

UTAH GIANT PUMPKIN GROWERS

The Pumpkin Vine

June 2006

VOL II ISSUE II

The season is in full swing, we hope everyone's plants are doing well. With an extra warm May and after having talked with several growers we are hopeful this year will be the best ever for giant pumpkins in Utah. Roomer has it that a couple top growers have bigger plants this year than they have ever had before at this time. Unfortunately we've also heard from some growers who have had some set backs and problems. Even if you fall in to the latter group we hope you still have a plant or two going and that you end up with a nice pumpkin to bring to the weigh off.

POLLINATION and FRUIT SELECTION

The process of pollinating and fruit selection can be the hardest thing a grower does during the season. Below are some of the most commonly asked questions regarding these topics:

WHAT IS THE DIFFERENCE BETWEEN A FEMALE FLOWER AND A MALE FLOWER?

A female flower has a little pumpkin right under it and has a very short stem. A male flower has a long stem and does not have a pumpkin attached under it.

HOW DO I POLLINATE?

The inside of a female flower is called the stigma. Inside the little pumpkin (not the stigma) are the ovaries or eggs. In AG's the stigma are multi segmented. These segments are called lobes. The stigma is just the receptacle and pathways for the pollen to land on and travel through to reach the eggs. The inside of a male flower is called the stamen. The stamen is where the pollen is. It takes one pollen grain to fertilize or pollinate one egg. There are hundreds of eggs in each female flower, which when pollinated will cause the pumpkin to grow. As a pumpkin matures each fertilized egg develops into a seed. Most growers use 3-4 male flowers to pollinate one female flower just to be sure enough pollen is transferred to the stigma, but successful pollination can occur with just one. Use a sharp knife and cut off the male flowers and take them to the newly opened female to do the pollinating. In the horticultural world they typically use a paint brush with camel hair to transfer the pollen from the stamen to the stigma. But many growers just cut off the petal of the male flower and rub the pollen directly on the stigma (all around both inside and outside). In the early morning before a male flower has opened the pollen may not be visible. The pollen is stored in little tubes that wrap around the stamen. These tubes do not open and expose the pollen until after the flower has opened. Flowers both male and female are only good for one day. The next day pollen will not be viable and the female may not be receptive.

WHAT TIME OF DAY SHOULD I POLLINATE?

You want to pollinate in the morning, earlier is better than later. To ensure that the bees do not mess up your pollination, the night before, you need to cover up all the flowers that you plan to use. You can use many things to do this such as a paper lunch sack tied with tape or string, a twist tie, a piece of string, a clothes pin, tied cheese cloth, a piece of panty hose, etc. The object is to keep the bees out of the flowers. After the female has

been pollinated you need to tie or cover it back up to ensure that the bees don't add any extra pollen into the mix.

HOW DO YOU KNOW WHEN A FLOWER WILL OPEN?

Both male and female flowers will open approximately 7-14 days after they first appear on the plant. This is not an exact date but it still gives you a general idea. You know a flower will open the next day by looking at the tip of it closely. If the tip of the flower is starting to pucker slightly and you can see the color of the flower then it is ready and will open the next day. If the tip comes to a sharp point and looks tight then the flower will not open the next day. You'll get the hang of doing this with a little practice.

WHY SHOULD I HAND POLLINATE?

Dills Atlantic Giant Pumpkins (or AG's) are only one of many species that are classified as *Cucurbita maxima* or *C. maxima*. This means that any *C. maxima* will pollinate with any other *C. maxima*. So if your next door neighbor is growing a Banana squash or a Hubbard squash it can pollinate with your AG plants. If this happens, won't affect what your pumpkin looks like this year. But next year all of the seeds could contain ½ Banana squash genes. So everyone to whom you gave a seed would be growing ½ pumpkin ½ banana squash thing. AG growers are very careful about their pollinations so that their future seeds will be pure. Regular field pumpkins, cook necked squash and many others are *C. pepo* and will not cross pollinate with AG's or other *C. maxima*. Now don't you wish you had remembered all that science, biology and genetics stuff from school?

HOW DO I KEEP TRACK OF MY POLLINATIONS?

Once you have pollinated a female you have made cross. A cross is short for cross pollination. Growers keep track of their crosses so that they have an idea of what kind of seeds their pumpkin will produce. A cross is always written (female x male). So if you just pollinated a female on a plant that was grown from the 932.5 Tanner seed with 3 females from a plant that was grown from a 707 Wolfley plant. Then the cross would be written as (932.5 Tanner 2005 x 707 Wolfley 2005) or (932.5 Tanner x 707 Wolfley). The best way to keep track of your crosses is to do two things. The first is to write the date and the cross on a marker and place it in the patch next to the female that was just pollinated. A wooden stick or plastic stake works fine. The second thing is to write down the date, the cross and approximate location on the plant (or in a sketch) in a note book devoted to pumpkins only. Also see "HOW IS A PUMPKIN/SEED NAMED?"

WHAT TIME OF YEAR SHOULD I POLLINATE?

Most growers agree that the best time to pollinate is during the first two weeks of July. But fruit pollinated from the last week in June through the last week in July have done well in Utah. If there is a weigh-off that you want to take a pumpkin to, that is sooner than your normal weigh-off, such as a state or local fair, then earlier pollination is fine.

WHY SHOULDN'T I POLLINATE AS EARLY AS POSSIBLE?

Most fruit only grow around 70-80 maybe 90 days so if you pollinate early chances are your fruit will stop growing and be losing weight while other guys' fruit are still growing. Also you would like your plant to be a bigger at pollination time so that it can provide some good growth to the pumpkin. The UGPG weigh off is usually the 2nd Saturday in October (this year it will be the 7th), so if you count back 80 days that puts you on the 20th of July. But since we usually have a couple of weeks of colder weather in mid-late September we typically pollinate a little earlier. Past experiences teaches us this.

WHICH FEMALES SHOULD I POLLINATE?

Ideally you want to pollinate around 3 females at least 10 ft out or farther on the main vine during the recommended time period.

WHAT IF MY MAIN VINE IS DAMAGED OR MISSING? (IN OTHER WORDS, WHAT IF I BROKE OFF MY MAIN VINE?)

Unfortunately I think everyone who has been growing for more than a couple of years has for one reason or another broken a main vine. Yes usually it is the growers fault. We say join the club. The next step is to train a strong secondary to take the place of the main that was lost.

MY MAIN VINE DOESN'T LOOK RIGHT IT IS REALLY WIDE IT IS LIKE 2 OR 3 OR MORE TIMES THE SIZE OF A NORMAL VINE?

If it is just two normal vines wide then this is what is called double vine. If it is more than two normal vines wide then it is call a flat vine or ribbon vine. Double vines will sometime split themselves and grow into two normal vines. If this happens usually one is cut off and the other used as "the main vine". However if you have extra space in your patch you can angle them away from each other and try growing two main vines each with one pumpkin on it. Many double vines turn into flat vines. Flat vines are not good! Typically large pumpkins are not grown on flat vines. If you have flat vine you want to cut if off and to train a normal strong secondary to become the new main vine.

WHAT DO I DO WITH ALL THE OTHER FEMALE FLOWERS?

Well if you are confident that you will be able to pollinated a few on the main vine then pinch or cut off all the others. If you'd like to pollinate a few on some secondaries to make sure that you have something then go ahead.

HOW DO I SELECT THE "CHOSEN ONE"?

Keep track of when you pollinated each fruit and measure each 10 days after pollination. Pollination day is day zero. Generally you want to keep the fastest growing fruit and eventually remove the others. But before you go cutting all the other off you want to make sure the chosen one is bigger than a basket ball. Pumpkins that are smaller than this size can abort for no reason. So you will want to keep the others on the vine another week or two just to make sure the chosen one is past the abort stage and is doing well. Other factors to consider are fruit shape, stem length, stem angle to the main vine and location in the patch. Fruit shape is a personal preference. The longer the stem is and the closer the stem angle is to 90° typically you'll have fewer the problems with it as the season goes on. If you have a fruit set right next to another fruit, a fence or in some other odd location it might be better to go with a different fruit. When your pumpkin is the size of a basket ball you can slowly start moving it to get a better stem-vine angle. You can also move the vine to help improve the stem to vine angle. Always move the pumpkin or vine in the late afternoon or evening when it is warm outside and the vine & stem are more flexible. Never move your pumpkin more than one inch in one day.

WHAT IF I ONLY POLLINATED ONE FRUIT IN THE RECOMMENDED TIME FRAME?

Well be happy that you got that one. If you only have one fruit then your choice of which fruit to go with is now very easy. But you might want to pollinate one or two more fruit as back ups just in case the first pollinated fruit aborts or for some reason doesn't make it. Remember fruit can abort for no reason up to basket ball size.

WHAT IF IT IS THE MIDDLE OF JULY ALREADY AND I DON'T HAVE ANY FEMALES TO POLLINATE?

You can only work with what the plant gives you. Don't worry just pollinate as soon as you can. If you don't pollinate anything then you won't get anything. So keep pollinating if you want to get something. You can still get a nice fruit with a late set and you never know if the weather is nice all the way up to the weigh off you will probably still have a nice contender. You maybe should shade your females so they don't get too hot in the summer sun during the day. Heat can cause a small pumpkin to abort.

WHAT IF I JUST WANT TO GROW 3-4 NICE PUMPKINS FOR MY KIDS FOR HALLOWEEN?

If this is your plan then pollinate 6-8 females on any vines that you have. You want to pollinate this many in case some abort. Once you know that you have 3-4 nice fruit going you can cull the others if you want. Ideally you'd want to have these fruit spaced evenly around the plant but it's not that big of a deal. If you don't care about the cross of the pumpkins then you can let the bees do the pollinating for you. That is if you have bees in your area. We'd recommend that you get out and to the hand pollinating to make sure it gets done.

IT'S A KEEPER NOW WHAT?

Be sure to build in extra slack in the vines that have pumpkins on them. When your pumpkin grows the stem is lifted off the ground. Also the shoulder of the pumpkin will grow toward the vine. A 500 lb pumpkin can be 3 ft tall. That would put the stem at around 18 inches off the ground. A few years ago Don Langevin of Mass. grew a 953 lb pumpkin that was 42 inches tall. Unless you have enough slack in the vine, stress will build up in the vine and stem. Stem stress can result in a stem split, a cracked vine. Or even worse the pumpkin may pick itself completely right off the vine. As a vine with a potential for a pumpkin on it grows gently put "S" curves in it to give it added slack. Any females/pumpkins should be on the outside of the curve on the vine.

SHOULD I PUT SOMETHING UNDER MY PUMPKINS?

Yes, you want to keep the pumpkins from lying directly in the dirt. This will keep them dry which will help them be free from diseases such as rot. Mice love to tunnel up from the bottom side of a pumpkin into it to have a nice house full of seeds. When the pumpkins are smaller a 1ft x 1ft piece of wood or tile works great. When pumpkins are larger they still need protection. Different growers use different things such as sand, metal mesh with sand on top of it, wood with sand on top of it, wood with slick landscape fabric on top, hard Styrofoam, etc. Regardless of what you chose you want a flat level base for your pumpkin to grow on, you want your base to drain water well and you want it to be able to give or be slippery so that as the pumpkin grows it won't bind up on it. You also want a flat base to get accurate estimating measurements. Many growers make their base in pieces so that they can add to it as the pumpkin grows. For example if you use a 1x4's or similar pieces of wood with sand then you can add a piece of wood with sand wherever you want as needed.

MEASURING, WHY and HOW?

Measuring is an easy way to estimate the weight of your pumpkin. Now who wouldn't want to know about how much their pumpkin weighs even if it still on the vine. There are two estimation methods out there, Circumference and Over the Top, or OTT. The Circumference is just like is sounds, you measure the circumference of the pumpkin and then look up that number on the estimation chart. It is quick and easy but not the

accurate. Most growers go with the OTT method because it doesn't take much more time than the circumference method and it is a lot more accurate. OTT involves taking three measurements on the pumpkin, Circumference, Side to Side and Front to Back, or Circ., s-s, and f-b in for short. The Circumference Measurement should be taken where you have the largest Circumference. It will not always be parallel to the ground. It may be above or below the stem and above or below the blossom end. On many large pumpkins the largest Circ. is not at the stem to blossom level. The largest Circ. is necessary to obtain the most accurate weight estimate. The Side to Side measurement is taken by starting from ground level (the dirt) at the widest part of the pumpkin (usually near the middle of the pumpkin) up to the top of the pumpkin (usually the highest point on the pumpkin) and then back down to the dirt on the opposite side. Again you want the largest Side to Side measurement that you can obtain. The tape should be roughly all in one plane. The Front to Back measurement is taken just like the Side to Side measurement except that you start at ground level near the stem and go to the highest point on the pumpkin and then back down to the ground on the opposite side, somewhere near the stem end. One last time you want the largest measurement that you can get. All the measurements are taken in inches. You simply add the three measurements together to get the OTT. Then you look up the OTT on the chart to find the estimated weight. We've added sketches and the OTT chart on pages 9 and 10 as part of this news letter so that everyone can measure and estimate their pumpkins weight. A soft flexible cloth or plastic tape measure works the best. You can buy one at this web site: <http://www.giantpumpkin.com/> You can also buy "How to Grow Giant Pumpkins" books vol. I, II and III there. The formula used to make the chart came from data taken from hundreds (maybe thousands) of actual pumpkins. The chart is updated every 2 or 3 years to include new data. The OTT chart is the most accurate way we have of estimating our pumpkins weight, but is not perfect. Most pumpkins (76%) will be within plus or minus 10% of estimated weight. But surprises still do occur at the weigh offs.

HOW IS A PUMPKIN/SEED NAMED?

If our previous example pumpkin was grown by Kevin Card and weighed 878.5 lbs at our weigh off. Then the seeds from that pumpkin would be called and labeled as 878.5 Card 2006 (932.5 Tanner 2005 x 707 Wolfley 2005). If a female is pollinated by males from the same plant then that is called a self pollination and it is written like (932.5 Tanner 2005 x self). If two plants were grown from two seeds from the same pumpkin and the pollen from one plant was used to pollinate a female on the other plant then that is called a cross sib, and is written as (932.5 Tanner 2005 x sib). If you don't make out to pollinate or if you didn't cover all your flowers or the female flower after or if the bees pollinated the flower and you also pollinated the flower, the cross is called an open cross and is written as (932.5 Tanner x open). EST is used if a pumpkin never gets weighed but only is estimated, for example 575 est. Card 2006. DMG is used if a pumpkin is damaged before it is weighed. Usually this is because a pumpkin split and there is a hole into the cavity. Also if there is a soft spot anywhere on the pumpkin then it is dmg. Dmg is used because only sound pumpkins without damage are official entries into weigh offs. This goes back to when pumpkins were weighed at fairs. Typically a person only brought his biggest and best fruit and vegetables to the fair. If a fruit or vegetable was damaged then it was not judged. This judging standard is a long held tradition that goes back many years and is still valid today. 757 dmg Card 2006 is an example.

WHAT DOES HEAVY or LIGHT MEAN?

A pumpkin is said to be heavy or light depending on what its actual weight is compared to its estimated weight. So if Kevin Card's pumpkin in the example above had an

estimated weight of 815.0 lbs and the actual weight was 878.5 lbs. Then the 858.5 Card 2006 pumpkin weighed 8% heavy to the chart. $[(878.5/815)-1] \times 100 = 8\%$. It is always a happier ending to the season if your pumpkin weighs heavy. Some growers specifically look for seeds from heavy pumpkins.

FACT or OLD WIFE'S TALES?

Some stories out there say that you can slit a vine and pour in or wick in milk or sugar water and that this will increase pumpkin growth. These are all false!!!! Pumpkins get nutrients from the plant. The plant produces these nutrients through certain specific process such as photosynthesis and others. The ingredients in Milk and sugar water are not the same nutrients that the plant produces to "feed" itself and the pumpkin. What about talking nicely, playing music or singing to my plants? If you think it will help your plants and pumpkins then go for it, but we only sing to our plants and pumpkins when we know nobody else is around to hear. OK seriously we don't think these sounds are helpful to the plants or pumpkins.

PATCH TOUR & LUNCH SATURDAY AUG. 12Th

In case you didn't hear we have combined the patch tours to just one day and added lunch at the end. Join your fellow UGPG growers and come see some of the best patches in the state. UGPG President Gordon Tanner says "I guarantee that on this patch tour every one there will be learn something that they did not know before that will help them to be a better grower". We will meet at Kevin Card's house at 9 am to start the tour.

After the tour is over we will have a Hamburger & Hot dog lunch at Ray Tolman's home. All the food & drinks will be provided. We are not sure when it will start because we are not sure when we will be done with the tour but we are guessing around 12:45 pm. Please let Gordon, Ray or Kevin know if you are going to attend. See page 8 for more details.

THE 2006 WEIGH OFF

The UGPG weigh off will be at Rockin E Country store in Woods Cross on Saturday Oct 7th, at Noon. Larry Sagers from the KSL Green House radio show will be our MC again this year. Registration is from 8 am till 10 am.- the earlier the better. Judging will be from 10:30 am till Noon. The weigh off will start at Noon. See page 1 for a map.

Rockin E Country Store
1201 West 500 South
Woods Cross, UT 84087

DUES

If you haven't paid your 2006 dues yet please do so. Thanks.

You can print out the form on our web site at: <http://www.utahpumpkingrowers.com/>

WOULD YOU LIKE TO HELP?

We are still looking for members to help us with some Weigh off details and with the Website. If you can help please contact one of the following:

Gordon Tanner, Pres.	451-5002	s1tanner@yahoo.com
Ray Tolman, VP	295-7019	jetrbt@msn.com
Kevin Card, VP	756-5711	highlandpumpkins@yahoo.com

Thanks we hope you all have a great season with a new personal best pumpkin!

UTAH GIANT PUMPKIN GROWERS

First Annual Patch Tour & Lunch

Saturday, August 12th 9 am

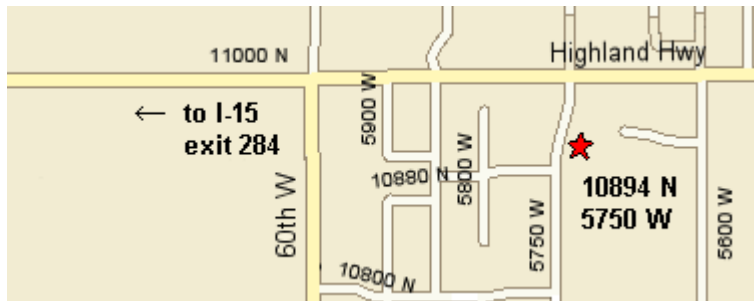
The Schedule is as follows:

Kevin Card's patch at 9 am.

10894 N 5750 W

Highland, UT 84003

756-5711



___To be determined___'s patch at about 10:15 am.

Kenny Blair's patch at about 11:15 am.

50 E 1500 South

Bountiful, UT 84010

298-2437

Gordon Tanner's patch at about Noon

1393 S 750 East

Kaysville UT 84037

451-5002

Ray Tolman's patch/home for lunch at about 12:45 pm.

331 East Park View Cir.

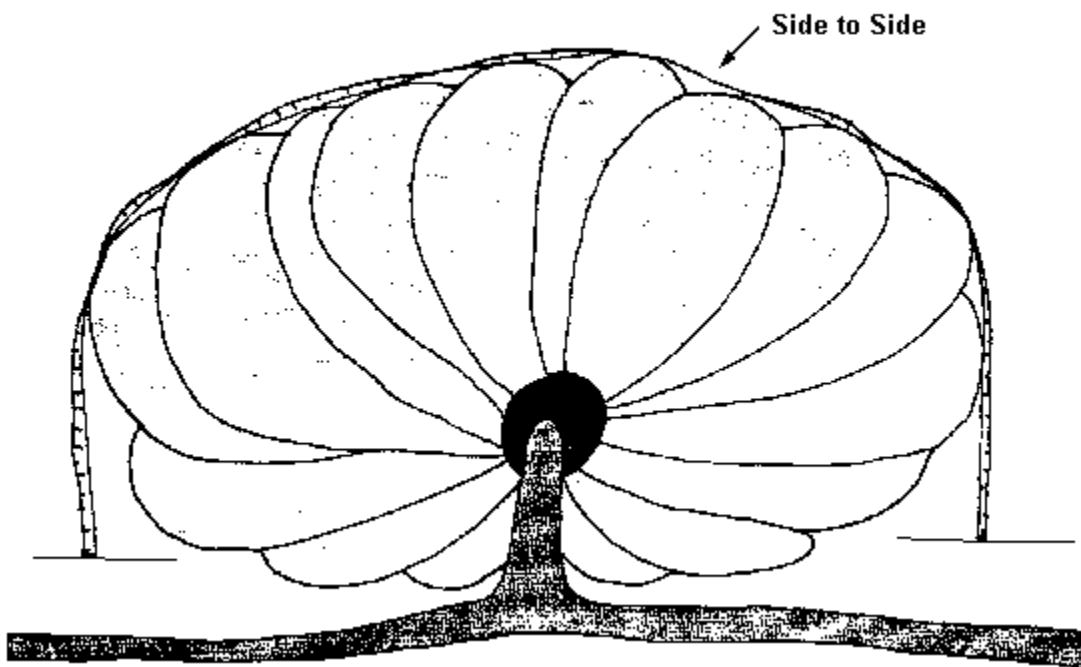
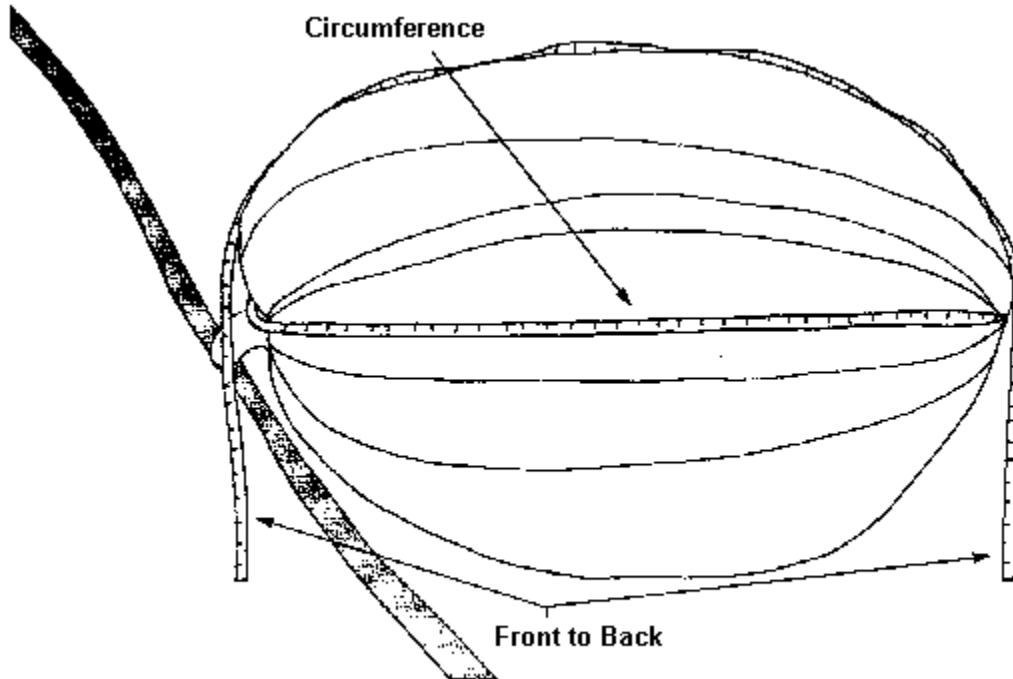
Bountiful, UT 84010

295-7019

The UGPG will provide all the food for the Lunch. The lunch is for UGPG members and their spouses. (Bring them so they can meet others who are pumpkin obsessed and not think that you are so strange after all.) Also welcome are children 12 years of age or older who are pumpkin growers.

RSVP by Aug 5th to Ray 295-7019, Gordon 451-5002 or Kevin 756-5711 if you plan on attending. Hope to see you there! (All numbers are 801 area code.)

HOW TO MEASURE THE OTT METHOD



OTT = Circ. + Side to Side + Front to Back. All measurements are in inches.

2005- OTT inches vs Estimated Weight- Table

OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.	OTT	lbs.
91	23	121	47	151	83	181	136	211	208	241	303	271	425	301	577	331	763	361	986	391	1249
92	23	122	48	152	85	182	138	212	211	242	307	272	430	302	583	332	770	362	994	392	1259
93	24	123	49	153	86	183	140	213	214	243	310	273	434	303	588	333	777	363	1002	393	1269
94	24	124	50	154	88	184	142	214	216	244	314	274	439	304	594	334	783	364	1010	394	1278
95	25	125	51	155	89	185	144	215	219	245	318	275	444	305	600	335	790	365	1019	395	1288
96	26	126	52	156	91	186	146	216	222	246	322	276	448	306	606	336	797	366	1027	396	1298
97	27	127	53	157	92	187	149	217	225	247	325	277	453	307	611	337	804	367	1035	397	1307
98	27	128	54	158	94	188	151	218	228	248	329	278	458	308	617	338	811	368	1044	398	1317
99	28	129	55	159	95	189	153	219	231	249	333	279	463	309	623	339	819	369	1052	399	1327
100	29	130	56	160	97	190	155	220	234	250	337	280	467	310	629	340	826	370	1060	400	1337
101	29	131	57	161	99	191	157	221	237	251	341	281	472	311	635	341	833	371	1069	401	1347
102	30	132	58	162	100	192	160	222	240	252	345	282	477	312	641	342	840	372	1078	402	1357
103	31	133	60	163	102	193	162	223	243	253	349	283	482	313	647	343	847	373	1086	403	1367
104	32	134	61	164	104	194	164	224	246	254	353	284	487	314	653	344	855	374	1095	404	1377
105	32	135	62	165	105	195	167	225	249	255	357	285	492	315	659	345	862	375	1104	405	1387
106	33	136	63	166	107	196	169	226	252	256	361	286	497	316	666	346	869	376	1112	406	1398
107	34	137	64	167	109	197	172	227	256	257	365	287	502	317	672	347	877	377	1121	407	1408
108	35	138	66	168	111	198	174	228	259	258	369	288	507	318	678	348	884	378	1130	408	1418
109	36	139	67	169	113	199	176	229	262	259	373	289	512	319	684	349	892	379	1139	409	1429
110	37	140	68	170	114	200	179	230	265	260	377	290	518	320	691	350	900	380	1148	410	1439
111	37	141	69	171	116	201	181	231	269	261	381	291	523	321	697	351	907	381	1157	411	1450
112	38	142	71	172	118	202	184	232	272	262	386	292	528	322	703	352	915	382	1166	412	1460
113	39	143	72	173	120	203	187	233	275	263	390	293	533	323	710	353	923	383	1175	413	1471
114	40	144	73	174	122	204	189	234	279	264	394	294	539	324	716	354	930	384	1184	414	1481
115	41	145	75	175	124	205	192	235	282	265	398	295	544	325	723	355	938	385	1193	415	1492
116	42	146	76	176	126	206	194	236	286	266	403	296	550	326	729	356	946	386	1202	416	1503
117	43	147	77	177	128	207	197	237	289	267	407	297	555	327	736	357	954	387	1212	417	1514
118	44	148	79	178	130	208	200	238	293	268	412	298	560	328	743	358	962	388	1221	418	1524
119	45	149	80	179	132	209	202	239	296	269	416	299	566	329	749	359	970	389	1230	419	1535
120	46	150	82	180	134	210	205	240	300	270	421	300	572	330	756	360	978	390	1240	420	1546

UTAH GIANT PUMPKIN GROWERS 2006 WEIGH OFF
SATURDAY OCT 7th

AT THE

Rockin E Country Store
1201 West 500 South
Woods Cross, UT 84087

Registration is from 8 am till 10 am.

Judging is from 10:30 am till noon.

Weigh off starts at Noon.

Tentatively all entries will stay on display at Rocking E until 5 pm



UTAH GIANT PUMPKIN GROWERS
1393 S 750 E
KAYSVILLE, UT 84037