

Table 15. **Potential to reduce seeding rate in direct seeded onions and increase plant population of transplanted onions** following incorporated optimally planted mustard cover crop in onions grown in the muck soils in Elba, NY: **Small-plot field studies; Economic return.**

Treatment (seeds/ft; plants/A)	INCOME (\$/A)										EXPENSES (\$/A)	NET RETURN (\$/A)
	Undersize (<1.75") \$6/cwt		Small (1.75-2.25") \$10/cwt		Medium (2.25-3") \$16/cwt		Jumbo (>3") \$20/cwt		Total Marketable Yield		Cost of seed/ Transplants ¹	
	cwt/A*	\$/A*	cwt/A*	\$/A*	cwt/A	\$/A	cwt/A	\$/A	cwt/A	\$/A		
Triple G yellow direct seeded onion (c.v. Hendrix) On-farm Plant Population Trial: 15 inch row spacing Brown/yellow mustard blend (c.v Caliente) 11 lb/A; optimally planted on Aug-20-2013. Incorporation: cover crops chopped, disked and culti-mulched on Oct-25-2016 when mustard was 2 feet tall with ~1% in bloom.												
Standard 7.7; 267,981	1.9	\$11.50	17.4	\$174	229 a ²	\$3,672 a	362	\$7,234	610	\$11,092	\$734	\$10,358
17% less 6.4; 222,424	1.4	\$8.36	14.5	\$145	208 a	\$3,323 a	422	\$8,433	645	\$11,909	\$612	\$11,297
38% less 4.8; 166,148	0.9	\$5.23	7.2	\$73	105 b	\$1,681 b	427	\$8,534	540	\$10,294	\$457	\$9,837
P Value ($\alpha=0.05$)	NS³	NS	NS	NS	0.0051	0.0051	NS	NS	NS	NS	--	NS
Mortellaro yellow transplanted onions (c.v. Bradley) On-farm Plant Population Trial: see Table 12 for planting configurations. Brown/yellow mustard blend (c.v. Caliente) 12 lb/A; optimally planted on Aug-7-2013 and incorporated via chopping, plowing and rolling on Oct-23-2013 when mustard 5 feet tall with 70% in bloom. Onions transplanted by hand on May-13, 2014.												
Standard 128,937 plants/A	2.1	\$12.79	12.5	\$125	209 c	\$3,346 c	269	\$5,376	493	\$8,860	\$2,000	\$6,860
21% more 156,817 plants/A	1.2	\$6.98	12.4	\$124	259 bc	\$4,147 bc	211	\$4,215	483	\$8,492	\$2,421	\$6,061
38% more 177,725 plants/A	2.3	\$13.40	28.7	\$287	281 b	\$4,502 b	141	\$2,814	453	\$7,616	\$2,755	\$4,861
62% more 209,089 plants/A	4.3	\$25.53	34.7	\$347	352 a	\$5,634 a	123	\$2,467	514	\$8,475	\$3,241	\$5,234
P Value ($\alpha=0.05$)	NS	NS	NS	NS	0.0012	0.0012	NS	NS	NS	NS	--	NS

*At Mortellaro, statistics performed on transformed data using log(x+1); untransformed data presented.

¹Only expenses related to plant population were included. Treated direct seed: \$2.75 per 100M. Cost of bare root transplants including seed, production, shipping, treating and planting: \$0.0155 per plant. ²Numbers in a column followed by the same letter are not significantly different, Fisher's Protected LSD test, p<0.05. ³NS: Not significant according to Fisher's Protected LSD test, p > 05.