# Upload project questions as a .csv

#### Example experiment

- Evaluate 120 lines of a crop under both full irrigation and drought stress
- You plant your crop in pots, with 3 plants in each pot
- You plant 480 total pots, with 40 pots in each row.
- Each line planted under full irrigation and drought stress in each replicate (right)

		Repli	icate 1		INUT		Replicate 2					
	Full Irrigation			Drought Stre	<u>ess</u>		<u>Full Irrigation</u>	<u>on</u>	Drought Stress			
Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 8	Row 9	Row 10	Row 11	Row 12	Row 13	
1	41	81	121	161	201	241	281	321	361	401	441	
2	42	82	122	162	202	242	282	322	362	402	442	
3	43	83	123	163	203	243	283	323	363	403	443	
4	44	84	124	164	204	244	284	324	364	404	444	
5	45	85	125	165	205	245	285	325	365	405	445	
6	46	86	126	166	206	246	286	326	366	406	446	
7	47	87	127	167	207	247	287	327	367	407	447	
8	48	88	128	168	208	248	288	328	368	408	448	
9	49	89	129	169	209	249	289	329	369	409	449	
10	50	90	130	170	210	250	290	330	370	410	450	
11	51	91	131	171	211	251	291	331	371	411	451	
12	52	92	132	172	212	252	292	332	372	412	452	
13	53	93	133	173	213	253	293	333	373	413	453	
14	54	94	134	174	214	254	294	334	374	414	454	
15	55	95	135	175	215	255	295	335	375	415	455	
16	56	96	136	176	216	256	296	336	376	416	456	
17	57	97	137	177	217	257	297	337	377	417	457	
18	58	98	138	178	218	258	298	338	378	418	458	
19	59	99	139	179	219	259	299	339	379	419	459	
20	60	100	140	180	220	260	300	340	380	420	460	
21	61	101	141	181	221	261	301	341	381	421	461	
22	62	102	142	182	222	262	302	342	382	422	462	
23	63	103	143	183	223	263	303	343	383	423	463	
24	64	104	144	184	224	264	304	344	384	424	464	
25	65	105	145	185	225	265	305	345	385	425	465	
26	66	106	146	186	226	266	306	346	386	426	466	
27	67	107	147	187	227	267	307	347	387	427	467	
28	68	108	148	188	228	268	308	348	388	428	468	
29	69	109	149	189	229	269	309	349	389	429	469	
30	70	110	150	190	230	270	310	350	390	430	470	
31	71	111	151	191	231	271	311	351	391	431	471	
32	72	112	152	192	232	272	312	352	392	432	472	
33	73	113	153	193	233	273	313	353	393	433	473	
34	74	114	154	194	234	274	314	354	394	434	474	
35	75	115	155	195	235	275	315	355	395	435	475	
36	76	116	156	196	236	276	316	356	396	436	476	
37	77	117	157	197	237	277	317	357	397	437	477	
38	78	118	158	198	238	278	318	358	398	438	478	
39	79	119	159	199	239	279	319	359	399	439	479	
40	80	120	160	200	240	280	320	360	400	440	480	

North 1

### Challenges in the PhotosynQ platform

- How to add all the key information (genotype, irrigation type, and replicate) to the PhotosynQ platform without the data collectors spending a long time answering each project question in the field.
  - Multiple choice answers: users are forced to scroll through a long list of genotypes.
  - Short answer: users need to type in genotype information. This is time consuming and can be prone to errors.
- Another option is to upload a csv file with the key questions and answers that you want on the PhotosynQ platform

# Building a csv for upload

#### Creating questions

- When we upload the csv to the PhotosynQ website, it will extract the first row as the question, and subsequent rows has answers.
- In the example from the previous section, the website will automatically generate 4 questions: POT #, Genotype, Irrigation, Replicate

POT #	Genotype	Irrigation	Replicate	
1	ADP0634	Full	1	
2	ADP0027	Full	1	
3	ADP0033	Full	1	
4	ADP0629	Full	1	
5	ADP0667	Full	1	
6	ADP0600	Full	1	
7	ADP0669	Full	1	

### Getting the order right

- You will need to order CSV based on the order that you will walk thru the field, this may not be in numerical order.
- To save time walking in the field, you will probably want to walk up one row, and then down the next row in the opposite direction (right).
- The order of the rows in the csv file should represent this order, and not simply numerical order

37	ADP0029	Full	1
38	ADP0390	Full	1
39	ADP0021	Full	1
40	ADP0277	Full	1
80	ADP0435	Full	1
79	ADP0479	Full	1
78	ADP0677	Full	1

ow 1	Row 2	Row 3
1	41	81
2	42	82
3	43	83
4	44	84
5	45	85
6	46	86
7	47	87
8	48	88
9	49	89
10	50	90
11	51	91
12	52	92
13	53	93
14	54	94
15	55	95
16	56	96
17	57	97
18	58	98
19	59	99
20	60	100
21	61	101
22	62	102
23	63	103
24	64	104
25	65	105
26	66	106
27	67	107
28	68	108
29	69	109
30	70	110
31	71	111
32	72	112
33	/3	113
34	74	114
35	75	115
36	/6	116
3/	//	11/
38	/8	118
39	/9	119
40	80	120

### Switching the order easily in excel

The easiest way to get the order right is to use the 'custom sort' function in excel. In this case, we want to reverse the order of Pot's 121 to 160. 1) Select the desired range, 2) select the 'custom sort' option, 3) in the dialogue box select the column to sort by (in this case column A), and 4) under 'Order' select 'largest to smallest'

	A B	С	D	Е	F	G	Н	1	J	К	L	М	N	0	Р		Q	
0	108 ADP0475	Full	1		-				-		_							
1	109 ADP0107	Full	1															
12	110 ADP0654	Full	1															
13	111 ADP0005	Full	1															
14	112 ADP0105	Full	1															
15	113 ADP0116	Full	1															
16	114 ADP0604	Full	1															
17	115 ADP0034	Full	1															
18	116 ADP0437	Full	1											_				
19	117 ADP0483	Full	1						Sort								?	$\times$
20	118 ADP0089	Full	1													_		
21	119 ADP0224	Full	1						* <u>A</u> ↓ <u>A</u> dd Le	evel X Del	ete Level	Copy Level	_ <b>∠</b> <u>(</u>	Options		∐ My (	data has <u>h</u> e	ade
22	120 ADP0091	Full	1						Caluma			a						
	120 1101 0051								Column			Sort On			Order			
23	121 ADP0634	Drought	1						Sort by C	Column A	~	Values		~	Urder Largest to Sr	nallest		
23	121 ADP0634 122 ADP0027	Drought Drought	1						Sort by C	Column A	~	Values		~	Largest to Sr	nallest		
23 24 25	121 ADP0634 122 ADP0027 123 ADP0033	Drought Drought Drought	1						Sort by C	Column A	~	Values		~	Largest to Sr	nallest		
23 24 25 26	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629	Drought Drought Drought Drought	1 1 1 1						Sort by C	Column A		Values		~	Largest to Sr	nallest		
23 24 25 26 27	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667	Drought Drought Drought Drought Drought	1 1 1 1 1						Sort by C	Column A	V	Values		~	Largest to Sr	nallest		
23 24 25 26 27 28	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600	Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1						Sort by C	Column A		Values			Largest to Sr	nallest		
23 24 25 26 27 28 29	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600 127 ADP0669	Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1						Sort by C	Column A		Values			Order Largest to Sr	nallest		
23 24 25 26 27 28 29 30	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600 127 ADP0669 128 ADP0612	Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1						Sort by C	Column A		Values			Eargest to Sr	nallest OK	Canc	el
23 24 25 26 27 28 29 30 31	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0607 126 ADP0600 127 ADP0609 128 ADP0612 129 ADP0109	Drought Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1						Sort by C	Column A		Values			Urder Largest to Sr	nallest OK	Canc	el
23 24 25 26 27 28 29 30 31 32	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600 127 ADP0669 128 ADP0612 129 ADP0109 130 ADP042	Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1 1 1						Sort by C	Column A		Values			Eargest to Sr	OK	Canc	el
23 24 25 26 27 28 29 30 31 32 33	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600 127 ADP0669 128 ADP0612 129 ADP0109 130 ADP0442 131 ADP0007	Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1 1 1 1						Sort by C	Column A		Values			Eargest to Sr	OK	Canc	el
23 24 25 26 27 28 29 30 31 32 33 34	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0660 127 ADP0669 128 ADP0612 129 ADP0102 130 ADP0442 131 ADP0007 132 ADP0115	Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						Sort by C	column A		Values			Largest to Sr	OK	Canc	el
23 24 25 26 27 28 29 30 31 32 33 34 35	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600 127 ADP0669 128 ADP0619 128 ADP0619 130 ADP0442 131 ADP007 132 ADP0115 133 ADP0679	Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						Sort by C	Column A	Y	Values			Largest to Sr	OK	Canc	el
23 24 25 26 27 28 29 20 20 20 21 20 21 20 21 21 22 22 23 24 25 24 25 26 26 27 27 28 29 20 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	121 ADP0634 122 ADP0027 123 ADP0033 124 ADP0629 125 ADP0667 126 ADP0600 127 ADP0669 128 ADP0612 129 ADP0109 130 ADP0442 131 ADP0070 132 ADP0115 133 ADP0679 134 ADP0460	Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought Drought	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						Sort by C	Column A	v	Values			Largest to Sr	OK	Canc	el

A123		- 1 a [	~ ~ J	x 100	
	А	В	С	D	E
119	117	ADP0483	Full	1	
120	118	ADP0089	Full	1	
121	119	ADP0224	Full	1	
122	120	ADP0091	Full	1	
123	160	ADP0277	Drought	1	
124	159	ADP0021	Drought	1	
125	158	ADP0390	Drought	1	
126	157	ADP0029	Drought	1	
127	156	ADP0097	Drought	1	
128	155	ADP0512	Drought	1	
129	154	ADP0438	Drought	1	
130	153	ADP0055	Drought	1	
131	152	ADP0450	Drought	1	
132	151	ADP0625	Drought	1	
133	150	ADP0353	Drought	1	
134	149	ADP0467	Drought	1	
135	148	ADP0047	Drought	1	
136	147	ADP0024	Drought	1	
137	146	ADP0660	Drought	1	
138	145	ADP0450	Drought	1	
139	144	ADP0522	Drought	1	
140	143	ADP0665	Drought	1	
141	142	ADP0112	Drought	1	
142	141	ADP0117	Drought	1	
143	140	ADP0625	Drought	1	
144	139	ADP0012	Drought	1	
145	138	ADP0445	Drought	1	
146	137	ADP0303	Drought	1	

#### Important notes

- This example assumes that each data collector is only collecting 1 measurement per pot.
- If each data collector is collecting multiple measurements (for example multiple leaves per plant) then the csv needs to include that information

39	ADP0021	Full	1	top
39	ADP0021	Full	1	middle
40	ADP0277	Full	1	top
40	ADP0277	Full	1	middle
80	ADP0435	Full	1	top
80	ADP0435	Full	1	middle
79	ADP0479	Full	1	top
79	ADP0479	Full	1	middle

Creating the project questions on the PhotosynQ website

# At the questions page, select 'Upload Questions/Answers from spreadsheet (.csv)



Follow the directions to drag and drop your csv. Once uploaded, the website will automatically generate questions. (You are free to add other questions besides those in the .csv)



Collecting data in the field using answered uploaded from csv's

#### Select auto-increment

- In the PhotosynQ app, load your project and connect to a device
- Once you select 'take measurement' your first question will appear
- Check the 'auto-increment' box



#### Choose where to start

- Let's say that multiple people are planning on collecting data at the same time and are starting at different locations in the field.
- Once 'auto-increment' has been checked, a screen will pop up allowing you to choose your starting point (near right)
- If you are going to start at pot # 81, scroll down and select pot # 81 (far right).



#### Choose where to start

- Now you will need to repeat the same process with the genotype, irrigation, and replicate questions
- The bold number on the left are the answer number, and help to ensure that your answers are properly aligned



### Taking measurements

 After each measurement, the PhotosynQ mobile app will automatically input the next answers when you select 'new measurement'

# ■ <sup>3</sup> ★ <sup>4</sup>F. ▲ <sup>51%</sup> ■ 1:06 PM ← Measurements □□□ :

#### csvtutorial

**85, ADP0634, Full, 1, vegetative** 13:06:23 2016-11-16

#### csvtutorial

**84, ADP0675, Full, 1, vegetative** 13:06:00 2016-11-16

#### csvtutorial

**83, ADP0632, Full, 1, vegetative** 13:05:36 2016-11-16

csvtutorial 82, ADP0108, Full, 1, vegetative 13:05:10 2016-11-16

#### csvtutorial

**81, ADP0633, Full, 1, vegetative** 13:04:31 2016-11-16

