

Table 10. Effect of brassica cover crops on **seedling disease and plant vigor** of onions grown in the muck soils at **Mortellaro** in Elba, NY: **soil bioassay**.

Treatment	New Emergence (%)	Damped off (%)*	% stress death	Healthy plants (%)	Crop Stage of Healthy Plants (%)					TOTAL	
					Poke*	Loop*	Flag	Flag + 1 st leaf starting to emerge	Flag + 1 st leaf same size as flag	Emergence (%)	Damped off (%)
Mortellaro Case Study (Pre-plant soil samples collected on Apr-24-2014): Trial seeded on May 31; 200 seeds for each of 6 replicates per field.											
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; late planted on Sep 26-2013 (37 days late) and incorporated in the same manner on Oct-28-2013 when mustard was 4 feet tall with 30% bloom. Winter-killed late planted mustard was planted on Aug-27-2013 (7 days late).											
Forage radish (c.v. Ecotill Buster) 8 lb/A was planted on Aug 30-2013 (10 days late).											
2.5-weeks post seeding (Jun-19)											
Incorporated Optimal Planted Mustard	33.9 b ¹	2.3	0.8	30.9 b	0.8	5.4	46	31.2	16.4		
Incorporated Late Planted Mustard	54.7 a	3.0	0.7	51.0 a	3.6	1.7	31.5	32.5	30.4		
Winter-killed Late Planted Mustard	25.8 b	2.7	0.9	22.4 b	7.0	5.2	46.7	29.1	11.2		
Winter-killed Late Planted Forage Radish	40.8 ab	1.6	0.9	38.4 ab	2.2	2.3	29.6	37.2	27.9		
P Value ($\alpha=0.05$)	0.0068	NS²	NS	0.0144	NS	NS	NS	NS	NS		
4-weeks post seeding (Jul-1)											
Incorporated Optimal Planted Mustard		1.3		31.0 ab						36.3 b	8.8
Incorporated Late Planted Mustard		1.3		51.7 a						61.0 a	10.8
Winter-killed Late Planted Mustard		1.3		18.6 a						25.8 b	16.0
Winter-killed Late Planted Forage Radish		0.5		36.8 ab						40.8 ab	7.0
P Value ($\alpha=0.05$)		NS		NS						0.0236	NS

*statistics performed on transformed data using $\arcsin(x/100)^{0.5}$; untransformed data presented. ¹Numbers in a column followed by the same letter are not significantly different, Fisher's Protected LSD test, $p < 0.05$. ²NS: Not significant according to Fisher's Protected LSD test, $p > 0.05$.