Optimizing Breeding Schemes via Simulations

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Previous

Stage	Yr.	Details
Breeding Crosses	Yr. 1	
Single Plant Selection	Yr. 2	
Progeny Row Stage 1	Yr. 3	•F2 •200 pops •PR
Progeny Row Stage 2		•F2:F3 •PR.
Preliminary Yield Test	Yr. 4	•1600 Entries •1 env. / 2 rep •Yield, Agro, G.Q.
Advanced Test (URN)	Yr. 5	•50 Entries •5 env. / 3 rep •Yld, Agro, GQ, Path
Advanced Yield (CA)	Yr. 6	•30 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Advanced Yield (CA)	Yr. 7	•3-5 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Foundation Increase	Yr. 8	

Current Trad

Stage	Yr.	Details
Breeding Crosses	Yr. 1	•300 new pops/yr. •Elite x Elite
Single Plant Selection		•F2 •200 pops •PR or GH Adv.
Progeny Row Stage 1	Yr. 2	•F2:F3 •20,000 rows •Visual/Obs.
Progeny Row Stage 2	Yr. 3	• F4 and F5 • 14,000 rows • Visual Sel
Preliminary Yield Test	Yr. 4	•2000 F2:4 Entries •2 env. / 1 rep •Yield, Agro, G.Q.
Regional Yield Test	Yr. 5	•200 F3:F5 Entries •4 env. / 2 rep •Yield, Agro, G.Q.
Advanced Yield Test 1	Yr. 6	•35 F4:F6 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Advanced Yield Test 2	Yr. 7	•10 F5:F7 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Pre-comm. Test	Yr. 7/8	•5-7 F6:F8 Entries •~25 env. / 3 reps •Yld, Agro, GQ, Path
Foundation Increase	Yr. 8	•Breeder seed with last year of testing

GS in F3

Stage	Yr.	Details
Breeding Crosses	Yr. 1	•300 new pops/yr. •Elite x Elite
Single Plant Selection		•F2 •200 pops •PR or GH Adv.
Progeny Row Stage 1	Yr. 2	•F2:F3 •20,000 rows •Visual/Obs.
Progeny Row Stage 2	Yr. 3	• F4 and F5 • 14,000 rows • Visual Sel
Regional Yield Test	Yr. 4	•600 F3:F5 Entries •4 env. / 1 rep •Yield, Agro, G.Q.
Advanced Yield Test 1	Yr. 5	•60 F4:F6 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Advanced Yield Test 2	Yr. 6	•15 F5:F7 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Pre-comm. Test	Yr. 6/7	•5-7 F6:F8 Entries •~25 env. / 3 reps •Yld, Agro, GQ, Path
Foundation Increase	Yr. 7	•Breeder seed with last year of testing

WGP: • 160 pops x 48 lines (8k lines)

GS in F2

Stage	Yr.	Details
Breeding Crosses	Yr. 1	•300 new pops/yr. •Elite x Elite
Single Plant Selection		•F2 •200 pops •PR or GH Adv.
Progeny Row Stage 1	Yr. 2	•F2:F3 •20,000 rows •Visual/Obs.
Regional Yield Test	Yr. 3	•600 F3:F5 Entries •4 env. / 1 rep •Yield, Agro, G.Q.
Advanced Yield Test 1	Yr. 4	•60 F4:F6 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Advanced Yield Test 2	Yr. 5	•15 F5:F7 Entries •8 env. / 3 rep •Yld, Agro, GQ, Path
Pre-comm. Test	Yr. 5/6	•5-7 F6:F8 Entries •~25 env. / 3 reps •Yld, Agro, GQ, Path
Foundation Increase	Yr. 7	•Breeder seed with last year of testing

HTP 1,200 h=0.40