

PROPRIETARY

TAURUS AG MANAGEMENT

Phosphorus is important for the soil because it is part of plant cells, and a key macronutrient used in cell division and development. In furrow components added to canola seed like MAP or AMS can be toxic to it. Thus, controlled release amendments such as Synchro, Crystal Green and Premium Polysulphate may help to provide the seed with the P content it needs for growth. Two trials were conducted at the NPARA farm, a) two rates of Synchro (50, 100 lb acre⁻¹) and Crystal Green (76.5, 153.5 lb acre⁻¹) are compared to two rates MAP in canola, and b) two rates of Premium Polysulphate (100 and 200 lb acre⁻¹) are each combined with either two rates of Synchro (50, 100 lb acre⁻¹), two rates of Crystal Green (76.5, 153.5 lb acre⁻¹), and two rates of MAP (82.7, 41.34 lb acre⁻¹)

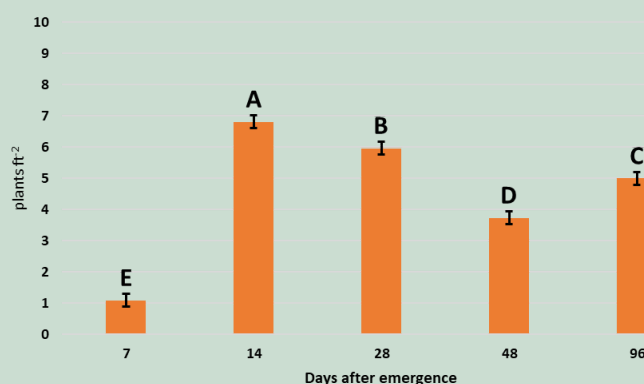
SYNCHRO

P-values and mean values of yield, test weight and oil content subjected to P amendments in furrow such as Synchro, Crystal Green and MAP at various rates

		Yield	Test weight	Oil
P-values		0.5971	0.3224	0.8102
		Mean values		
		Bushel acre ⁻¹	Pounds bushel ⁻¹	%
Treatment				
Product	lb acre ⁻¹			
No product		38.44	48.60	45.88
Synchro	100	40.17	52.06	47.40
	50	37.35	50.10	48.43
Crystal Green	153.5	36.22	50.10	47.98
	77.0	36.88	51.45	47.00
MAP	82.7	37.85	51.65	47.05
	41.34	35.78	49.30	47.83
Standard error		1.7	1.1	1.2

There was no difference between the effects of treatment products ($P=0.2559$) except for a difference in days to emergence ($PM<0.0001$). The greatest stand count number was found two weeks after emergence. From this point values decreased until harvest, where stand counts increased between 48 to 96 days after emergence (Figure 13). This is likely due to a rain period that occurred in early August (Figure B). This rain period caused the canola to turn green and delayed maturity until October when it was harvested. Yield, test weight and oil content were not significantly different among treatments.

Number of canola stands counted in plots subjected to P amendments in furrow such as Synchro, Crystal Green and MAP at various rates a week, two weeks, four weeks, forty eight days after emergence and shortly after harvest (96 days after emergence)



KEY POINTS:

- Synchro, Crystal Green and MAP products had the same effect in all canola stands as well as yield, test weight and oil content. Thus, an actual effect can be found if these products are combined with Poly as an in furrow amendment while seeding.

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TAURUS AG MANAGEMENT MIXED PRODUCTS

Number of emerging plants were greater in plots where no product was added (Figure 1-12). However, number of emergent plants is statistically the same as those found in plots where no product was added and in plots subjected to in furrow treatments of Poly 100 with Cristal Green (CG) 153.5, as well as Poly 200 with either MAP 82.7 or MAP 41.34 (Figure 1-12). These treatment plots had the greatest number of emergent plants in contrast to plots subjected to Poly 100 combined with either CG 76.5, or MAP 82.7 as well as Poly 200 combined with either Synchro 100, Synchro 50, and CG 76.5.

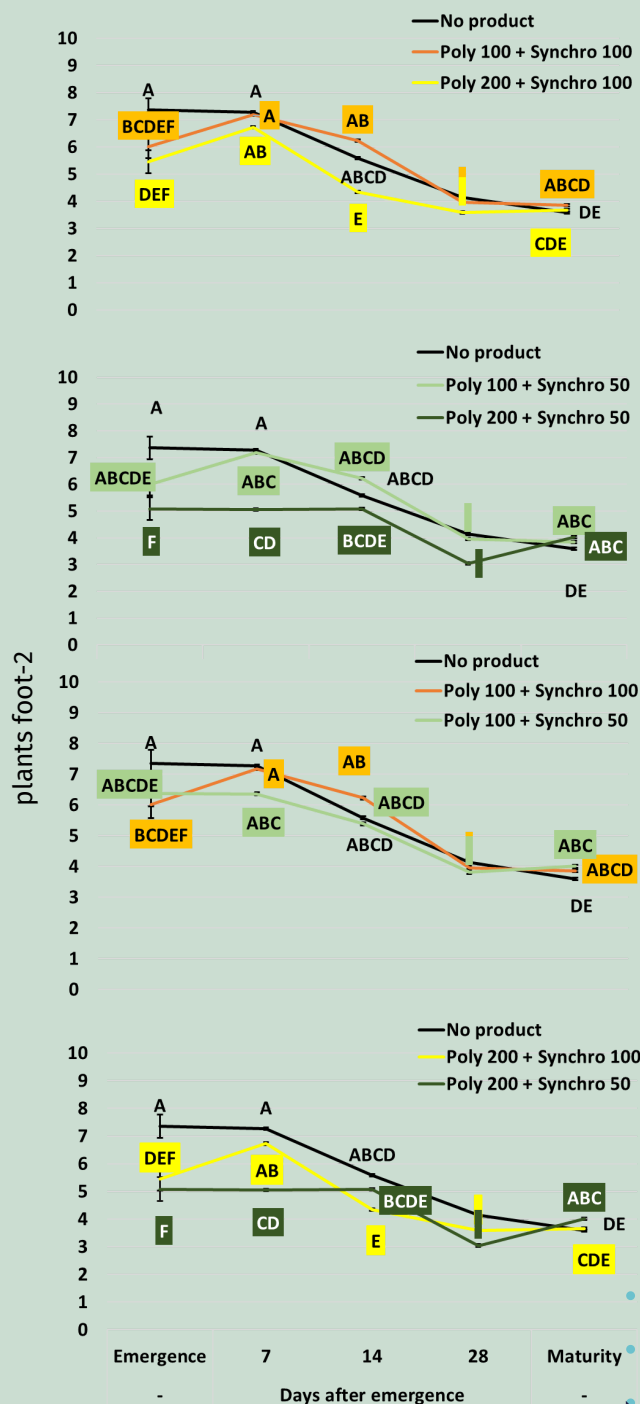
Seven days after emergence, plots with no product and plots subjected to Poly 100 mixed with either Synchro 100, or CG 153.5, as well as Poly 200 combined with either MAP 82.7, or CG 153.5 had more canola stands compared to Poly 100 combined with either MAP 82.7 as well as Poly 200 combined with either Synchro 50, or CG 76.5.

Two weeks (14 days) after emergence, canola plots seeded in furrow with Poly 200 mixed with either MAP 41.34 or CG 153.5 as well as Poly 100 combined with Synchro 100 had more canola stands compared to plots seeded in furrow with Poly 200 with either CG 76.5 or Synchro 100 as well as Poly 100 with MAP 82.7.

There were no difference in treatments a month (28 days) after emergence ($P=0.1557$). Maturity counts conducted three days after harvest showed that plots treated in furrow with Poly 100 combined with MAP 41.34, as well as Poly 200 combined with MAP 82.7 had a greater number of stands compared to Poly 100 combined with MAP 82.7 as well as Poly 200 with either Synchro 100 or CG 76.5 and the untreated control (no product added).

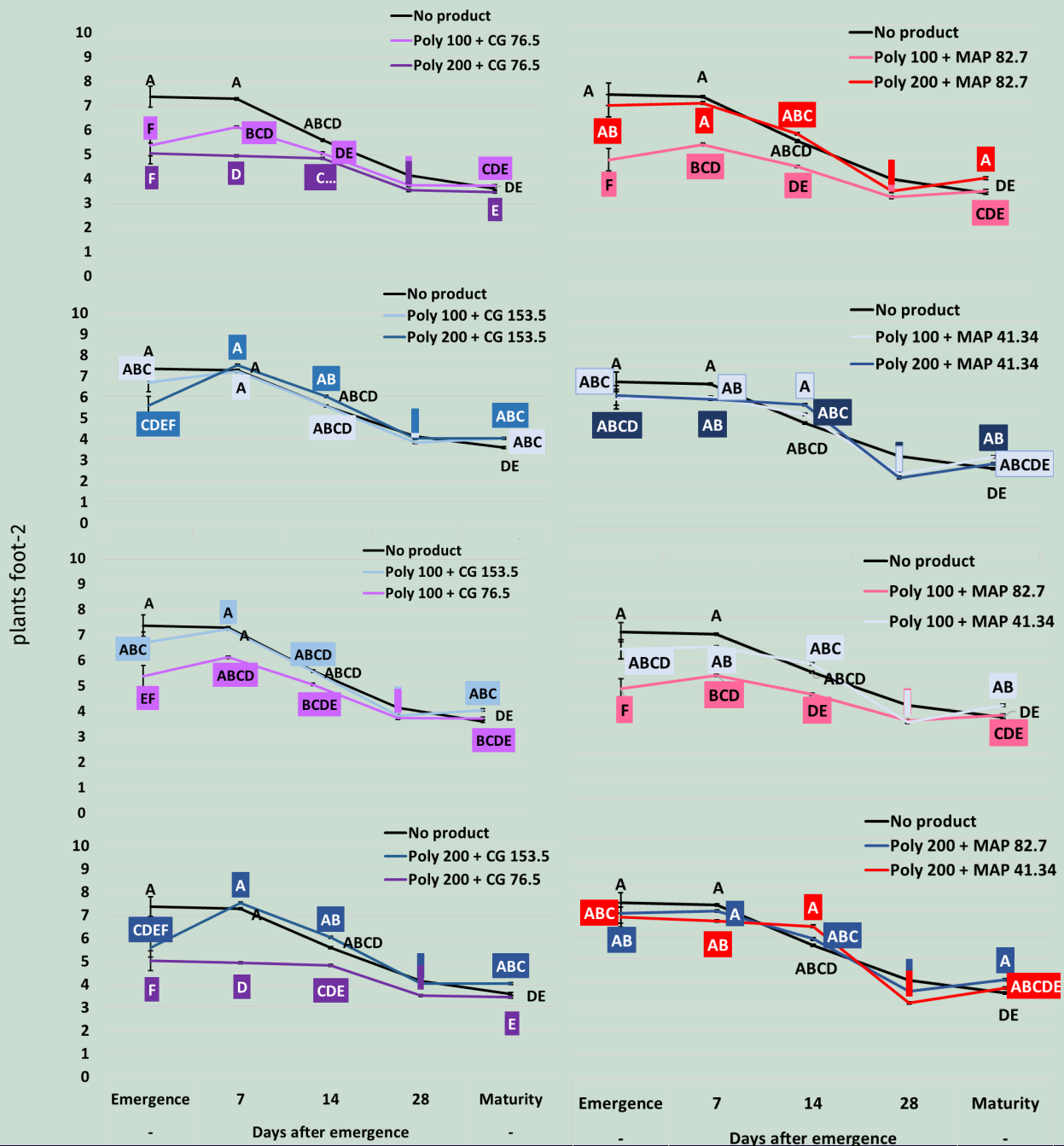
Canola plots sown in furrow with Poly 200 and MAP 82.7 produced the most yield. In furrow treatments with statistically equal yield were Poly 100 combined with either CG 153.7, Synchro 100, or MAP 82.7 (Table 1). In contrast, canola plots sown in furrow to both concentrations of Poly combined with Synchro 50 were the least yielding. There was no difference in test weight among these treatments ($P=0.7341$).

Oil content in canola seed was greater in canola plots sown in furrow to Poly 200 combined with either CG 76.5 or Synchro 100 compared to canola seed obtained from stands where no product was added.



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P-values and mean values of yield, oil content and test weight of canola subjected to different P soil amendments such as Poly, with either Synchro, CG or MAP combinations at various rates.

				Yield		Test weight		Oil	
				P-values		0.0062		0.7341	
						Mean values		0.1503	
Treatments				bushel acre-1		Pounds bushel-1		%	
Product	lb acre-1	Product	lb acre-1						
No product	0	-	0	32.24	BCD	52.15		48.03	C
Poly	100	Synchro	100	42.49	AB	51.25		48.15	BC
			50.0	33.82	D	49.90		49.58	ABC
		Crystal Green	153.5	42.27	AB	52.65		49.35	ABC
			76.5	37.44	BCD	51.50		49.33	ABC
		MAP	82.7	41.89	AB	50.85		48.25	BC
			41.34	37.95	BCD	51.40		48.68	ABC
Poly	200	Synchro	100	38.49	BCD	51.20		49.70	AB
			50	36.55	CD	50.90		49.33	ABC
		Crystal Green	153.5	38.03	BCD	53.45		49.35	ABC
			76.5	38.08	BCD	52.05		50.05	A
		MAP	82.7	45.69	A	53.05		48.18	BC
			41.34	40.22	BC	49.98		49.60	ABC
Standard error				2.0		1.3		0.8	

KEY POINTS:

- Poly 200 + MAP 82.7 is the best treatment to apply in furrow for more yield and Poly 200 CG + 76.5 is best to apply for greater oil content despite lower emergence and yield
- Canola plots seeded with Poly 200 combined with MAP 82.7 had
 - the most emergence by 7 days
 - the greatest number of stands
 - the highest yield
- Greatest oil content was found in canola sown in furrow with Poly 200 combined with CG 76.5.
 - Canola plots sown to this treatment had
 - least number of emergent stands
 - the least number of stands a week after emergence
 - Least number of mature stands.