



# MEGHA SANDESHA

## DAMU e-Newsletter

ICAR-Agricultural Technology Application Research Institute, Zone XI, Bengaluru  
District Agromet Unit (DAMU), ICAR-Krishi Vigyan Kendra, Ballari.

### CONTENTS

- Mechanism of Agro-Automatic Weather Station (AWS)
- Agro-advisories, FAPs and other activities conducted at DAMU-KVKs
- DAMUs field visits
- Dissemination of Agro-met Advisory bulletins
- DAMU in media

### EDITORIAL COMMITTEE

- Advisor** : **Dr. D.V. Srinivasa Reddy**  
Principal Scientist  
ICAR-ATARI, Bengaluru
- Chief Editor** : **Dr. Ramesh B K**  
Nodal officer, DAMU  
Senior Scientist and Head  
ICAR-KVK, Ballari
- Editors** : **Sri. Jagadeesha Naika**  
SMS (Agro-Meteorology)
- : **Dr. Shilpa H**  
Scientist (Home Science)
- Members** : **Smt. Radhika**  
Agromet Observer
- : **Smt. Mamatha B**  
Senior Assistant
- : **Sri. Ashok S Mahendrakar**  
Technical Officer (Computer)

### Editorial

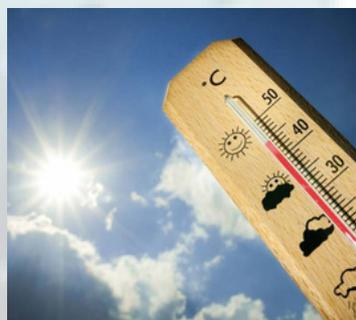
District Ago-met Units established at select KVKs under ICAR-ATARI, Zone-XI, Bengaluru are performing to the best of their abilities and have carved a 'niche' for themselves among the farming community of their district. The Agro-met advisories disseminated twice weekly to the registered farmers and to all the RSKs have helped stakeholders to plan the agrarian activities based on the weather forecast. There are success stories that tell us how farmers have cut-down their input cost and enhanced their agricultural income because of continuous update on weather they recieved from DAMU during last year.

DAMU, KVK, Ballari feels honoured for having given the opportunity to bring out the first issue of DAMU e-newsletter 'MEGHA SANDESHA' on behalf of ATARI, Zone XI, Bengaluru.

We express our deepest sense of gratitude to The Director, ATARI, Dr. V. Venkatasubramanian, Dr. D.V.S Reddy, Principal Scientist, ATARI for the opportunity given.

We feel always motivated under the leadership of our honourable Vice Chancellor Dr. K.N. Kattimani and Director of Extension, Dr. D.M. Chandargi to achieve the goals set and we pledge to do better in days to come.

**Dr. Ramesh. B.K.**  
Nodal officer, DAMU  
KVK, Ballari



## MECHANISM OF AGRO-AUTOMATIC WEATHER STATION (AWS) FOR FARM AND OTHER AGRICULTURAL APPLICATIONS

An Agro-Automatic Weather Station (AWS) is a 'meteorological station in which observations are made and transmitted automatically'. To increase the accuracy of weather forecasting and to augment the block level Agricultural Weather Advisory Services (AAS), India Meteorological Department (IMD) under ATARI, Zone XI, Bengaluru has installed 16 Agro-AWS at phase 1st DAMU KVKs. In that 12 are at Karnataka, 3 (Kollam, Malapuram, Palkkad) in Kerala and 1 at Lakshadweep. These Agro-AWS record 8 weather parameters at 15 minutes intervals including soil moisture and soil temperature. An Agro-AWS is an assembly of various sensors to monitor various weather parameters coupled with a data logger and transmitter to record and transmit this data to terminal equipment like PC or server where it may be stored, accessed, analysed. The analysed data is sent to DAMUs through E-mail. The 10 m pole is foldable to make easy maintenance of wind sensors installed at 3 m, 10 m height and GPRS is used for communication from field site to central server.

Typical sensors used in Agro-AWS stations are air temperature, relative humidity, wind direction, wind speed (Anemometer), solar radiation (Pyranometer), tipping bucket type rain gauge, soil moisture and soil temperature.



- **Temperature and Humidity sensors-** used to record the maximum, minimum temp and relative humidity
- **Wind sensors** are mounted at 3m and 10m height for recording wind direction and wind speed
- **Rainfall sensors-** The tipping bucket type sensors record the rainfall amount. The receiver is 200 mm to 325 mm in diameter. The rain gauge is mounted 30 cm above the ground level
- **Soil sensors** measure the soil temperature and soil moisture. These sensors are installed at 4 different depths i.e. 10, 30, 70 and 100 cm. Soil moisture sensors measures the water content of soil. These sensors can also be used to estimate the amount of stored water in a profile or how much irrigation is required to reach a desired amount of water in the soil.
- **Solar radiation sensors-**The pyranometer is used to record the solar radiation. It measures direct solar radiation which exceeds the level of 120 W/m<sup>2</sup>

### Uses of Agro-AWS in Agriculture

- The Agro-AWS data is used in the preparation of Agro-met Advisory Bulletins (AAB) and help farmers to take decisions on day to day farming operations. Through these advisory bulletins farmers can minimize monetary losses during extreme weather conditions.
- Using AWS we can monitor weather conditions remotely and also analyse the weather over longer periods of time, helping to generate accurate weather forecasts.
- Soil moisture and soil temperature data are used to schedule the irrigation.
- Realized weather data is used for other agricultural research activities.
- These weather stations minimize the human resource involved in taking daily weather observations.

## Annual Review Meeting 2021 for the KVKs implementing DAMUs under ATARI, Bengaluru

The second annual review meeting for the KVKs of DAMU under ATARI Zone XI was held on 24/09/2021 in virtual mode through google meet. The meeting was attended by a galaxy of experts from IMD, ICAR and SAUs besides Heads of KVKs of Karnataka, Kerala and Lakshadweep Islands and SMS (Agromet) of DAMU implementing KVKs of ATARI, Bengaluru.



Both Dr. Randhir Singh, ADG (AE), ICAR, New Delhi and Dr. V. Venkatasubramanian, Director, ATARI-XI expressed that the impact of DAMUs is well recognised in changing the lives of farmers through minimising crop loss from extreme weather conditions and sustainability in farmers' income. Further suggested to take up the dissemination of district specific weather forecast and agro advisories in non DAMU KVKs also making use of IMD weather forecast. Dr. KK Singh, IMD, New Delhi expressed that the micro level information available with KSNDCM in Karnataka is to be utilised to integrate the agro advisory bulletins. In order to empower the KVKs, IMD will conduct need based capacity development programmes from time to time.

The technical session was chaired by Dr S D Attri, Scientist G, Agromet Advisory Service Division, IMD, New Delhi and co-chaired jointly by Prof H S Shivaramu, Dean, College of Hort., Kolar, UHS Bagalkote and Dr Kripan Ghosh, IMD, Pune. The SMSs (Agromet) of all the 16 DAMU implementing KVKs, 12 in Karnataka, three in Kerala and one in Lakshadweep made the presentations and discussed critically.

During the year 2020-21, a total of 4106 agro advisories generated and disseminated to 973943 in these 16 districts. These DAMUs have also prepared 323 SMSs and sent to 450818 farmers through Kisan Portal. In addition DAMUs have conducted 267 awareness programmes benefitting 16236 farmers and also have developed 52 videos on district specific weather related aspects and disseminated to 492584 farmers through registered WhatsApp groups.

The feedback obtained from the stakeholders indicated that the AAS bulletins issued by DAMUs have been useful to the farmers as well as extension workers of the district. According to farmers' feedback, the bulletins and telephonic mode of communication were useful to farmers to take up agricultural operations such as land preparation, sowing of crops, irrigation during non-rainy days, fertilizer application and spraying during calm and clear weather conditions. Information regarding the incidence of pest/diseases and their control measures and ideal time for harvesting of the crop were most useful to the farmers. Dr. DVS Reddy, Principal scientist, ATARI- XI coordinated the meeting.



**Dr S D Attri, Scientist G, IMD New Delhi  
Chairing the technical session**

## Agro-advisories and Farmers Awareness Programmes (FAPs) at DAMU-KVKs

Sl. No	Name of the DAMU, KVKs	Agro advisories			Farmers awareness programmes	
		No. of Agro advisories generated	No. of Farmers registered for agro advisories	No. of Farmers benefitted	No. of programmes	No. of farmers benefitted
1.	Ballari	26	11,525	11,525	03	120
2.	Bagalakote	17	500	500	03	127
3.	Chamarajanagara	26	567	5,473	06	158
4.	Chikkamagaluru	12	9,608	9,608	02	102
5.	Haveri	26	2,600	> 2,000	10	267
6.	Kodagu	78	455	3,400	13	437
7.	Kolar	26	4,408	4,408	04	269
8.	Kollam	26	2,490	3,150	05	662
9.	Koppal	26	14,500	14,500	15	346
10.	Lakshadweep	--	--	--	--	--
11.	Malappuram	360	3,300	21,000	0	0
12.	Mandya	26	9,600	9,600	03	67
13.	Palakkad	26	2,169	2,500	--	--
14.	Ramanagara	130	10,226	8,365	5	98
15.	Tumkur-1	40	74,600	74,600	07	269
16.	Yadagir	26	1,950	1,890	05	232

### DAMU-KVK, Ballari

#### Virtual Farmer Awareness Programme (FAP) on 'Importance of weather forecasting in agriculture'



DAMU, KVK, Ballari conducted Farmer Awareness Program (FAP) on "Importance of weather forecasting in agriculture" through virtual mode on 12.08.2021 in collaboration with DATC, Kampli and ATMA scheme, Ballari. Total of 53 farmers and extension personnel took part in the programme. Mr. Jagadeesha Naika, SMS (Agromet) delivered lecture and provided information about types of weather forecasting and how weather conditions prevailed for next five days and next one month is discussed.

Also pest and disease incidence during the prevailing weather conditions in major crops of the district and also possible pest and disease outbreak were disseminated to the online gathering. He also gave information about use of weather apps namely Mehghdoot and DAMINI app. Dr. Ramesh B.K. Senior Scientist and Head, ICAR-KVK, Ballari, JDA, Ballari, and all the KVK, Scientists were presented during the programme and interacted with the farmers on various agri-related issues.

### DAMU-KVK, Bagalakote

#### Training to DAESI students



DAMU-KVK, Bagalkote had conducted training to DAESI students on Meghdoot and Damini Apps on 26-09-2021 at ICAR-KVK, Bagalkote. Totally 42 farmers took part in the programme and got benefitted.

## DAMU-KVK, Chamarajanagara

### FAP on importance of Meghdoot and Damini application



DAMU, KVK Chamrajnagar had conducted FAP on importance of Weather apps at ICAR-KVK, Haradanahalli farm on 28-09-2021. 52 farmers participated in programme. Rajath H P, SMS (Agrometeorology), enlightened the Importance of Meghdoot and Damini application and demonstrated the same. He also explained about the pest and disease development related to climatic parameters and preventive measures to be followed in different seasons to manage pest and diseases.

He also explained about the management strategies under abnormal conditions like drought, heavy rainfall, high wind speed and effect of continuous cloudy condition on crop growth and development.

## DAMU-KVK, Chikkamagaluru

### DAMU interventions brought changes among the farmers



DAMU has been functional in Chikkamagaluru district from June-2019. DAMU unit has brought some changes among the farmers since from its beginning using IMD's accurate forecast. According to the mandates of KVK & DAMU trainings, FAP's were conducted to educate the farmers regarding the changing climate and its impact on Agriculture & allied sectors. In addition, steps to popularize Meghdooth and Damini App have also be taken.

## DAMU-KVK, Haveri

### Dignitaries visit to DAMU Unit



Shri. L.S. Ajagannavar, Hon'ble Board Member UAS Dharwad visited the District Agromet Unit (DAMU) at Krishi Vigyan Kendra, Haveri (Hanumanmatti). During his visit reviewed the DAMU activities regarding the dissemination of weather forecast and weather based agro advisories at block level through WhatsApp groups. He also visited the automatic weather station (AWS) at KVK premises and examined the operational techniques of weather instruments (sensors) and its utility at every 15 minutes. Dr. Ashok P. Senior Scientist and Head explained in detail about DAMU activity, how KVK has increasing awareness on climate change, usage of weather apps through farmers awareness programs (FAPs) and outreach of weather based agro advisories by social media. Shri. L.S. Ajagannavar appreciated the DAMU staff for creating short videos on weather based agro advisories to farmers and meticulous work towards dissemination of weather forecasting and farm advisory services.



Dr. V. I. Benagi, former Vice-Chancellor UAS Dharwad also visited the DAMU unit and gathered information on weather apps viz., MEGHDOOT and DAMINI exhibited in the KVK museum. Dr. Shantveerayya, SMS (Agrometeorology) briefed the DAMU activities like dissemination of weather forecasting and agro advisory bulletin on every Tuesday and Friday at block level through Whats App groups, facebook, youtube, display at KVK premises, collecting the feedback from farmers on every fortnight. Dr. V. I. Benagi, valued the work done by DAMU for improving the livelihood of farming community.

### DAMU-KVK, Kodagu

#### FAP to DAESI students

Diploma in Agricultural Extension services for Input dealers (DAESI) play an important role in educating the farmers when they visit the store for farm purchases and are also enrolled in different agricultural societies & organisations. On 02-09-2021 at KVK Gonikoppal, FAP to educate the DAESI students on "Role & importance of different weather parameters on different Agricultural and horticultural crops that are grown in Kodagu region" was conducted.

Dr. Harish, SMS (Agromet) DAMU, Gonikoppal gave a talk on the importance of Weather based Agro advisory bulletins services to make use of weather information before starting any farm activities and they were encouraged to register for weather based advisory services to get regular update on the weather based agriculture information through WhatsApp and telegram social media groups. Information on Meghdoot app was also shared and were asked to install the app to get weather update in regional language on daily basis.



### DAMU-KVK, Kolar

#### Capacity Building Programme to DAESI trainees

Capacity Development programme on importance of Weather forecasting in Agriculture and popularization of weather based mobile applications used in agriculture was organized at College of Horticulture campus, Kolar on 09-07-2021. About 40 DAESI trainees benefitted from this program. Information was given regarding working of Automatic Weather Stations and its importance in agriculture and also importance of Meghdoot application in farming sector. About 35 DAESI trainees have installed Meghdoot Application during the programme.



### DAMU-KVK, Kollam

#### Awareness on 'Importance of weather-based cultivation and use of AAS Bulletin'

DAMU, KVK, Kollam had organized an awareness programme on the topic of "Importance of weather-based cultivation and use of AAS Bulletin" at Seminar Hall of Krishi Vigyan Kendra, Kollam on September 28th, 2021. The session was handled by Mrs. Shahina S, Agromet Observer, DAMU, KVK, Kollam. The one-hour session has started at 12:00 PM. 35 farmers from different blocks of Kollam district had attended the programme.



Importance of weather-based farming, use of various weather based mobile applications (Meghdoot, Damini, Mausam), How to utilize the AAS Bulletins in planning various agricultural operations were the topics that were covered during the session. All the farmers who have attended the session expressed their interest for getting AAS services in future and registered in DAMU, KVK, Kollam.

## DAMU-KVK, Koppal

### FAP to farm women and Self-Help Groups



Latitude: 15.456099  
Longitude: 76.523834  
Elevation: 430.39±21 m  
Accuracy: 15.0 m  
Time: 26-08-2021 14:05

ICAR-Krishi Vigyan Kendra, Gangavathi (Koppal) had conducted programme on Popularization of weather based apps to farm women and self help groups on 26-08-2021. Nearly 40 farm women were participated in this programme. Dr. M. V. Ravi (Senior Scientist and Head) ICAR-KVK Gangavathi addressed the participants on climate change and its impact on agriculture.

Dr. Fakeerappa Arabhanvi, SMS (Agrometeorology) had given a lecture on popularization of weather based apps and explained the role of DAMU activities in agriculture and suggested to do agricultural activities based on the forecast to enhance agricultural productivity.

## DAMU-KVK, Mandya

### Popularization of weather apps

DAMU, Mandya conducted two on-campus FAP on 2nd and 3rd August 2021 at VC farm KVK, Mandya on Importance of weather forecasting, popularization weather apps. Nearly 35 farmers were attended the programme and got benefitted.



## DAMU-KVK, Ramanagara

### Soil moisture observation, a boon to AAS



DAMU KVK Ramanagara has started recording soil moisture observations since April 2021 in both cropped and non-cropped area of KVK farm by Gravimetric method from the surface level and also for the depths 7.5, 15, 30, 45 and 60 cm. Soil moisture is an important hydrological variable for climatic and agricultural modelling. It plays a critical role in governing water and energy balance between the land and atmosphere.

It helps in determining crop growth & development, drought assessment, water resource management and crop insurance. In the tropics, soil moisture becomes more often the limiting factor in crop growth under rainfed farming. KVK has started using soil moisture observations for operational data analysis and disseminated through Agro Advisory services.

**DAMU-KVK, Tumkur-1**

**Capacity Building Programme to farmers**



DAMU-KVK, Tiptur had conducted on-campus FAP on Meghdoot and Damini Apps and Weather based agro advisory for Agricultural and Horticultural crops under Drought situation on 28-09-2021 at ICAR-KVK, Tiptur. Totally 65 farmers took part in the programme and got benefitted.

**DAMU-KVK, Yadgiri**

**Capacity Building Programme on Meghdoot and Damini app**



An on campus training program was organized at ICAR-KVK-Yadgir Dr. Shilpa V. Chogatapur, SMS (Ag Met), Dr. Amresh Y. S., Senior Scientist and Head and some progressive farmers were chaired the program. During this programme Dr. Shilpa V. Chogatapur addressed the gathering on usage of MEGHDOOT and DAMINI App and also contingent crop planning. A demo was given on MEGHDOOT and DAMINI App, steps to download, registration and usage this app in farming activity. More than 40 farmers were attended this programme and most of the farmers downloaded and started using this app on the same day.

**Field visits**



**DAMU-KVK, Ballari**



**DAMU-KVK, Chamarajanagar**



**DAMU-KVK, Kodagu**



**DAMU-KVK, Koppal**



**DAMU-KVK, Tumkur-1**



**DAMU-KVK, Haveri**



**DAMU-KVK, Ramanagara**



**DAMU-KVK, Chikkamagaluru**

# Dissemination of Agro-met Advisory Bulletins through various modes

**ಕೃಷಿ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ರಾಯಚೂರು**  
 ಎ.ನಿ.ಎ.ಆರ್.ಕೃಷಿ ವಿಜ್ಞಾನ ಕೇಂದ್ರ, ಬಳ್ಳಾರಿ  
**ಜಿಲ್ಲಾ ಹವಾಮಾನ ಘಟಕ (DAMU)**  
**ಅಕಾಲಿತ ಮಳೆಯಿಂದಾಗಿ ರೈತರಿಗೆ ಬೆಳೆ ಸಲಹೆಗಳು**  
**ಸಾಮಾನ್ಯ ಸಲಹೆಗಳು**

1. ಹೊಲದಲ್ಲಿ ನೀರು ನಿಲ್ಲದ ಹಾಗೆ ಬನಿಗಾಲುವೆ ಮಾಡಿ ನೀರು ಸರಾಗವಾಗಿ ಹರಿದು ಹೋಗುವ ಹಾಗೆ ನೋಡಿಕೊಳ್ಳಬೇಕು.
2. ಕಟಾವಾದ ಬೆಳೆಗಳನ್ನು ಸೂಕ್ತ ಸ್ಥಳಕ್ಕೆ ಸಾಗಿಸಿ, ಮಳೆಯ ನೀರು ತಾಗದಂತೆ ಹೊದಿಕೆ ಹಾಕಬೇಕು.
3. ಮರಳುಮಿಶ್ರಿತ (ಮಸಾರಿ) ಜಮೀನುಗಳಲ್ಲಿ ಸೊರಗು ರೋಗ ಬಂದಲ್ಲಿ (ಸಿಡಿ, ಬುಡರೋಳಿ ಇತ್ಯಾದಿ) ರೋಗ ಬಂದಲ್ಲಿ Carbonizium ದ್ರವವನ್ನು ಬೆಳೆಯ ಬೇರುಗಳಿಗೆ ತಾಗುವಹಾಗೆ ಸುರಿಯಬೇಕು.
4. ಕನಿಷ್ಠ ತಾಪಮಾನ ಸಾಮಾನ್ಯ ಕೃಷಿ ಕಡಿಮೆ ಇರುವುದರಿಂದ ಜಾನುವಾರುಗಳನ್ನು ಬೆಚ್ಚನೆಯ ಸ್ಥಳಗಳಲ್ಲಿ ಕಟ್ಟಬೇಕು.



**ಕೃಷಿ ಸಲಹೆಗಳು-ಕೊಪ್ಪಳ ಜಿಲ್ಲೆ**  
**ಹತ್ತಿ (ಎಲ್ಲ ಕಂಪಾಗುವಿಕೆ)**  
**ಶೇ. 1ರ ಮೆಗ್ನೀಷಿಯಂ**  
**ಸಲ್ಫೇಟ್ ಜೊತೆಗೆ ಶೇ. 2ರ**  
**ಯೂರಿಯಾ ಸಿಂಪರ್ಡಣೆ**  
**ಹವಾಮಾನ ಆಧಾರಿತ ಕೃಷಿ ಸಲಹೆಗಳು**

**ಕೃಷಿ ಸಲಹೆಗಳು - ಬಳ್ಳಾರಿ ಜಿಲ್ಲೆ**  
**ಜಾನುವಾರು**  
**ಚರ್ಮಗಂಟು ರೋಗ ಬರುವ**  
**ಸಾಧ್ಯತೆ ಇದೆ**  
**ಸೂಕ್ತ ಮುನ್ನೆಚ್ಚರಿಕಾ**  
**ಕ್ರಮಗಳನ್ನು ಕೈಗೊಳ್ಳಿ**  
**ಬಳ್ಳಾರಿ ಜಿಲ್ಲೆ ರೈತರು ಪಾಲಿಸಬೇಕಾದ ಕ್ರಮ**

**ಕೃಷಿ ಸಲಹೆಗಳು-ಕೊಪ್ಪಳ ಜಿಲ್ಲೆ**  
**ಭತ್ತ (ಮೇಲುಗೊಬ್ಬರ)**  
**3 ಮತ್ತು 6 ವಾರಗಳ ನಂತರ**  
**ಹಾಗೂ ತೆನೆ ಬರುವ ಹಂತದಲ್ಲಿ**  
**ಹೆಕ್ಟೇರಿಗೆ 25 ಕೆಜಿ ಸಾರದನಾ**  
**ಕೃಷಿ ಸಲಹೆಗಳು**

**ಸತತ ಮಳೆಯ ನಂತರದ ಅವಧಿಯಲ್ಲಿ**  
**ಕೃಷಿ ಸಲಹೆಗಳು**  
**ಪ್ರಸ್ತುತಿ: ಜಿಲ್ಲಾ ಕೃಷಿ ಹವಾಮಾನ ಘಟಕ**  
**ಕೃಷಿ ವಿಜ್ಞಾನ ಕೇಂದ್ರ, ಹಾವೇರಿ**



**ಕೃಷಿ ವಿಜ್ಞಾನ ಕೇಂದ್ರಕ್ಕೆ ವಿವಿ ಸದಸ್ಯ ಅಜಗಣ್ಣವರ ಭೇಟಿ**  
**ಕವಿಯಿಂದ ರೈತರಿಗೆ ಹವಾಮಾನ ಆಧಾರಿತ ಕೃಷಿ ಸಲಹೆಗಳು**  
**ಮಂಚನ ಮುನ್ನೂಟೆ: ದಾಮಿನಿ ಆತ್ಮಾ ಬಳಕೆ**



**ಜಿಲ್ಲೆಯಲ್ಲಿ 5 ದಿನ ಧಾರಾಕಾರ ಮಳೆ ಮುನ್ನೂಟೆ**  
**ಗೊಬ್ಬರ, ಔಷಧಿ ಸಿಂಪರ್ಡಣೆಯ ಚಟುವಟಿಕೆ ಮುಂದೂಡಲು ಇಲಾಖೆ ಸೂಚನೆ**  
**ಹವಾಮಾನಾಧಾರಿತ ಬೆಳೆ ಬೆಳೆಯಿರಿ**

**ಜನಮಿತ್ರ**  
**5 ದಿನ ಸಾಧಾರಣ ಮಳೆ**  
**ಮುಂದಿನ 4 ದಿನ ಮಳೆ ಸಾಧ್ಯತೆ**

**ಮೇಷದಾತ ಆತ್ಮಾ ಪ್ರಾತ್ಯಕ್ಷಿಕೆ**  
**ಮೇಷದಾತ ಆತ್ಮಾ ಪ್ರಾತ್ಯಕ್ಷಿಕೆ**  
**ಮೇಷದಾತ ಆತ್ಮಾ ಪ್ರಾತ್ಯಕ್ಷಿಕೆ**



**ವೃತ್ತಿ ನಮೂನಾಂಕ**  
**ಕರ್ನಾಟಕಕ್ಕೆ ಉಪಯುಕ್ತ**  
**ವಿವಿಧವಾದ ರೈತ ಕೃಷಿಗಳನ್ನು ಬಾಂವು ಅನುಸರಿಸಬೇಕಾದ ಕ್ರಮಗಳು**

**ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿ.22ರ ತನಕ ಮಳೆ ಸಂಭವ**  
**ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿ.22ರ ತನಕ ಮಳೆ ಸಂಭವ**  
**ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿ.22ರ ತನಕ ಮಳೆ ಸಂಭವ**

**DAMU IN MEDIA**  
**ಮೇಷದಾತ ಆತ್ಮಾ ಪ್ರಾತ್ಯಕ್ಷಿಕೆ**  
**ಮೇಷದಾತ ಆತ್ಮಾ ಪ್ರಾತ್ಯಕ್ಷಿಕೆ**

**ಜಿಲ್ಲೆಯಲ್ಲಿ 5 ದಿನ ಧಾರಾಕಾರ ಮಳೆ ಮುನ್ನೂಟೆ**  
**ಗೊಬ್ಬರ, ಔಷಧಿ ಸಿಂಪರ್ಡಣೆಯ ಚಟುವಟಿಕೆ ಮುಂದೂಡಲು ಇಲಾಖೆ ಸೂಚನೆ**  
**ಹವಾಮಾನಾಧಾರಿತ ಬೆಳೆ ಬೆಳೆಯಿರಿ**

**ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿ.22ರ ತನಕ ಮಳೆ ಸಂಭವ**  
**ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿ.22ರ ತನಕ ಮಳೆ ಸಂಭವ**  
**ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿ.22ರ ತನಕ ಮಳೆ ಸಂಭವ**