.70	9.63	5.90
Silver King/Dairyland	116	20	14.9	20.7	6.02	9.75	5.98
Dairyland/Cuzco Cross	118	18	12.7	25.8	4.75	9.68	5.50
Dairyland/Cacahuacintle Cross	115	20	16.1	22.6	5.40	10.40	6.10
Dairyland/Conico Cross	132	13	6.8	21.9	6.02	10.10	5.70
Sequia/Dairyland	111	22	7.4	20.7	4.84	9.40	5.80
Dairyland/Coroico Cross	125	15	2.1	22.8	5.92	10.25	6.50
Minnesota 13	137	11	8.0	19.0	7.27	9.63	5.03
Dublin	118	19	23.6	22.6	5.57	10.38	5.10
Stan's OP	147	8	5.9	19.7	7.75	9.15	4.85
Wapsie Valley	125	15	28.5	21.1	6.80	10.10	5.65
Tommy Boy	125	16	14.1	21.6	6.15	10.20	5.28
Dairyland	109	24	3.6	20.7	5.14	10.03	5.70
FDO 8833	203	1	1.6	19.6	10.64	8.13	4.50
FDO 8924	190	2	1.5	19.4	9.92	7.98	4.55