

# SUMMARY: Plant-TEC List October 2019



Non-confidential list for non-subscribers to the PBL TEC Scheme. To discuss subscribing to the TEC Scheme and find out what your company is missing, please contact [info@pbltechnology.com](mailto:info@pbltechnology.com).

New or updated technologies are listed in RED. Technologies currently in the TEC exclusivity period are listed in BLUE.

TECH ID	TECHNOLOGY DESCRIPTION	RELEASE DATE	SOURCE ORGANISATION
<b>CROP PERFORMANCE TECHNOLOGY</b>			
<b>DEVELOPMENT AND YIELD</b>			
07.436	Gene controlling plant seed and organ size, and plant biomass.	07-Jan-08	UK
09.488	Control of Pod Shattering - Brassica Oilseeds germplasm.	29-Jun-10	UK
12.529	Increased seed size, plant growth and grain yield.	10-Oct-12	China
12.546	Gene for enhanced yield and nitrogen use.	26-Mar-13	UK / China
12.550	Gene for increased yield and abiotic stress tolerance.	02-Oct-13	Argentina
13.561	Increased seed size, plant growth and grain yield.	18-Sep-13	UK / China
14.584	Increased yield and stress tolerance.	09-Feb-15	Argentina
14.586	Increased seed size, plant growth and grain yield.	09-Feb-15	China
15.600	Enhanced yield and nitrogen use.	18-Jan-16	China
16.613	Genome editing for increasing yield in oil crops.	11-Jan-17	UK
16.617	Increasing yield and nutrient use in soybean and other legumes.	13-Mar-17	China
17.621	Increased seed size and grain yield (achieved by genome editing).	17-May-17	China
17.623	Genome editing target for increased yield in a wide range of crops including maize, wheat, soybean and brassica oilseeds.	05-Sep-17	China
17.625	Increased yield in a wide range of crops.	11-Jul-17	China
18.640	Maize lodging resistance	15-Oct-18	China
<b>18.645</b>	<b>Increased grain size and yield</b>	<b>09-Sep-19</b>	<b>China</b>
<b>19.657</b>	<b>Enhanced Root Architecture</b>	<b>07-Oct-19</b>	<b>UK</b>
<b>19.659</b>	<b>Increased seed size and protein content</b>	<b>09-Sep-19</b>	<b>China</b>
<b>STRESS RESISTANCE AND YIELD</b>			
12.550	Gene for increased yield and abiotic stress tolerance.	02-Oct-13	Argentina
15.598	Drought tolerance in monocot and dicot plants.	10-Nov-15	China
18.634	Gene for increased abiotic and biotic stress tolerance and enhanced crop yield.	19-Apr-18	China
<b>19.651</b>	<b>Enhanced photosynthesis and growth while preserving water status</b>	<b>02-Apr-19</b>	<b>UK</b>
<b>CROP NUTRIENT USE</b>			
12.546	Gene for enhanced yield and nitrogen use.	26-Mar-13	China
15.600	Enhanced yield and nitrogen use.	18-Jan-16	China
17.624	Enhanced crop nitrogen use with high yield.	20-Feb-18	China

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<b>CROP COMPOSITION AND QUALITY</b>			
10.508	Oilseed Rape mutants with increased mono-unsaturated fatty acid content.	02-Mar-11	UK
12.533	High Phytase Wheat: novel wheat germplasm with seed phytase levels 5-8x the levels commonly seen in wheat.	11-May-12	Denmark
18.638	Novel Wheat Starch: mutant wheat lines with altered starch granule profile. Multiple high value applications.	15-Oct-18	UK
<b>PEST / DISEASE RESISTANCE AND CROP PROTECTION TECHNOLOGY</b>			
05.395	Virus resistance strategy to enable broad-spectrum resistance.	27-Sep-06	USA
07.425 07.426	Late blight resistance genes from wild potato species.	01-Mar-10	UK
17.630	Pathogen Resistant Plants.	19-Apr-18	Spain
<b>16.618</b>	<b>Insect Resistance.</b>	<b>07-Oct-19</b>	<b>UK</b>
<b>ENABLING TECHNOLOGY</b>			
<b>PROMOTERS &amp; SELECTABLE MARKERS</b>			
04.345	High expression monocot promoter.	01-Jun-04	USA
06.414	Root-specific promoters for driving gene expression in monocots and dicots.	28-Feb-07	UK
<b>SILENCING</b>			
99.192	Tobacco rattle virus VIGS vectors for high throughput and rapid gene discovery.	18-Jun-03	UK
01.258	Geminivirus based gene function analysis with broad crop range targets.	24-Oct-05	USA
04.365	Modified TRV vector, with demonstrated facilitated cloning of tomato ESTs.	24-Oct-05	USA
<b>EXPRESSION SYSTEMS</b>			
99.194	Suppressors of post transcriptional gene silencing from plant viruses.	01-Nov-02	UK
05.386	Virus based system for expression of proteins in plants without production of infective viral particles.	30-May-06	UK
07.439	Mutagenesis of CPMV expression system results in heterologous protein production of up to 30% of total soluble protein.	07-Jan-08	UK
<b>GENERAL TECHNOLOGY</b>			
14.580	Reversible nuclear male sterility system and germplasm for hybrid rice production.	03-Jun-14	China
16.603	CRISPR Regeneration Efficiency Boost for high efficient site-directed editing of plant genomes.	20-Jun-16	China
<b>19.648</b>	<b>A step change in gene replacement techniques: high efficiency gene replacement technology.</b>	<b>19-Mar-19</b>	<b>China</b>
<b>19.650</b>	<b>Genome editing by virus infection</b>	<b>12-Jul-19</b>	<b>China</b>
<b>NATURAL PRODUCTS / BIOSTIMULANTS</b>			
<b>NON-TEC TECHNOLOGIES</b>			
16.605	Plant activator protein.	19-Apr-18	China