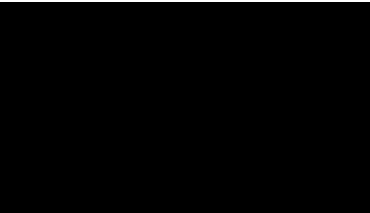













**Tamil Nadu Agricultural University**  
**Varieties/Technologies developed during 2023**

Item	Nos.
Crop varieties (Agricultural, Horticultural and Forestry crops)	23
Technologies	10
Farm implements/ Machineries	06
<b>Total</b>	<b>39</b>





S. No.	Name of the variety/ hybrid	Parentage	Duration	Salient features	Photo
1.	Rice CO 56	CO (R) 50 x CB 05501	130-135 days	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Samba</i> / late <i>Samba</i> / <i>Thaladi</i></li> <li><input type="checkbox"/> Yield: 6372 kg/ha</li> <li><input type="checkbox"/> Non-lodging with high tillering ability; long panicles with &gt; 350 grains per panicle</li> <li><input type="checkbox"/> Medium slender white rice with good milling percentage (67%) and head rice recovery (64.1%)</li> <li><input type="checkbox"/> Moderately resistant to multiple diseases viz., blast, BLB, brown spot, sheath rot, sheath blight, RTD and glume discolouration</li> <li><input type="checkbox"/> Moderately resistant to stem borer and gall midge</li> </ul>	
2.	Rice Improved <i>Kavuni</i> CO 57	CO (R) 50 x <i>Kavuni</i>	130-135 days	<ul style="list-style-type: none"> <li><input type="checkbox"/> Suitable for all seasons</li> <li><input type="checkbox"/> Yield: 4638 kg/ha</li> <li><input type="checkbox"/> Photo-insensitive</li> <li><input type="checkbox"/> Contains medicinal properties viz., reduced levels of total carbohydrates (65-70%), increased amount of total dietary fibre (3-3.5%), medium glycemic index (67%), higher levels of Lutein (205.35µg/100g), anthocyanins</li> </ul>	





				<p>(148 mg/100 g), antioxidants, flavonoids (6.54 mg/100 g) and resistant starch.</p> <ul style="list-style-type: none"> <li>□ Resistant to bacterial leaf blight, sheath blight, false smut and moderately resistant to sheath rot, brown spot, grain discoloration, stem borer and leaf folder.</li> </ul>	
3.	Rice ADT 58	ADT 39 x Konark	125 days	<ul style="list-style-type: none"> <li>□ <i>Thaladi</i> (October-November)</li> <li>□ Yield:6376 kg/ha</li> <li>□ Medium slender grain, 72.0% Milling %; 65.0% Head Rice Recovery</li> <li>□ Suitable for cooked rice and <i>Idli</i> making</li> <li>□ Moderately tolerant to Leaf folder and stem borer; Moderately resistant to blast, sheath blight, sheath rot</li> </ul>	
4.	Rice ASD 21	ASD 16 x <i>Manjal Saradai</i>	120 days	<ul style="list-style-type: none"> <li>□ Early <i>Kar/</i> Early <i>Kuruvai</i> / Late <i>Pishanam</i></li> <li>□ Yield:6330 Kg/ha</li> <li>□ Erect &amp; Non lodging plant type, Short bold white rice, Head Rice recovery (59.3%), cooked rice volume expansion 4.1, non sticky and uniform.</li> <li>□ Flour properties better than ASD 16 &amp; TPS 5</li> <li>□ Moderately resistant to stem borer, leaf folder, gall midge, blast, sheath blight and bacterial leaf blight</li> </ul>	
5.	Maize Hybrid COH (M) 11	UMI 1240 × UMI 1210	105 – 110 days	<ul style="list-style-type: none"> <li>□ <i>Aadi</i> (June-July), <i>Purattaasi</i> (Sep-Oct) and <i>Thai pattam</i> (Jan-Feb)</li> <li>□ Irrigated: 8100 kg/ha; Rainfed: 6590 kg/ha</li> <li>□ Seed production of the hybrid is easier as the male and female parental lines can be sown on the same day.</li> <li>□ Drought tolerant; Orange yellow semi-dent kernels with high test weight.</li> <li>□ Better fodder qualities</li> <li>□ Moderately resistant to Fall Army Worm and</li> </ul>	




				Charcoal Rot	
6.	Pearl millet Hybrid COH 10	ICMA 10444A x PT 6679	85-90 Days	<input type="checkbox"/> Irrigated: <i>Aadi</i> (June-July), <i>Chithirai</i> (April-May) Rainfed: <i>Purattaasi pattam</i> (Sep-Oct) <input type="checkbox"/> Irrigated: 3020 kg/ha; Rainfed: 2050 kg/ha <input type="checkbox"/> Bold grain with semi compact long ear head <input type="checkbox"/> Medium level of Fe (59 ppm) and Zn (37 ppm); High protein (15.6%) <input type="checkbox"/> Tolerant to shoot fly; Resistance to downy mildew and blast	
7.	Sorghum K 13	ICSB 518 x SPV 1489	95-100 days	<input type="checkbox"/> <i>Aadi</i> and <i>Purattaasi pattam</i> <input type="checkbox"/> Grain yield: 2575 kg/ha; Stover yield: 11.4 t/ha <input type="checkbox"/> Dual purpose suited for grain and fodder <input type="checkbox"/> Short duration variety <input type="checkbox"/> Resistant to shoot fly, stem borer, downy mildew, grain mould and rust	
8.	<i>Kudiraivali</i> ATL 1	DHBM 99-6 x RBM 36	90 days	<input type="checkbox"/> Rainfed: <i>Aadi</i> (June-July) & <i>Purattaasi</i> (September-October) <input type="checkbox"/> Grain: 2123 kg/ha; Dry fodder: 3057 kg/ha <input type="checkbox"/> Drought tolerant; Non lodging <input type="checkbox"/> Iron 5.85 mg/100g <input type="checkbox"/> Long, compact, cylindrical and non-shattering panicle <input type="checkbox"/> Resistant to stem and borer shoot fly; Moderately resistant to grain smut	
9.	Panivaragu ATL 2	Selection from IPM 19	65-70 days	<input type="checkbox"/> Rainfed: <i>Aadi</i> (June-July) & <i>Purattaasi</i> (September-October) <input type="checkbox"/> Grain: 2140 kg/ha; Dry fodder: 2793 kg/ha <input type="checkbox"/> Short duration; Protein content: 12.0% <input type="checkbox"/> Non lodging and suitable for mechanical harvesting <input type="checkbox"/> Grains are bold and straw white in colour <input type="checkbox"/> Moderately resistant to shoot fly incidence and Resistant to brown spot diseases and moderately resistant to leaf blight	

10.	Greengram CO 9	CO 6 x COGG 912	65-70 days	<input type="checkbox"/> Suitable for all seasons <input type="checkbox"/> Yield:825 kg/ha <input type="checkbox"/> Determinate plant type with synchronized maturity; Suitable for single/ mechanical harvesting. <input type="checkbox"/> Protein content: 23.20 % <input type="checkbox"/> Shiny and medium bold seeds (4.0 to 4.5 g / 100 seeds) <input type="checkbox"/> Moderately resistant to Mungbean Yellow Mosaic Virus and Leaf Crinkle Virus diseases	
11.	Greengram VBN 6	VBN 2 x IPM 409 - 4	70 - 75 days	<input type="checkbox"/> Rice fallow (December-January) <input type="checkbox"/> Yield:760 kg/ha <input type="checkbox"/> Suited for rice fallow condition <input type="checkbox"/> Synchronized maturity, non-shattering and amenable for single harvest <input type="checkbox"/> Shiny seeds with 100 seed weight of 3.0 to 3.5 grams <input type="checkbox"/> High protein (20.63%) <input type="checkbox"/> Resistant to Pod borer and White fly; Moderately resistant to Mungbean Yellow Mosaic Virus (MYMV), Powdery mildew and Urdbean leaf crinkle virus diseases	
12.	Cowpea VBN 4	VBN 1 x VCP 10 - 001	70 - 75 days	<input type="checkbox"/> <i>Aadi</i> (June-July); <i>Purattaasi pattam</i> (September-October) <input type="checkbox"/> Irrigated: 1377 kg/ha; Rainfed: 1035 kg/ha <input type="checkbox"/> Determinate plant type with synchronized maturity <input type="checkbox"/> Large seeds with 100 seed weight of 9.5-11.0 g <input type="checkbox"/> High fibre (5.6 %) and protein (18.6 %) <input type="checkbox"/> Resistance to pod borer and Bean Common Mosaic Virus (BCMV) disease.	



13.	Sunflower hybrid COH 4	COSF12A x IR 6	90-95 Days	<input type="checkbox"/> <i>Aadi and Karthigai-Margazhi pattam</i> <input type="checkbox"/> Irrigated: 2182 kg/ha; Rainfed: 1898 kg/ha <input type="checkbox"/> High volume weight (46 g/100ml) <input type="checkbox"/> High oil content (40-42 %) <input type="checkbox"/> Moderately resistant to sucking pest, leaf feeders, powdery mildew and <i>Alternaria</i>	
14.	Sesame VRI 5	VRI 3 x EC 370840	75- 80 days	<input type="checkbox"/> Dec. – Jan. and Feb. – March <input type="checkbox"/> Yield:795 kg/ha <input type="checkbox"/> Monostem type suitable for high density sowing and mechanical harvesting <input type="checkbox"/> White seeded; 52% oil and 23.8% protein content <input type="checkbox"/> Moderately resistant to sucking pests, capsule borer, dry root rot, phyllody and powdery mildew diseases	
15.	Sugarcane Co 18009 (Punnakai)	Co 07027 x ISH 69	12 months	<input type="checkbox"/> December – March (Mid/Late season) <input type="checkbox"/> Cane yield: 160.39 t/ha; Sugar yield: 20.71 t/ha <input type="checkbox"/> Good ratooner <input type="checkbox"/> Suitable for jaggery production <input type="checkbox"/> Drought tolerant; Suitable for machine harvesting <input type="checkbox"/> Less susceptible to shoot borer (< 15%) and internode borer (< 30%); Moderately resistant to red rot.	
16.	Sunnhemp ADT 1	Intercross of SH4, CO 1, SUIN 053 & JRJ 610	120 days	<input type="checkbox"/> Green manure: All seasons; Seed production: Dec. - Jan., March - April <input type="checkbox"/> Yield:20.8 t/ha <input type="checkbox"/> High biomass <input type="checkbox"/> Less infestation by pests and diseases	

17.	Ridge Gourd MDU 1	Virudhunagar local x Periyakottai local	120 -130 days	<ul style="list-style-type: none"> <li><input type="checkbox"/> June – July and December - January under irrigated conditions</li> <li><input type="checkbox"/> Yield:18.75 tons/ha</li> <li><input type="checkbox"/> Medium sized fruits (29-30 cm length) with soft pulp</li> <li><input type="checkbox"/> 10-15 pickings can be made in four months duration.</li> <li><input type="checkbox"/> Suitable for preparation of jam, <i>thokku</i> and pickles.</li> <li><input type="checkbox"/> Field tolerant to fruit fly</li> </ul>	
18.	Winter Jasmine CO 1	Selection from Karamadai local	Perennial	<ul style="list-style-type: none"> <li><input type="checkbox"/> Year-round flowering</li> <li><input type="checkbox"/> Yield:8.52 tons/ha</li> <li><input type="checkbox"/> Profuse flowering during off-season (Oct- Feb).</li> <li><input type="checkbox"/> Attractive bright pink bold buds with good keeping quality.</li> <li><input type="checkbox"/> Flowers have mild fragrance.</li> <li><input type="checkbox"/> Free from red spider mite; low level of thrips infestation; Moderately resistant to leaf spot under field condition</li> </ul>	
19.	Bush Lab lab CO 16	Lp (b) 03 x Lp (b) 36	100 – 120 Days	<ul style="list-style-type: none"> <li><input type="checkbox"/> June – July and October – November</li> <li><input type="checkbox"/> Yield:16.5 t/ha</li> <li><input type="checkbox"/> <i>Kozhikkaal avarai</i> type</li> <li><input type="checkbox"/> Photo-insensitive and suitable for year round cultivation.</li> <li><input type="checkbox"/> Early bearing with 50-55 days for first harvest</li> <li><input type="checkbox"/> 12-15 pickings can be made in four months duration</li> <li><input type="checkbox"/> Less infestation by <i>Maruca</i> pod borer (5.5%)</li> </ul>	
20.	Silk Cotton MTP 1	Selection from Melachokkanat hapuram local	4 years up to 40 years	<ul style="list-style-type: none"> <li><input type="checkbox"/> All seasons (Throughout the year)</li> <li><input type="checkbox"/> Yield:900 – 1500 pods/tree</li> <li><input type="checkbox"/> Fast growing and short rotation</li> <li><input type="checkbox"/> Suitable for all agro-forestry systems</li> <li><input type="checkbox"/> Medium sized pods densely packed with flosses</li> <li><input type="checkbox"/> No major incidence of pests and diseases</li> </ul>	

				except stem borer	
21.	Red sanders MTP 1	Selection from Ammur local	15-18 years	<input type="checkbox"/> All seasons (Throughout the year) <input type="checkbox"/> Yield:100 kg heartwood/tree <input type="checkbox"/> Wood is heavy, strong with wavy grain and dark brown <input type="checkbox"/> High santalin content <input type="checkbox"/> No incidence of major pests and diseases	
22.	<i>Casuarina</i> MTP 3	<i>Casuarina</i> <i>equisetifolia</i> × <i>C.</i> <i>junghuhniana</i>	3 years	<input type="checkbox"/> For all seasons (Throughout the year) <input type="checkbox"/> Yield:162 tonnes/ha <input type="checkbox"/> High holocellulose (75.8%) and wood density <input type="checkbox"/> Multifarious industrial utility <input type="checkbox"/> No incidence of major pests and diseases	
23.	Khaya MTP 1	Selection from Mettupalayam local (African Mahogany)	5-6 years	<input type="checkbox"/> For all seasons (Throughout the year) <input type="checkbox"/> Yield:150 tonnes/ha <input type="checkbox"/> Cylindrical stem <input type="checkbox"/> Multipurpose tree <input type="checkbox"/> No incidence of major pests and diseases	

### Technologies developed 2023

S. No.	Name of the technology
1.	TNAU's Village level Medium Range Weather Forecast
2.	TNAU seed coating formulation technology
3.	TNAU seed pelleting technology
4.	Stage-Specific Inoculants for Rice
5.	<i>Bacillus altitudinis</i> FD 48 for drought, plant growth and yield in rice
6.	Seed cubes for propagation of tree / vegetable crops
7.	Horizontal roughing filter for sediment removal for open well recharge
8.	Pyrolysis process for fuel oil production from waste plastics
9.	Red manila tamarind squash from PKM 2
10.	Preparation of functional food products from Hibiscus ( <i>Hibiscus rosa-sinensis</i> )

### Farm implements/ Machineries developed 2023

S. No.	Name of Farm implements/ Machineries
1.	Manual Operated Sugarcane Mother Shoot Cutter for Sustainable Sugarcane Initiative
2.	Development of Power Hoe cum Ridger for narrow spaced crops
3.	Moringa De-podding Machine
4.	Forced combustible cook stove
5.	Tractor operated planter for Tissue Culture Banana
6.	On-farm Hermetic Storage System for Dehulled Millets

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