

Newly Released High Yielding Millet Varieties of Tamil Nadu Agricultural University

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Millets have nutritional, environmental and economical superiority over the most common staple grains in India such as rice and wheat. India is the world's largest producer of Millets with a total share of 38.4% of world's production. (Source: Food & Agricultural Organization (FAO) as on 01-12-2023)). Millets are nutritionally superior to wheat and rice as they are rich in protein, vitamins and minerals and are gluten-free with low glycemic index. Being an excellent source of essential nutrients, millets are called as 'Nutri cereals'. Millets mature quickly, a valuable trait important for rain-fed farming and require relatively few inputs compared to major cereals. They grow under a range of day lengths and in poor soil, making them an attractive crop for marginal farming environments. With the objectives of creating awareness and increasing the production, productivity and consumption of millets, the United Nations, at the behest of the Government of India, declared 2023 as the 'International Year of the Millet'. High yielding varieties in millet crops have been released from Tamil Nadu Agricultural University, Coimbatore for the benefit of farming community. This article aims to provide details on the newly released high yielding varieties released from TNAU, Coimbatore.

Recently released TNAU millet varieties

Pearl Millet Hybrid COH 10

Parentage : ICMA 10444A x PT 6679
Year of release : 2023
Duration : 80-95 days
Season : **Irrigated:** June- July sowing;
April-May sowing
Yield : **Rainfed:** Sep-Oct sowing
3020 kg / ha under irrigated condition
2050 kg / ha under rainfed condition

Special Features

- Bold grain with semi compact long ear head
- Medium level of Fe (59 ppm) and Zn (37 ppm); High protein (15.6%)

- Tolerant to shoot fly
- Resistance to downy mildew and blast

Pearl Millet CO 10

Parentage : Composite of five elite inbreds (PT6029, PT6033, PT6034, PT6039 and PT6047)
Year of release : 2016
Duration : 85-90 days
Season : **Irrigated:** March/April;
January/February
Rainfed: June/July;
September/October
Yield : Irrigated - 3526 kg/ha
Rainfed - 2923kg/ha

Special Features

- Resistant to downy mildew
- High protein content (12.07%)
- Compact earhead and bold seed

Sorghum K 13

Parentage : ICSB 518 x SPV 1489
Year of release : 2023
Duration : 95-100 days
Season : **Rainfed:**
June- July sowing
Sep-Oct sowing
Yield : Grain Yield: 2575 kg/ha
Stover Yield: 11.4 t/ha

Special Features

- Dual purpose suited for grain and fodder
- Short duration variety
- Resistant to shoot fly, stem borer, downy mildew, grain mould and rust

Sorghum CO 32

Parentage : APK 1 x M35-1
Year of release : 2020
Duration : 105-110 days

Season : **Rainfed:**
June- July sowing
Sep-Oct sowing

Yield :
Grain Yield: 2911 kg/ha
Stover Yield: 11.7 t/ha

Special Features

- Moderately resistant to important shoot pests viz., shoot fly and stem borer.
- It is moderately resistant to downy mildew and grain mold.
- It has high protein (11.31-14.66 %) and fiber content (5.8 %) along with better cooking quality traits.

Barnyard Millet ATL 1

Parentage : DHBM 99-6 x RBM 36

Year of release : 2023

Duration : 90 days

Season : Rainfed: June-July: Sep-Oct

Yield :

Grain yield: 2123 kg/ha
Dry fodder: 3057 kg/ha

Special Features

- Drought tolerant
- Non lodging
- Iron 5.85 mg/100g
- Long, compact, cylindrical and non-shattering panicle
- Resistant to stem and borer shoot fly
- Moderately resistant to grain smut

Barnyard Millet MDU 1

Parentage : Pure line selection from Aruppukottai local

Year of release : 2017

Duration : 95-100 days

Season : Suitable for Kharif, rabi and summer seasons of Tamil Nadu

Yield : Grain:
Rainfed - 1500-1700 kg/ha
Irrigated - 2200-2500 kg/ha
Fodder: 3000-3300 kg/ha

Special Features

- Early maturing and high yielding
- High iron content (16 mg/100g of grain)
- Resistant to shoot fly, stem borer and smut

Recently released TNAU millet varieties



Pearl Millet Hybrid COH 10



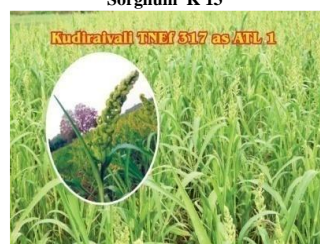
Pearl Millet variety CO 10



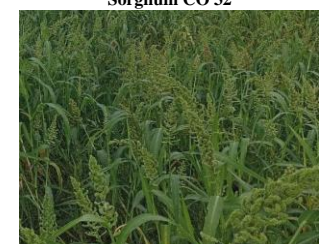
Sorghum K 13



Sorghum CO 32



Barnyard Millet ATL 1



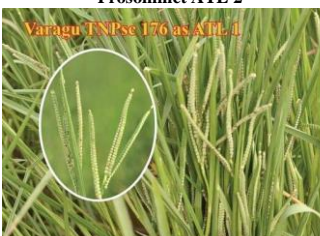
Barnyard Millet MDU 1



Proso millet ATL 2



Finger Millet ATL 1



Kodo Millet ATL 1



Small Millet ATL 1

Proso millet ATL 2

Parentage : Selection from IPM 19

Year of release : 2023

Duration : 65-70 days

Season : Rainfed:
June-July; Sep-Oct

Yield : Grain yield: 2140 kg/ha
Dry fodder: 2793 kg/ha

Special Features

- Short duration; Protein content: 12.0%
- Non lodging and suitable for mechanical harvesting
- Grains are bold and straw white in colour
- Moderately resistant to shoot fly incidence
- Resistant to brown spot diseases and moderately resistant to leaf blight

Finger Millet ATL 1

Parentage : TNAU 900 x Co (Ra) 14
Year of release : 2021
Duration : 110 days
Season : Rainfed: Kharif (June-July);
Yield : Rabi (Sep-Oct) Summer (Jan-Feb)
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Grain yield: 3130 kg/ha

Special Features

- Moderately Resistant of leaf, neck and finger blasts
- No serious pest incidence
- Sturdy culm and uniform maturity with nonlodging traits suited for mechanized harvesting
- Drought tolerant
- Bold grains with high bulk density
- Nutritionally rich grain and straw
- High flouring capacity (92%)

Kodo Millet ATL 1

Parentage : DPS 63 by pure line selection
Year of release : 2021
Duration : 110 days
Season : Rainfed: Rabi (Sep-Oct)
Yield :
Grain yield: 2510 kg/ha

Special Features

- No serious pest and diseases incidence
- Panicles, long and open
- nonlodging
- uniform maturity traits suited for mechanized harvesting,
- Drought tolerant,

- Bold grains with high bulk density,
- Nutritionally rich grain and straw,
- High milling out turns (54%),
- Suitable for value addition with consumer preference

Small Millet ATL 1

Parentage : CO(Samai) 4 x TNAU 141
Year of release : 2018
Duration : 85-90 days
Season : Rainfed: Kharif (June-July);
Yield : Rabi (Sep-Oct)

1587 kg/ha grain yield and 3109 Kg/ha of straw yield

Special Features

- Strong and sturdy culm
- Long, semi-compact panicles with non-shattering grains
- Drought tolerant
- It has special attributes like easy threshability, synchronous maturity and nonlodging growth habit.
- The grains are bold with attractive golden yellow colour
- The grains are nutritious with preferred grain qualities for cooking and value addition
- The nutrient rich straw is palatable and highly suitable for cattle feeding

Millet is a climate resilient crop which can be grown under water-scarce conditions in marginal lands, making them future-ready crops for ensuring food security under the current climate crisis. Area under millet cultivation, production and productivity of millet crops have to be increased and high yielding millet varieties have to be adopted in order to ensure food and nutrition security for our country.

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