Maizex Crop Planner – Corn

Year: **Producer:** **ON**

Farm	Field	Acres	Soil Texture	Previous Crop	Soil Test P	Soil Test K	Yield Est.	Hybrid	Seeding Rate	Nitrogen Applications		Weed Control	Foliar Fung.	Foliar Insect.
										Early	Late			

Notes, Questions, Action Items:

Hybrid	Target Populations (,000/ac)	Intensive Management Score	Hybrid	Target Populations (,000/ac)	Intensive Management Score
MZ 2495DBR	33-36	7	MZ 4092DBR	30-32	6
MZ 248X	30-32	6	MZ 4158DBR	34-37	8
E53G52 R	34-36	Not Rated	MZ 4280DBR	31-33	8
MZ 2655DBR	32-35	3	MZ 4368SMX	34-37	8
MZ 2810DBR	33-36	8	MZ 4343DBR	32-34	7
MZ 2812SMX	33-36	8	MZ 4525SMX	32-34	4
MZ 3033DBR	31-34	5	MZ 467X	33-36	7
MZ 305X	32-36	5	MZ 4676DBR	33-36	7
E 63G62 R	36-38	Not Rated	MZ 4623SMX	32-36	5
MZ 3144DBR	33-36	7	MZ 5165DBR	33-37	8
MZ 3216DBR	32-34	3	MZ 5134DBR	33-36	6
MZ 3397SMX	33-36	7	**Silage**	**Populations**	
MZ 342X	32-34	4	MS 7420R	28-30	-
MZ 3410DBR	30-33	4	MS 8088R	30-32	-
MZ 3522DBR	32-34	4	MS 9240EZR	30-34	-
E65G82 R	32-34	Not Rated	MZ 395X	30-32	-
MZ 3656DBR	33-36	8	LFG 8755R	27-30	-
E67H92 R	34-36	Not Rated	LFG 875	27-30	-
MZ 3818DBR	30-33	6	LF 8890SMX	30-32	-
MZ 3877SMX	32-35	7	LFG 9701R	28-32	-
MZ 3964DBR	34-36	8	LFG 995R	30-34	-
MZ 402X	32-34	8	LF 0284SMX	30-32	-

Note: For additional hybrid guidance refer to the Maizex Seed Guide or visit **www.maizex.com**

Relative Maturity Days Compared to Ontario Crop Heat Units			
RM Days	CHU (approx.)	RM Days	CHU (approx.)
80	2400	96	2900
84	2500	100	3000
86	2600	103	3100
89	2700	107	3200
93	2800	111	3300

Example: MZ**40**92DBR - add 60 to **40** to get 100 Days Relative Maturity
100 Days RM = 3000 CHU

Estimating Seed Count or Corn Plant Populations (Row Length Required for 1/1000 acre)			
Row Spacing	**Row Length**	**Row Spacing**	**Row Length**
38 inches	13 ft 9 in	22 inches	23 ft 9 in
36 inches	14 ft 6 in	20 inches	26 ft 2 in
30 inches	17 ft 5 in	15 inches	34 ft 10 in

Foliar Fungicides (Target: Ear Rots) Fusarium and Gibberella		
Product	Rate	Pre-harvest Interval
Caramba	404 ml/ac	20 days
Proline 480 SC	170 ml/ac	20 days
Miravis Neo	500 ml/ac	30 days

Note: These products will provide "suppression only" of the ear rot. Be sure to apply in a window where silks are emerged from the ear but before any silk "browning" has occurred.

Foliar Insecticides (Target: Western Bean Cutworm)		
Product	Rate	Pre-harvest Interval
Coragen	101-151 ml/ac	14 days
Decis 5.0 EC	100-120 ml/ac	1 day
Matador 120E	34-76 ml/ac	21 days
Voliam Express	200 ml/ac	21 days
Delegate	50-85 g/ac	28 days

Herbicide Strategies for Weed Control in Corn

Herbicide Treatments and Timings	Notes
***Premium Set-up Programs**: Intended for a two-pass system where soil applied herbicides provide early season weed control and where glyphosate tolerant corn allows for a post-emergence treatment of glyphosate to clean-up escapes and late emerging weeds.*	
1) Lumax EZ (1.36 L/ac) *(Pre)* + Glyphosate (*Post*) (1.0 L/ac)	Set-up rate for early season weed control only.
2) *Converge Flexx (89 ml/ac) + Converge 480 (440 ml/ac) (*Pre*) + Glyphosate (*Post*) (1.0 L/ac)	Not for sandy soil or sub-2% O.M.
3)	
4)	
***Economy Set-up Programs:** Same approach as above but with a lower cost pre-emerge approach for a more limited range of early season weed control.*	
5) Xtendimax (680 ml/ac)*(Pre)* + Glyphosate (1L/ac) (*Post*)	See all drift mitigation strategies. No residual grass control.
6) *Primextra II Magnum (1.0 L/ac) *(Pre)* + Glyphosate (1 L/ac) (*Post*)	Rate will be too low for nutsedge or heavy grass infestations
7)	
8)	
***Pre-Emerge Programs:** These programs are designed for maximum early season control with herbicide packages that have residual control for both broad leaf and grasses. Suited for conventional, non-herbicide tolerant corn.*	
9) Integrity (440 ml/ac) (*Pre*)	Do not use Integrity on sandy soils with less than 2 % organic matter.
10) Acuron (1.96 L/ac) (*Pre*)	Timing! Will not control grassy weeds that have reached the 2 leaf stage.
11)	
12)	
***Post-Emerge Programs:** These programs focus on post emerge applications of herbicides to control emerged weeds and in some cases provide residual control at the soil surface.*	
13) Marksman (1.0 L/ac) + Glyphosate (1.0 L/ac) (*Post*)	Timing is critical (i.e. 3 leaf corn, do not let crop and weeds compete).
14) Halex GT (1.7 l/acre) + Aatrex 480 (235 ml/ac) (*Post*)	Only for glyphosate tolerant corn. Apply up to 6th leaf stage corn.
15)	
16)	
***Additional Notes**: *Does not provide adequate control of glyphosate resistant Canada fleabane. Be sure to check out the PestManager App.*	

Attention: The herbicide options above are included only as examples of different approaches to weed control. Please consult OMAFRA Publication 75 and your local herbicide supplier for more details. Always follow label instructions.

Mixing Order - W.A.M.L.E.G.S. — Mixing order for tank mixes. *Concept: BASF (When in doubt consult the label)*

W Wettable powders, flowable (DC, DF, DG, DS, F, DF, Gr, SG, SP) > **A** Agitate, Anti-flowing compounds, buffers > **M** Microcapsule suspension (ME) > **L** Liquid and soluble (SN, SC, Li, Su) > **E** Emulsifiable concentrates (EC) > **G** High load Glyphosates > **S** Surfactants.

Corn Leaf Staging:

Method 1) Count a leaf when it is long enough to droop over and the tip no longer points vertical (used in OMAFRA Pub. 75).
Method 2) Count a leaf only when it has fully emerged and the “collar” at the bottom of the leaf is visible (often referred to as “V” stages).
Method 3) Count all corn leaves when the tip is visible and out of the whorl (frequently used in university reports).

Corn Grain Yield (bu/acre) (15.5%)	P Removal P_2O_5 lbs/ac	K Removal K2O lbs/ac
150	53	38
175	61	44
200	70	50
225	79	56
250	88	63
Corn Silage Yield (tonne/ac) (65%)	**P Removal P_2O_5 lbs/ac**	**K Removal K_20 lbs/ac**
18	65	153
22	80	188
26	95	222
30	109	256
34	123	290

Source: IPNI Nutrient Removal Calculator

Soil Test P (PPM) (Sodium Bicarb.)	P Recommended (P_2O_5) (lbs/acre)
6-7	80
8-9	62
10-12	44
13-15	18
16-20	18
21-30	18
31 - over	0

Recent research suggests that a base line P soil test of 20 PPM contributes to higher and more stable yields.

P fertilizer placement close to the seed can often stimulate early growth and increased yields across a wide range of P soil tests. (Rec. Source: OMAFRA 811)

Soil Test K (PPM) (Ammonium Acetate)	K Recommended (K_2O) (lbs/acre)
16-30	141
31-45	123
46-60	97
61-80	70
81-100	44
101-120	26
121 - over	0

Recent research suggests that a base line K soil test of 120 PPM contributes to higher and more stable yields.

Below 90 PPM K management that includes both broadcast and banded sources of K can improve yields. (Rec. Source OMAFRA 811)

Safe Rates for Banded Fertilizer in Corn (2 inch x 2 inch band) (Source: OMAFRA 811)		
Fertilizer Nutrient	30" rows	20" rows
	lbs./acre	
N as Urea	35	53
Other N sources	46	69
N, K and S combined when urea is the N source	70	105
N, K and S combined when N source is not urea	103	154

Examples: (based on 30" rows)

Based on the above guidelines no more than 76 lbs. of urea (35 lbs. N/ac; max) can be safely banded in a 2x2 configuration.

Fertilizer blend of 19-19-19 (when made with urea) would have a maximum safe rate of 184 lbs. per ace (35 N + 35 K = 70 lbs./ac; max).

Nitrogen Rate Considerations.

Base Price Assumptions: Corn = $4.85/ bu; Nitrogen: = $.50/lb of N

	Field A	Field B	Field C	Field D	Field E	Field F	Field G Ontario East of Kingston
Yield Expectation	205	180	220	220	205	205	205
Soil Texture	Loam	Loamy Sand	Clay loam	Clay loam	Loam	Loam	Clay loam
Previous Crop	Soys	Soys	Soys	Grain Corn	Red Clover	Wheat (Straw Off)	Soybeans
CHU Area	2950	2950	2950	2950	2950	2950	2950
Planting Time Total	160	154	179	221	115	175	147
Sidedress Total (60 lbs. N applied in Planting Window)	80	94	95	129	44	92	87

Notes: The above information is a guide; for assessing individual fields with the ability to change all the descriptions for those fields download the Maizex N Tracker from **www.maizex.com**. Soil nitrates taken in the June 10-20 window can also provide direction as to the amount of side dress or top dress nitrogen required in a given season. These values can also be entered into the N Tracker.