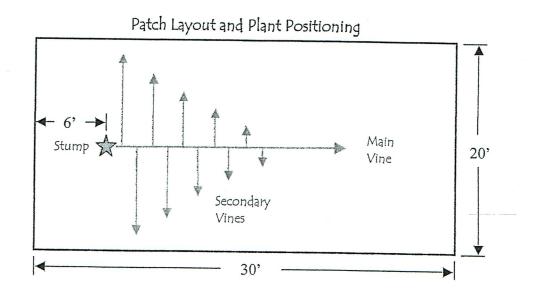
How To Grow A Giant Pumpkin

If you want to grow a world-record pumpkin, you can forget about every variety of pumpkin out there except Howard Dill's patented Atlantic Giant. Since 1979, no other pumpkin variety has been a world champion. The best Atlantic Giant pumpkin seeds can be obtained from competitive pumpkin growers or Howard Dill Enterprises (www.howarddill.com)

The primary thing you need to grow a big pumpkin is good soil. Pumpkins are large consumers of all the major plant nutrients (nitrogen, phosphorus and potassium), as well as other nutrients like calcium, magnesium and other trace elements. The key for big growth is a balanced soil, well amended with organic matter, deeply tilled and consistent generous watering. Growing a huge pumpkin is a lot of work but you can obtain amazing results if you follow the 12 basic steps listed below.



1. PATCH PREPARATION: Pumpkin plants thrive in rich balanced soils high in organic matter. If you can, allow a 20' by 30' foot area for each planting site. (smaller gardens use 16' x 25' min.) In the fall or early spring, apply three to five yards of compost or wellaged manure per planting site. A cover crop planted in the fall and plowed under in the early spring will help protect and condition the soil. Prior to planting, add fertilizers and other amendments as required and till the patch as deep as possible. After final tilling, keep the patch weed free by shallow hoeing and avoid compaction of the soil at all times.

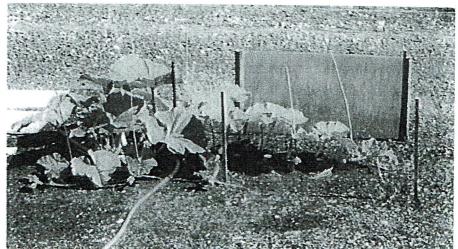


- 2. <u>GERMINATE SEEDS</u>: Start seeds indoors in six-inch peat pots or one gallon containers about the first week of May. Many growers file the edges of the seeds except the tip to promote germination. Keep the soil temperature in the pots at 85 to 90 degrees F. Most seeds will emerge within five days. Do not try to plant the seeds directly outdoors as they will not germinate if the soil is not warm enough.
- 3. TRANSPLANT SEEDLINGS: Transplant seedlings into the garden as soon as possible after germination. Three to four days after germination is ideal. Roots grow quickly and the plant will become root bound in less than a week. The main vine normally grows in the opposite direction of the first true leaf. Plant the seedling so that the main vine will grow down the center of the length of your patch. Transplant with care as pumpkin seedlings are easily set back during transplanting.



direction of main vine growth is opposite first true leaf.

4. EARLY PLANT PROTECTION: Place a small greenhouse over the young plants to protect them from frost, wind and pests. Use a 4 foot by 4 foot structure or larger. Once the plants outgrow the greenhouse, they will need to be protected from the wind until the main vine is on the ground and well rooted. Insert bamboo stakes on both sides of vine near the vine tips to keep the wind from rolling the vines over. The vine tips can become sun sensitive and burn easily. You may have to shade the vine tips with shade cloth to prevent sunburn on new growth.



Polycarbonate wind protection - Bamboo stakes are used to stabilize the plant

5. TRAIN AND PRUNE VINES: Pumpkin plants start a new vine at each leaf junction and must be pruned heavily and trained to grow in an orderly fashion. The main vine will start to run about one month after germination. Train the main vine to run down the center of your patch by gently coaching the vine tip and anchoring it in position with bamboo stakes. Allow secondary vines to grow perpendicular to the main vine as shown in the diagram on the first page.

Pinch off all the tertiary vines from the secondaries as soon as they begin to form. The vines should be buried as they grow to encourage anchor root growth at the leaf junctions. Burying the vines also helps protect the plant from wind damage. When the main vine and the secondaries reach the edge of the patch they should be terminated by pinching off the vine tips.

6. WATER AND FERTILIZE: Pumpkin plants like lots of water. The plants should get a good watering two or three times a week. Pumpkin plants are heavy feeders so weekly application of soluble fertilizers is recommended. Young plants need high phosphorus mixes such as 15–30–15. They also respond well to foliar sprays of kelp and fish emulsions. Shift to a more balanced formula, such as 20–20–20, once fruits are set. Apply water-soluble fertilizer at the rate of one pound per week per plant from the fruit set until the end of the growing season. Late in the season also consider the use of foliar calcium to supplement calcium uptake and help prevent fruit splitting. Avoid heavy watering and over fertilizing especially after fruit set as a growth spurt can result in the fruit splitting. Slow and easy wins the race. Remember this when you feel the urge to over-fertilize.

7. <u>POLLINATE FLOWERS</u>: Eight to ten weeks after seed starting, the first flowers will start appearing on the plant. Pumpkin plants have both male and female flowers. The females are easy to distinguish from the male flowers because they have a small pumpkin at their

base and a multi-lobed stigma. Hand pollination of the female flowers is recommended to insure the flower is fully pollinated. Female flowers only last for several hours after they open and must be pollinated early in the morning before it becomes too hot. Use at least three male flowers per female. Pick the males early before the bees get to them and remove the outer flower petals, exposing the pollenladen stamen. Gently swab the stigma (internal parts) of the female flower with the stamen or use a small artist's brush to transfer the pollen to the female stigma.



Pollinate at least the first three females that open on the plant. It is important to get a pumpkin set early, preferably before the middle of July. The earlier a pumpkin is set, the longer it has to grow until harvest. Atlantic Giants can continue to grow for up to 90 days.

- 8. <u>SELECT THE MOST PROMISING PUMPKIN</u>: For the best chance of growing the largest pumpkin, all but one should be removed from the plant. The biggest pumpkins will normally grow on the main vine. Set at least two pumpkins on the secondary vines and use these as backups in case there are problems setting a good pumpkin on the main vine. If the main vine pumpkin is growing significantly slower than the backups, consider trying to set the next female on the main vine or going with a backup on a secondary. You can leave one or two backups on the plant until they get to 10 to 15 days old before culling them. Once you've selected your best prospect, remove all other pumpkins and female flowers from the plant.
- 9. <u>POSITION PUMPKIN AND RELIEVE STEM STRESS</u>: Once a pumpkin has set, its position on the vine becomes extremely important. Most often the stem grows at an acute angle to the vine. However, for optimal long-term growth, the best position is to have the stem perpendicular to the vine. If the stem is not at right angles to the vine naturally, coax it gradually, over about a week's time. Be very careful, because at this early stage the pumpkin may abort or the fragile stem can be injured.



Position the pumpkin's stem perpendicular to the vine. Here a bed of sand is used to help keep the bottom of the pumpkin dry

Place sand, fabric or styrofoam under the pumpkin to protect the bottom surface from the ground. As the pumpkin grows larger, the stem will be torn from the pumpkin if steps are not taken to reduce stem stress. Cut the anchor roots from underside the vine for several feet on either side of the fruit to allow the vine to rise as the pumpkin grows.

When the pumpkin is growing rapidly monitor stem stress often. You may have to remove some secondary vines and reposition the pumpkin repeatedly to keep the stem stress down.

- 10. KEEP TRACK OF GROWTH: Measure your pumpkins at least weekly to track its growth. A competitive pumpkin will have a circumference of about 20" at day 10, 60" at day 20 and 100" at day 30. To estimate weight, measure the circumference of your pumpkins first parallel to the ground around the entire pumpkin, from blossom end to stem. Next, measure over the top in both directions: from ground to ground along the axis from stem to blossom end, then perpendicular to the stem-blossom-end axis. Add these three measurements together, and then look up the estimated weight in the attached table one. A less precise but easier estimate is obtained by simply measuring the circumference from stem to blossom end and obtaining an estimated weight from the attached table two.
- 11. <u>SHADE THE PUMPKIN</u>: As the pumpkin gets larger, it must be shaded from the sun to prevent sunburn and to reduce the chance of splitting. Build a structure around the pumpkin and drape with a plastic tarp or otherwise shade the pumpkin. Some growers cover the pumpkin with a blanket to shield it from the sun during the day and reduce heat loss at night.
- 12. <u>MOVING THE PUMPKIN</u>: Giant pumpkins will usually stop growing at 70–80 days from pollination. If a pumpkin is headed to a weigh off, it should be left on the vine as long as possible. It can lose over a pound a day to evaporation once it is cut from the vine.



A large pumpkin can be moved with the help of some strong friends and a tarp. For larger pumpkins (greater than 500 pounds) consider buying a special moving tarp designed with hand holes. (www.howarddill.com) Gently roll the pumpkin up on one side and position the tarp underneath. Roll it back onto the tarp, gather your friends around and heave-ho! If you have real trouble lifting the pumpkin – it may be a winner!!

Team-Pumpkin, 2013 Standard OTT Chart for Estimating Pumpkin Weights

Pounds	2047	2060	2073	2086	2099	2112	2125	2138	2152	2165	2178	2192	2205	2219	2232	2246	2260	2274	2287	2301	2315	2329	2343	2357	2372	2386	2400	2414	2429	2443	2458	2472	2487	2501	2516	2531
Inches	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495
Pounds	1617	1628	1639	1650	1661	1672	1684	1695	1706	1718	1729	1741	1753	1764	1776	1788	1800	1811	1823	1835	1847	1859	1872	1884	1896	1908	1921	1933	1945	1958	1970	1983	1996	2008	2021	2034
Inches	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459
Pounds	1250	1260	1269	1278	1288	1297	1307	1317	1326	1336	1346	1356	1366	1375	1385	1395	1405	1416	1426	1436	1446	1456	1467	1477	1488	1498	1509	1519	1530	1540	1551	1562	1573	1584	1595	1606
Inches	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423
Pounds	943	951	959	296	974	982	066	866	1006	1015	1023	1031	1039	1047	1056	1064	1073	1081	1090	1098	1107	1115	1124	1133	1142	1150	1159	1168	1177	1186	1195	1204	1213	1222	1232	1241
Inches	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387
Pounds	069	969	703	709	716	722	729	735	742	748	755	762	692	775	782	789	962	803	810	817	824	831	838	846	853	860	898	875	882	890	897	905	912	920	928	935
Inches	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	.331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351
Pounds	486	491	496	501	507	512	517	522	527	533	538	544	549	554	260	565	571	577	582	588	594	599	605	611	617	623	629	635	641	647	653	629	665	671	212	684
Inches	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	596	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
Pounds	326	330	334	338	342	346	350	354	358	362	367	371	375	379	384	388	392	397	401	405	410	414	419	424	428	433	438	442	447	452	457	461	466	471	476	481
Inches	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	797	263	264	265	266	267	268	569	270	271	272	273	274	275	276	277	278	279
Pounds	506	208	211	214	217	220	223	226	229	232	235	239	242	245	248	251	255	258	261	265	268	272	275	279	282	286	289	293	296	300	304	307	311	315	319	322
Inches	208	509	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243
Pounds	119	121	123	125	127	129	131	133	135	137	140	142	144	146	149	151	153	156	158	161	163	166	168	171	173	176	178	181	183	186	189	192	194	197	200	203
Inches	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	506	207
Pounds	09	61	63	64	65	67	68	69	71	72	74	75	77	78	80	81	83	84	86	88	89	91	93	94	96	86	100	101	103	105	107	109	111	113	115	117
Inches	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171
Pounds	25	25	26	27	28	28	29	30	31	32	32	33	34	35	36	37	38	39	40	41	- 42	43	44	45	46	47	48	49	50	52	53	54	55	56	58	59
Inches	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135