



FALGRO TABLET PLANT GROWTH REGULATOR NOW REGISTERED FOR USE ON POTATOES

Gibberellic acid (GA) is a naturally occurring plant hormone, which is used to modify plant growth in the fruit and vegetable industry, when applied to Potato tubers FALGRO can effect dormancy and sizing profile. Research in Manitoba in 2001-2003 has demonstrated that applying a 10-15 ppm GA solution at a rate of 150 ml/100 kg of seed will increase tuber number and decrease the tuber size profile by 20-30% in Shepody potatoes.

This size difference is desirable in several markets

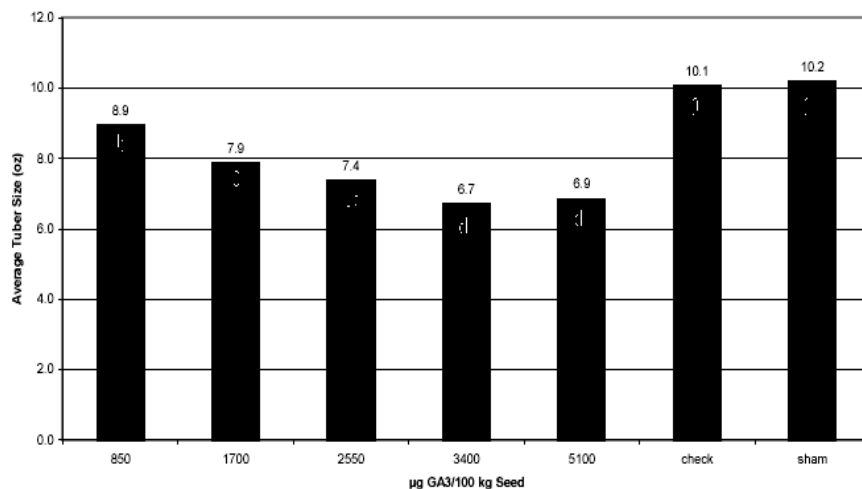
1. **Seed.** The most productive seed pieces originate from mother tubers weighing between 2 and 8 oz. Seed pieces originating from large mother tubers have fewer eyes and may result in blind seed pieces (no eyes), causing a reduction in stand, yield and quality.
2. **Table.** A premium price is paid for potatoes less than 15/8 inches in diameter called "little potatoes" or "creamers".
3. **French Fry Processing:** Certain varieties (e.g. Shepody) have a low tuber set resulting in an undesirable size profile with a large percentage of tubers greater than 10 ounces. Large tubers are not ideal for making French fries.

THE PRODUCT:

FALGRO is a ready-to-use plant growth regulator. FALGRO is a specifically formulated effervescent tablet containing 1 gram of gibberellic acid. FALGRO has been registered for use on SOUR and SWEET CHERRIES and is NOW registered for use on POTATOES in Canada.

PRODUCT PERFORMANCE:

Figure 1: Effect of GA₃ on Shepody Tuber Size



Research conducted by Keystone Vegetable Producers Association, McCain Foods Limited and Midwest Foods Limited (2001, 02, & 03) demonstrated that applying 1,700 to 2,500 µg GA₃/100 kg to Shepody seed increased tuber number and decrease the tuber size profile by 20-30%

FALGRO TABLET FOR USE ON POTATO SEED FOR SEED, TABLE OR PROCESSING POTATOES

APPLICATION RATE & TIPS:

FALGRO is mixed with water and applied after the seed cutter and before the fungicide seed piece treatments is applied.

FALGRO is applied to POTATO seed at an application rate of 1 tablet per 75 Litres of water on 61,000 kg of potatoes. FALGRO can be used for treating potato seed for growing for seed potatoes, growing for table potatoes or growing for processing potatoes.

FALGRO has been tested on both cut and planted seed and Pre cutting and storing seed, Pre-cutting seed resulted in earlier emergence but total emergence (37 DAP) was the same.

Table 3. Effect of Gibberellic Acid treatment timing and concentration on yield, and grade.

Timing	Concentration							Mean
	5 ppm	10 ppm	15 ppm	20 ppm	30 ppm	check	sham	
2-6 oz yield ¹ - pre-cut	51.3	70.8	91.8	85.2	90.9	36.7	30.3	65.3
2-6 oz yield - fresh cut	63.2	81.5	96.0	92.2	78.6	52.0	50.6	73.5
2-6 oz yield - mean	57.3	76.2	93.9	88.7	84.8	44.3	40.5	
2-6 oz yield (timing) P =	0.0685							
2-6 oz lsd (concentration)	16.5							
2-6 oz CV	23.5%							
6-10 oz yield - pre-cut	90.5	129.9	108.3	110.3	97.7	96.7	72.0	100.8
6-10 oz yield - fresh cut	123.3	132.7	121.4	128.0	125.4	97.3	87.1	116.5
6-10 oz yield - mean	106.9	131.3	114.8	119.1	111.5	97.0	79.6	
6-10 oz (timing) P =	0.0024							
6-10 oz lsd (concentration)	18.3							
6-10 oz CV	16.6%							
>10 oz yield - pre-cut	225.9	161.6	157.0	110.8	142.6	255.7	246.3	185.7
>10 oz yield - fresh cut	192.5	162.4	137.4	119.9	120.2	219.6	230.9	169.0
>10 oz yield - mean	209.2	162.0	147.2	115.3	131.4	237.6	238.6	
>10 oz (timing) P =	0.0674							
>10 oz lsd (concentration)	33.6							
>10 oz CV	18.8							
Total yield - pre-cut	370.3	367.4	362.6	312.9	339.7	389.9	350.1	356.1
Total yield - fresh cut	381.2	378.1	362.2	343.7	327.0	369.8	370.9	361.8
Total yield - mean	375.7	372.7	362.4	328.3	333.4	379.9	360.5	
Total yield (timing) P =	>0.9999							
Total yield lsd (concentration)	33.5							
Total yield CV	9.2%							
Premium ² seed yield - pre-cut	141.8	200.7	200.1	195.5	188.5	133.4	102.3	166.0
Premium seed yield - fresh cut	186.5	214.2	217.3	220.2	204.0	149.0	137.8	189.9
Premium seed yield - mean	164.2	207.4	208.7	207.8	196.3	141.4	120.1	
Premium seed (timing) P =	0.0018							
Premium seed lsd (conc.)	26.9							
Premium seed CV	15.0%							

¹Yield expressed as hundred weights per acre (cwt/ac)

²Premium seed yield = 2 – 10 oz.

Gibberellic Acid Rate Evaluation Final Report 2003

Costing and ROI

Applying FALGRO will cost pennies per acre, at 1,500lb/acre seeding rate should cost under \$0.10 per acre, by improving bonus and premium seed lot sizes this will allow for a considerable ROI

ENGAGE AGRO

1030 Gordon Street, Guelph, ON N1G 4X5
Ph: 1-866-613-3336 Fx: 519-826-7675



P.O. Box 31097, Guelph, ON N1H 8K1
Ph: 519-821-3633 Fx: 519-821-2083

Results

- Higher premium seed yield with fresh-cut.
- Higher premium seed yield with 10-30 ppm GA application.
- Sham (water) reduced total and premium seed yield.