



**B. L. D. E ASSOCIATION'S
S. B ARTS AND K. C. P SCIENCE COLLEGE,**

SHRI B. M. PATIL ROAD (Solapur Road), VIJAYAPUR

ACCREDITED at 'A' Grade in 3rd Cycle by NAAC

Phone: (08352) – 261766, (08352) 262770 Extn. 2223, 2224

Fax: 08352 – 261766 E-mail: bldeasbkcp@gmail.com



Web: www.bldeasbkcp.org

REF.: _____

Date: 18th Nov 2021

To,

The Head Master,

Bapuji Primary School,

Babaleshwar

Vijayapur

Subject: Regarding Permission to organize "Soil and Water Testing Camp".

Sir/Madam,

The Chemistry Department of BLDEA's S. B. Arts and K. C. P. Science College, Vijayapur are planning to organize a free "Soil and Water Testing Camp" on 25 Nov 2021 at 10.30 am in your school.

The camp would give the detailed analysis of the soil and water quality. This will be very helpful for the farmers to improve their crop yield.

We request you to grant permission to organize the above mentioned camp at your school.

Thanking you.

Yours sincerely,

Principal,
S.B. Arts and KCP Science College
VIJAYAPUR

IQAC, Co-ordinator
S.B. Arts & K.C.P. Science College,
Vijayapur.

Head Master,
Shri Bapuji H.P.S. Babaleshwar
Tq: Babaleshwar. Dist: Bijapur.



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ಗೆ,
ಮುಖ್ಯವಾಢ್ಯಾಯಕ
ಬಾಪುಜಿ ಪ್ರಾಥಮಿಕ ಶಾಲೆ
ಬಾಬಲೇಶ್ವರ,
ವಿಜಯಪುರ

ವಿಷಯ: ಬಾಬಲೇಶ್ವರ ದಲ್ಲಿ "ಮಣ್ಣು ಮತ್ತು ನೀರು ಪರೀಕ್ಷಾ ಶಿಬಿರ" ಆಯೋಜಿಸಲು
ಅನುಮತಿ ಬಗ್ಗೆ.....

ಮಾನ್ಯರೆ,

ವಿಜಯಪುರದ ಬಿ. ಎಲ್. ಡಿ. ಎ. ಯ ಎಸ್. ಬಿ. ಕಲಾ ಮತ್ತು ಕೆ. ಸಿ. ಪಿ. ವಿಜ್ಞಾನ ಕಾಲೇಜಿನ
ರಸಾಯನಶಾಸ್ತ್ರ ವಿಭಾಗವು 25 ನವೆಂಬರ್ 2021 ರಂದು ಬಾಬಲೇಶ್ವರ ನಲ್ಲಿ ಉಚಿತ
"ಮಣ್ಣು ಮತ್ತು ನೀರು ಪರೀಕ್ಷಾ ಶಿಬಿರ" ವನ್ನು ಆಯೋಜಿಸಲು ಯೋಜಿಸುತ್ತಿದೆ.

ಶಿಬಿರವು ರೈತರ ಮಣ್ಣು ಮತ್ತು ನೀರಿನ ಗುಣಮಟ್ಟದ ವಿವರವಾದ ವಿಶ್ಲೇಷಣೆಯನ್ನು ನೀಡುತ್ತದೆ.
ಆದ್ದರಿಂದ ಇದು ಬೆಳೆ ಇಳುವರಿಯನ್ನು ಸುಧಾರಿಸಲು ರೈತರಿಗೆ ತುಂಬಾ ಸಹಾಯಕವಾಗುತ್ತದೆ.

ಆದ್ದರಿಂದ ಮೇಲೆ ತಿಳಿಸಿದ ಶಿಬಿರವನ್ನು ನಿಮ್ಮ ಶಾಲೆಯಲ್ಲಿ ಆಯೋಜಿಸಲು ತಾವು ಅನುಮತಿ
ನೀಡುವಂತೆ ವಿನಂತಿಸುತ್ತೇವೆ.

ಧನ್ಯವಾದಗಳು.

ನಿಮ್ಮ ವಿಶ್ವಾಸಿ,



Principal,
S.B. Arts and KCP Science College
VIJAYAPUR



IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.



Head Master,
Shri Bapuji H.P.S. Babaleshwar
Tq: Babaleshwar. Dist: Bijapur.



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Date: 18 Nov 2021

Instructions to Farmers

(Regarding awareness about Soil and Water Testing Camp)

A Free "Soil and Water Testing Camp" will be organized by Chemistry Department of BLDEA's S. B. Arts and K. C. P. Science College, Vijayapur on 25 Nov 2021 in Babaleshwar

The farmers are hereby informed to follow the below mentioned procedure for collecting the soil and water samples.

Procedure:

1. Divide the field into different homogenous units based on the visual observation and farmer's experience. Remove the surface litter at the sampling spot.
2. Make a 'V' shaped cut to a depth of 15 cm in the sampling spot using spade. Collect at least 10 to 15 samples from each sampling unit and place in a bucket or tray.
3. Remove thick slices of soil from top to bottom of exposed face of the 'V' shaped cut and place in a clean container. Mix the samples thoroughly and remove foreign materials like roots, stones, pebbles and gravels.
4. Reduce the bulk to about half to one kilogram by quartering or compartmentalization. Quartering is done by dividing the thoroughly mixed sample into four equal parts. The two opposite quarters are discarded and the remaining two quarters are remixed and the process repeated until the desired sample size is obtained.
5. Collect the sample in a clean cloth or polythene bag. Label the bag with information like name of the farmer, location of the farm, survey number, previous crop grown, present crop, crop to be grown in the next season, date of collection, name of the sampler etc.
6. Water sample has to be collected in a clean plastic container (bottle).

Principal,
S.B. Arts and KCP Science College
VIJAYAPUR

IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
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Date: 18 Nov 2021

ರೈತರಿಗೆ ಸೂಚನೆಗಳು

(ಮಣ್ಣು ಮತ್ತು ನೀರು ಪರೀಕ್ಷಾ ಶಿಬಿರದ ಬಗ್ಗೆ ಜಾಗೃತಿ ಬಗ್ಗೆ)

ವಿಜಯಪುರದ ಬಿ. ಎಲ್. ಡಿ. ಇ. ಎ. ಯು. ಎಸ್. ಬಿ. ಕಲಾ ಮತ್ತು ಕೆ. ಸಿ. ಪಿ. ವಿಜ್ಞಾನ ಕಾಲೇಜಿನ ರಸಾಯನಶಾಸ್ತ್ರ ವಿಭಾಗವು 25 ನವೆಂಬರ್ 2021 ರಂದು ಬಬಲೇಶ್ವರ ನಲ್ಲಿ ಉಚಿತ "ಮಣ್ಣು ಮತ್ತು ನೀರು ಪರೀಕ್ಷಾ ಶಿಬಿರ" ವನ್ನು ಆಯೋಜಿಸಲು ಯೋಜಿಸುತ್ತಿದೆ.

ಮಣ್ಣು ಮತ್ತು ನೀರಿನ ಮಾದರಿಗಳನ್ನು ಸಂಗ್ರಹಿಸಲು ಈ ಕೆಳಗಿನ ವಿಧಾನವನ್ನು ಅನುಸರಿಸಲು ರೈತರಿಗೆ ತಿಳಿಸಲಾಗಿದೆ.

ವಿಧಾನ:

1. ರೈತನ ಅನುಭವದ ಆಧಾರದ ಮೇಲೆ ಕ್ಷೇತ್ರವನ್ನು ವಿವಿಧ ಏಕರೂಪದ ಘಟಕಗಳಾಗಿ ವಿಂಗಡಿಸಿ. ಮಾದರಿ ಸ್ಥಳದಲ್ಲಿ ಮೇಲ್ಮೈ ಕಸವನ್ನು ತೆಗೆದುಹಾಕಿ.
2. ಸನಿಹೆಯಿಂದ ಅಗೆದು ಮಾದರಿ ಘಟಕದಲ್ಲಿ 15 ಸೆ.ಮೀ ಆಳಕ್ಕೆ 'V' ಆಕಾರದ ಅಗೆಯಿರಿ. ಪ್ರತಿ ಮಾದರಿ ಘಟಕದಿಂದ ಕನಿಷ್ಠ 10 ರಿಂದ 15 ಮಾದರಿಗಳನ್ನು ಸಂಗ್ರಹಿಸಿ ಬಕೆಟ್ ಅಥವಾ ಟ್ರೇನಲ್ಲಿ ಇರಿಸಿ.
3. 'V' ಆಕಾರದ ಕತ್ತರಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ಮೇಲಿನಿಂದ ಕೆಳಕ್ಕೆ ಮಣ್ಣಿನ ದಪ್ಪ ಚೂರುಗಳನ್ನು ತೆಗೆದುಹಾಕಿ ಮತ್ತು ಶುಚಿಯಾದ ಪಾತ್ರೆಯಲ್ಲಿ ಇರಿಸಿ. ಮಾದರಿಗಳನ್ನು ಚೆನ್ನಾಗಿ ಬೆರೆಸಿ ಬೇರುಗಳು, ಕಲ್ಲುಗಳು, ಬೆಣಚುಕಲ್ಲುಗಳು ಮತ್ತು ಜಲ್ಲಿಕಲ್ಲುಗಳಂತಹ ವಿದೇಶಿ ವಸ್ತುಗಳನ್ನು ತೆಗೆದುಹಾಕಿ.
4. ವಿಭಾಗೀಕರಣದ ಮೂಲಕ ದೊಡ್ಡ ಭಾಗವನ್ನು ಅರ್ಧದಿಂದ ಒಂದು ಕಿಲೋಗ್ರಾಂಗೆ ಇಳಿಸಿ ಸಂಪೂರ್ಣವಾಗಿ ಮಿಶ್ರ ಮಾದರಿಯನ್ನು ನಾಲ್ಕು ಸಮಾನ ಭಾಗಗಳಾಗಿ ವಿಂಗಡಿಸಿ. ಎರಡು ವಿರುದ್ಧ ಭಾಗಗಳನ್ನು ತ್ಯಜಿಸಿ, ಉಳಿದ ಎರಡು ಭಾಗವನ್ನು ಮರುಮಿಶ್ರಣ ಮಾಡಬೇಕು ಮತ್ತು ಅಪೇಕ್ಷಿತ ಮಾದರಿ ಗಾತ್ರವನ್ನು ಪಡೆಯುವವರೆಗೆ ಪ್ರಕ್ರಿಯೆಯನ್ನು ಪುನರಾವರ್ತಿತಿಸಲಾಗುತ್ತದೆ.
5. ಮಾದರಿಯನ್ನು ಶುಚಿಯಾದ ಬಟ್ಟೆ ಅಥವಾ ಪಾಲಿಥೀನ್ ಚೀಲದಲ್ಲಿ ಸಂಗ್ರಹಿಸಿ. ನಂತರ ರೈತನ ಹೆಸರು, ಜಮೀನಿನ ಸ್ಥಳ, ಸಮೀಕ್ಷೆಯ ಸಂಖ್ಯೆ, ಹಿಂದಿನ ಬೆಳೆ ಬೆಳೆದ ವಿವರ, ಪ್ರಸ್ತುತ ಬೆಳೆಯ ವಿವರ, ಮುಂದಿನ ಬುತುವಿನಲ್ಲಿ ಬೆಳೆಯಬೇಕಾದ ಬೆಳೆ, ಸಂಗ್ರಹಿಸಿದ ದಿನಾಂಕ, ಮಾದರಿ ಹೆಸರು ಇತ್ಯಾದಿ ಮಾಹಿತಿಯೊಂದಿಗೆ ಚೀಲವನ್ನು ಲೇಬಲ್ ಮಾಡಿ.
6. ನೀರಿನ ಮಾದರಿಯನ್ನು ಶುದ್ಧ ಪ್ಲಾಸ್ಟಿಕ್ ಪಾತ್ರೆಯಲ್ಲಿ (ಬಾಟಲ್) ಸಂಗ್ರಹಿಸಬೇಕು.

Principal,

S.B. Arts and KCP Science College
VIJAYAPUR

IQAC, Co-ordinator

S.B.Arts & K.C.P.Science College,
Vijayapur.

Head Master,

Shri Bapuji H.P.S. Babaleshwar
Tq: Babaleshwar. Dist: Bijapur.



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REF.: _____

Date: 30 Nov 2021

To,

The Head Master,

Bapuji Primary School,

Babaleshwar

Vijayapur

Subject: To express the gratitude for permitting to organize the "Soil and Water Testing Camp".

Sir/Madam,

We are very grateful to the head of the institution for their gracious support in organizing a free "Soil and Water Testing Camp" on 25 Nov 2021 at your school.

We thank you for the great support of administrative bodies and all the staff members.

Thanking you.

Yours sincerely,

Principal,
S.B. Arts and KCP Science College
VIJAYAPUR

IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College
Vijayapur.

Head Master,
Shri Bapuji H.P.S. Babaleshwar
To: Babaleshwar. Dist: Bijapur.

To,

The Principal,

BLDEA's S. B. Arts and K. C. P. Science College,

Vijayapur.

Subject: Letter of Appreciation for organizing "Soil and Water Testing Camp" at Babaleshwar
on 25th November 2021

Sir/Madam,

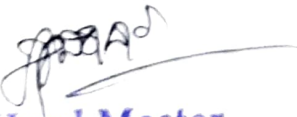
It was a very kind gesture from your side to organize a free "Soil and Water Testing Camp" for the farmers of Babaleshwar.

This camp proved to be very helpful to the farmers who otherwise had to go to cities to do the testing and wait for the results. But this camp with instant results made the task very easy for them.

We are also very grateful that you chose our school for this purpose. If any further assistance is required will be provided from our side with utmost co-operation.

Thanking you.

Yours sincerely,


Head Master,
Shri Bapur H.P.S. Babaleshwar
Tq: Babaleshwar, Dist: Bijapur

BLDEA's

S.B.Arts and K.C.P.Science College Vijayapur

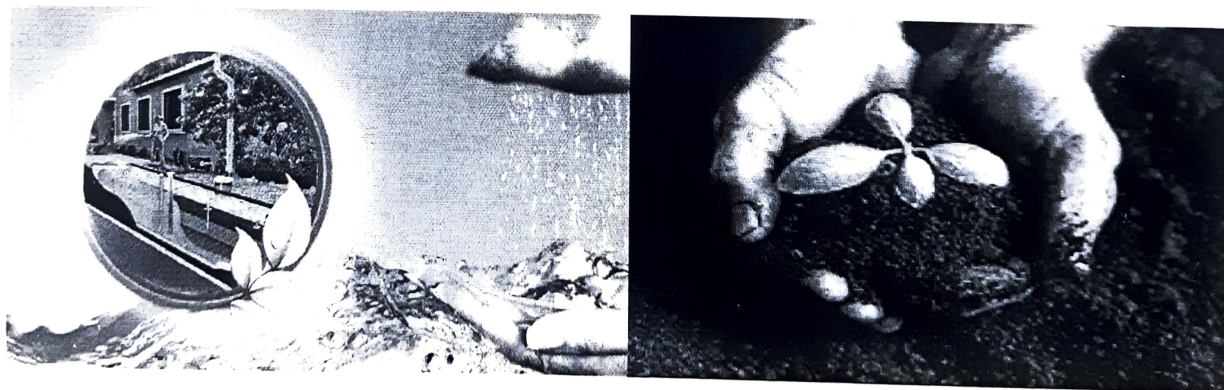
Department of Chemistry

Soil and Water Testing Camp at Babaleshwar

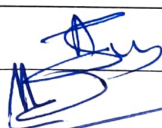


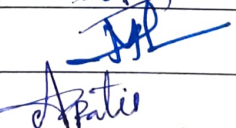
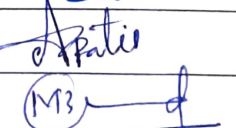
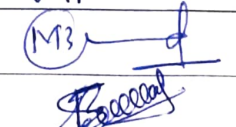
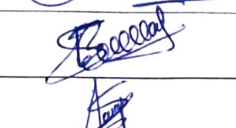

Date: 10th Sept 2021

Number of staff members:09

Number of Students:18



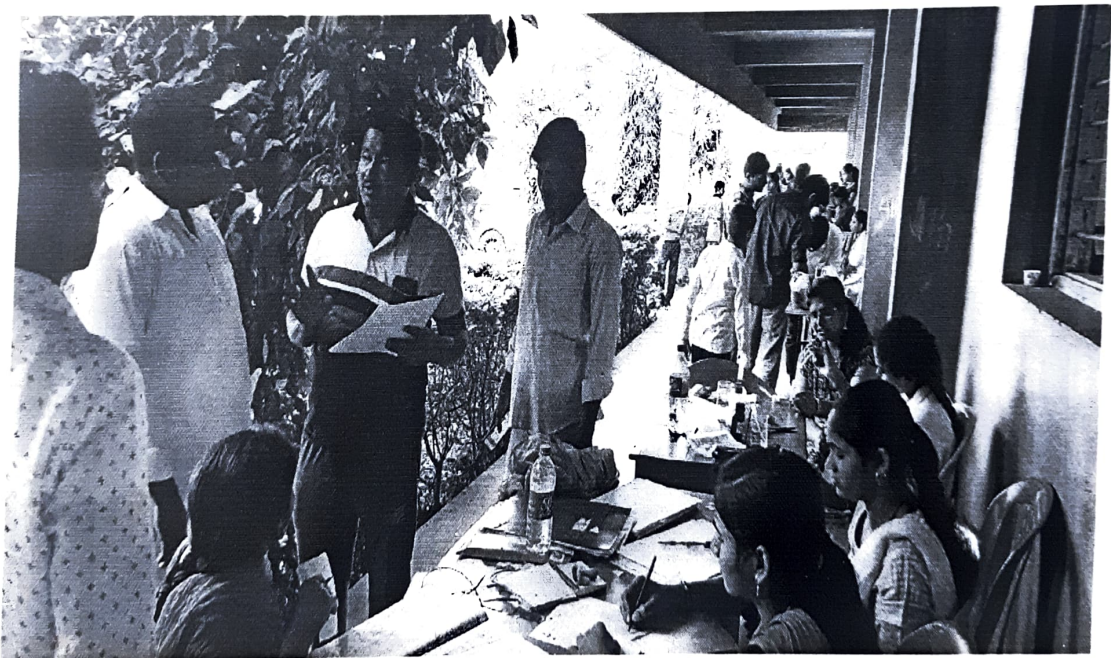
List of Participants

| S.No | Name of Students | class |
|---------------|------------------------------|---|
| 1 | Kum: Akhila.Karani | B.Sc V |
| 2 | Kum: Rashmi. Dashyal | B.Sc V |
| 3 | Kum: Harshita.Bhat | B.Sc V |
| 4 | Kum: Akshata.Naik | B.Sc V |
| 5 | Kum: Renuka.Siddwadkar | B.Sc V |
| 6 | Kum:Tejaswini.Hitnalli | B.Sc V |
| 7 | Kum: Shashankumar Dixit | M.Sc I |
| 8 | Kum: Sourabh kamble | M.Sc I |
| 9 | Kum: Apoorva M | M.Sc I |
| 10 | Kum: Ashwini S | M.Sc I |
| 11 | Kum: Navya K | M.Sc I |
| 12 | Kum: Vasuki V | B.Sc III |
| 13 | Kum:Anusha B | B.Sc III |
| 14 | Kum:Ganesh M | B.Sc III |
| 15 | Kum:Jyoti N | B.Sc III |
| 17 | Kum:Ajeet P | B.Sc III |
| 18 | Kum:Ankita | B.Sc V |
| Staff Members | | |
| 1 | Dr.Vidya.Patil NAAC Chairman | |
| 2 | Dr.A.S.Pujar |  |
| 3 | Dr.U.S.Pujeri |  |
| 4 | Dr.S N Unki |  |
| 5 | Dr.Manjunath H M |  |
| 6 | Mr. A.R.Patil |  |
| 7 | Mrs. Malati Chanagond |  |
| 8 | Prof. Savitri.Biradar |  |
| 9 | Prof. Soumya.Muttagi |  |

Objectives of Soil and water testing

The **aims of soil analysis** are: To determine the level of availability of nutrients or the need for its introduction. To predict the increase in yields and profitability of fertilization (poor **soils** do not always provide yield increase due to fertilization because of possible limiting factors)

Water quality analysis is ultimately performed to ensure safety—specifically, that certain chemical, physical, and biological parameters are within safe limits. Polluted **water** has many negative effects like threatening fish and shellfish, concentrating pollutants in the food chain, and endangering drinking **water**



BL D E A's S.B.Arts and K.C.P.Science College Vijayapur launched a innovative programme to provide soil health awareness to each farmers for keeping with readymade information on soil facility of their soil for fertilizers recommendation & for crop planning in succeeding year. Under this programme 100 soil samples from each village of total 1000 villages of the Vijayapur district. We collected & analyzed in our laboratories. On the basis of soil test analysis report, soil health awareness was given with entering computerized data of soil test, fertilizers recommendation, reclamation of soil, crop planning etc. & computerized prepared soil health awareness were given to 1000 farmers during 2016-21.

During free check up camp, about 1000 soil health report were distributed to towards & about 1000 soil and water samples were collected (considering 5 soil samples from each village). Which will be analyzed during current year 2016-21 & soil health report will be distributed to farmers.

Under this programme Agriculture University has given responsibility to develop soft ware containing readymade data as soil testing, fertilizers recommendation. Crop Planning for getting guidance for farmers.

Agriculture contributes to one-sixth of the Gross Domestic product of India and a major chunk of our population depends on farming for their livelihood. Declining soil health because of excessive use of fertilizers, non-replacement of depleted nutrients, etc. has now become a serious concern and has also decreased the soil fertility in various parts of the country. Therefore, there is a need to assess soil health at regular intervals so that the farmers can apply the nutrients required while taking advantages of the nutrients already present in the soil. Talking about the question of what this health card represents, it signifies the quality and fertility of the soil sample. The analysis is based on physical quantitative parameters like soil depth, color, texture, surface/ subsurface hardness, compaction, etc. and on chemical parameters like soil pH, electrical conductivity, levels of primary, secondary and micro-nutrients.

The next thing that needs to be considered is what use is such information to a farmer and whether the health card would help reduce consumption of fertilizers. While physical parameters help determine the type of soil and hence broadly decipher the

type of farming that could be followed by the farmer, the chemical parameters help understand the amount of nutrients essential to enable ideal growth. For example, if the soil turns out to be more acidic, application of more lime is recommended, and if it is alkaline, it can be corrected through gypsum treatment and ensuring no water-logging. Also, the card will help the farmer in determining what can be more easily grown in the farm. For instance, if the soil contains more nitrogen, wheat or rice is more suitable; phosphorus is the most important nutrient for pulses; and potassium is vital for tomato, banana and pineapple.

As regards reduced fertilizer consumption, these cards will not help reduce it but will help the farmer to decide which fertilizer to use and in what combination. If the scheme proves successful, we may witness a shift in the market where instead of selling plain fertilizers, companies might start the practice of selling modified fertilizers, custom-made for particular crops in specific regions. Politically, the government might be trying to push the scheme keeping in view the mounting fertilizer subsidy bill which is largely on account of urea alone. If this scheme helps in dissuading the farmers from overusing urea, it might turn out to be a win-win situation.

Talking about the practical impossibilities of the scheme, first and foremost, bridging the gap between the number of soil testing laboratories that exist today and the targeted number that needs to be established in the following three years is a behemoth task. The 'new class of entrepreneurs' may set up their establishments in urban areas and towns, but it is the villages that are mostly uninformed and severely affected. Moreover, the government should come up with incentives for those who seek to set up such laboratories in rural areas. The cost of testing the soil is Rs. 150 per sample for basic parameters like pH, electrical conductivity and primary-secondary nutrient content. As per analysts, deeper analysis of soil health involves Atomic Absorption Spectrophotometer which costs about Rs. 20 lakh. Once the cost of other equipment, chemicals, salaries of employees, capital cost, etc. is added up, it turns out to be more than Rs. 75 lakh.

This cost can only be recuperated from the farmers or the government if it decides to subsidize soil testing. Therefore, this is what the government could do in order to overcome the immediate shortcomings: subsidize soil testing; provide incentives for entrepreneurs; set up camps to spread awareness about the importance of soil health; and set up laboratories themselves in regions that need immediate attention. The entire scheme does not talk about what the farmer could do once he is aware of the health of the soil in his land. The government should also establish soil health clinics where oblivious or unaware farmers could go and get appropriate solutions to the problems pertaining to the quality or health of the soil.

Conclusion


pH of water samples analysed in Babaleshwar area varies from 6.75-9, Electrical conductivity of water ranged from 0.5 to 1.2 microsemens / cm. Salinity ranged from .5 to 4.2% and TDS values varied from 300 to 1050 ppm and hardness of all the water samples ranged from 200 to 600ppm respectively.

Similarly pH of all the soil samples analyzed in Babaleshwar ranged from 6.8-9, organic carbon values varied from .5 to 2.2 ct/acre indicating that most of the soil samples deficient in organic carbon, Nitrogen content of all the samples in low to medium range, phosphorous is also found to be from low to medium in most of the samples. Potassium is found to be in high range no need to add or supplement potassium fertilizer.

Recommendation; Water samples need to desalinate and some samples require to add coagulants. Organic manure need to be supplied regularly. Most of the soil samples deficient in nitrogen and phosphorus content hence nitrogenous and phosphate fertilizer should be added to soil samples.



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