



UNIVERSITY OF GEORGIA
EXTENSION

22-23 Winter Onion Fertilizer and Spacing Study

Dr. Ted McAvoy

Treatment	Density	Nitrogen lbs/A
1	58,000 plants/acre	80
2	87,000 plants/acre	80
3	109,000 plants/acre	80
4	58,000 plants/acre	100
5	87,000 plants/acre	100
6	109,000 plants/acre	100
7	58,000 plants/acre	120
8	87,000 plants/acre	120
9	109,000 plants/acre	120





Application Schedule and Rates

Application Dates	Source	Fert Rate	N Rate
Mid Dec (12/13)	5-10-15	200	10
Early Jan (1/10)	6-6-18	300	18
Late Jan (1/19)	5-10-15	500	25
Early Feb	15.5-0-0 (Cal Nitrate)	87, 152 or 216	13.5, 23.5 or 33.5
Late Feb	15.5-0-0 (Cal Nitrate)	87, 152 or 216	13.5, 23.5 or 33.5



GROUND DRIVE RATE CHART

DIRECTIONS:

- Divide the chart material weight by your selected material weight. Multiply the result by your desired rate to get the equivalent chart rate.
- Divide the total width served by each box by two to get the equivalent chart row spacing.

Transmission Setting Options

SPEED RANGE	SPROCKET SIZES
LOW	19 34 18 34
MEDIUM	34 19 19 34
HIGH	34 19 34 19

TRANSMISSION SETTING		LOW RANGE ROW SPACING								MEDIUM RANGE ROW SPACING								HIGH RANGE ROW SPACING							
DRIVER	DRIVEN	30	32	34	36	38	40	44	48	30	32	34	36	38	40	44	48	30	32	34	36	38	40	44	48
17:	38	86	81	76	72	68	65	59	54	259	243	229	216	205	194	177	162	702	658	618	585	554	527	479	439
	36	91	86	80	76	72	68	62	57	272	255	240	227	215	204	186	170	748	701	660	623	590	561	510	467
	34	97	91	86	81	77	73	66	61	287	269	253	239	226	215	196	179	793	744	700	661	626	595	541	496
	32	102	96	90	85	81	77	70	64	300	281	265	250	237	225	205	188	839	786	740	699	662	629	572	524
21:	38	103	97	91	86	81	77	70	65	304	285	268	253	240	228	207	190	839	786	740	699	662	629	572	524
	36	109	102	96	91	86	82	74	68	322	302	284	268	254	241	219	201	895	839	790	748	707	671	610	560
	34	115	108	102	96	91	86	79	72	338	317	299	282	267	254	231	212	952	892	840	793	751	714	649	595
	32	122	115	108	102	97	92	83	77	356	334	314	297	281	267	243	223	1008	945	889	840	796	756	687	630
26:	38	132	124	116	110	104	99	90	83	374	351	330	312	296	281	255	234	1073	1006	947	894	847	805	731	671
	36	139	131	123	116	110	104	95	87	396	371	349	330	313	297	270	248	1142	1071	1008	952	902	857	779	714
	34	146	137	129	122	116	110	100	92	418	392	368	348	330	313	285	261	1212	1136	1069	1010	957	909	826	758
	32	154	144	136	128	121	115	105	96	439	412	388	366	347	329	299	275	1282	1202	1131	1068	1012	961	874	801
32:	38	156	146	138	130	123	117	106	98	434	407	383	362	343	326	296	272	1284	1204	1133	1070	1014	963	875	803
	36	166	155	146	138	131	124	113	104	460	431	406	383	363	345	313	287	1369	1284	1208	1141	1081	1027	934	856
	34	175	164	155	146	138	131	119	110	485	455	428	404	383	364	331	303	1454	1364	1283	1212	1148	1091	992	909
	32	185	173	163	154	146	139	126	116	511	479	451	426	404	383	349	320	1540	1443	1358	1283	1215	1155	1050	962
40:	38	186	174	164	155	147	140	127	116	536	503	473	447	423	402	366	335	1625	1523	1434	1354	1283	1219	1108	1016
	36	199	187	176	166	157	149	136	125	518	486	457	432	409	389	353	324	1704	1598	1504	1420	1345	1278	1162	1065
	34	212	199	187	177	168	159	145	133	550	515	485	458	434	412	375	344	1812	1699	1599	1510	1431	1359	1235	1133
	32	226	212	199	188	178	169	154	141	582	546	514	485	459	437	397	364	1928	1800	1694	1600	1516	1440	1309	1200
30	239	224	211	199	189	179	163	149	613	575	541	511	484	460	418	383	2028	1901	1789	1690	1601	1521	1383	1268	
									646	605	570	538	510	484	440	404	2136	2003	1885	1780	1686	1602	1456	1335	

APPROXIMATE POUNDS PER ACRE FOR GRANULAR MATERIAL WEIGHING 80 POUNDS PER CUBIC FOOT (OR 53.5 POUNDS PER 5 GAL)

Net Wt. 50 lb
(22.68 kg)

RAINBOW[®]

PLANT FOOD

RAINBOW
PLANT FOOD
5-10-15
GUARANTEED ANALYSIS

TOTAL NITROGEN (N)	5.00%
1.00% Ammoniacal Nitrogen	
AVAILABLE PHOSPHATE (P2O5)	10.00%
SOLUBLE POTASH (K2O)	14.00%
TOTAL CALCIUM (Ca)	3.00%
TOTAL MAGNESIUM (Mg)	1.00%
1.00% Water Soluble Magnesium (Mg)	
TOTAL SULFUR (S)	2.00%
1.00% Combined Sulfur (S)	
BORON (B)	0.10%
TOTAL MANGANESE (Mn)	0.20%
0.05% Water Soluble Manganese (Mn)	
TOTAL ZINC (Zn)	0.10%
CHLORINE (Cl) (not active)	12.00%

DERIVED FROM:
Ammonium Sulfate, Ammonium Phosphate, Potassium Chloride, Sulfate of Potash Magnesia, Calcium Sulfate, Boron Calcium Borate, Manganese Oxide, Manganese Sulfate, Zinc Oxide

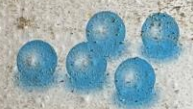
GUARANTEED BY:
Yara USA, Inc.
1700 Maryland Lake Dr
Lawrenceville, GA 30046

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YaraLiva[®]

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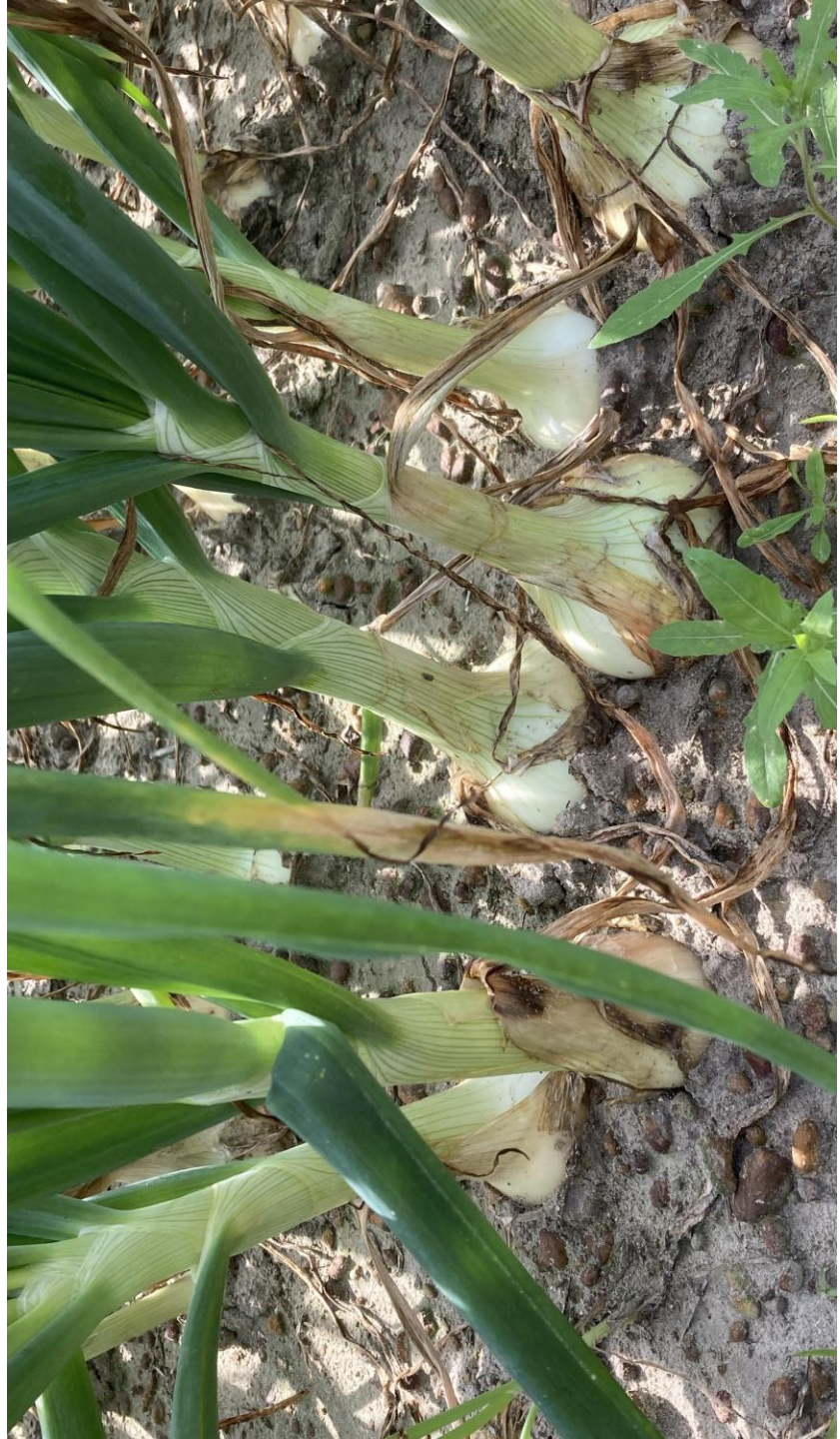


15.5-0-0

50 lb/22.7 kg

Planting Density Results

Density	Total Wt	Jumbo	Medium	Marketable	Colossal
109,000 Plants/A	197 a	123 a	16 a	154 a	15 b
87,000 Plants/A	167 b	80 b	5 b	114 b	29 a
58,000 Plants/A	151 c	50 c	2 c	84 c	32 a



Nitrogen Rate Results

Nitrogen	Total Wt	Jumbo	Medium	Marketable	Colossal
120 lbs/A	184 a	93 a	6.6 a	127 a	28 a
100 lbs/A	174 a	94 a	9.2 a	130 a	27 a
80 lbs/A	158 b	69 b	7.3 a	98 b	21 a



Conclusions

- Plant Density
 - $109 > 87 > 58$
- Nitrogen Rates
 - $100 = 120 > 80$



Acknowledgements

- Vidalia Onion Committee
- Chris Tyson
- Denny Thigpen
- Bob Brooke
- Elvis Pulici

