VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH
PARBHANI

COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE
(RAWE PROGRAMME-2017)

Name	:	Jadhav Devanand Sandipan
Registration No	:	43A/COAT/141B.
Course No	:	ENGG - 475
Semester	:	VII (New)
Allotted Village	:	BHATEGAON
Year	:	2017-2018

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VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH PARBHANI

COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE (RAWE PROGRAMME-2017)

CERTIFICATE

This is Certified that Mr./Miss. Jadhav Devanand Sandipan

Reg No 43A/COAT/1618 Has Completed Rawe Schedules and Demonstrations of Course No ENGG-375 As per the syllabus of B.Sc (Agri) VII Semister as Prescribed by MCAER Pune During the year 2017- 18 His Performance During The RAWE Programme Has Satisfied.

PROGRAMME OFFICER

Sign. of SMS
(Internal)

UNIVERSITY REPRESENTATIVE

Sign. of SMS
(External)

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ACKNOWLEDGEMENT

Change is the rule of nature & agriculture is no expectation this with an Intension to make me understand the rural life more closely with the changing scenario in the field of agriculture,this demonstration report is worked out.

I am happy to present the **"RAWE PROGRMME"** DEMONSTRATION REPORT 2017-18 in this report I am put the all record of demonstration which conducted by us in village .....Bhategaon..... This demonstration report contains the information related to demonstration,such as date of demonstration conducted,farmer list such kind of information is put in this report.

My sincere thank to **Dr.S.G.Jadhav** Principal,College of Agriculture Tondapur for providing facilities and encouragement to us.

I am thankful to incharge of RAWE programme and SMS's team college of agriculture Tondapur.Specially thanks to my host farmer and also thanks to RAWE Group ...Bhategaon..... Who have taken appreciable effort for preparation of this RAWE demonstration report 2017-18

Place :- Tondapur

Date :- / /2017

Dedios

Signature of Student's

Jadhav D. S.

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VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH, PARBHANI
COLLEGE OF AGRICULTURE, TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE

(2017-18)

Student Information :-

Name : Jadhav Devanand Sandipan

Reg. No. : 43 A / COAT / 14 /B

Semester : VII (NEW)

Placement Center : COLLEGE OF AGRICULTURE,TONDAPUR

of which attached : Waranga

Center of which attached : COA _TONDAPUR

Host Farmer Information :-

Farmer Name : Hake Jagdevrao Dattarao

Age : 45

Education : 5 th

Address : Bhategaon Tq.Kalamnuri Dist.Hingoli

Land Holding : 3 ha.

Crops : Soybean, green gram, cotton, Turmeric

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आदर्श गांवकरी

आम्हा घरी धन शब्दांचीच रत्ने। शब्दांचीच शस्त्रे यत्न करू।।

हिंगोली | आदर्श गांवकरी | २

सोमवार, दि.१७ जुलै २०१७

आधुनिक तंत्रज्ञान शेतकऱ्यांच्या दारी

तोंडापूर कृषी केंद्राचा नविन उपक्रम

डोंगरकडा/प्रतिनिधी

तोंडापूर येथे कृषी महाविद्यालयातील विद्यार्थी ग्रामीण कृषी कार्यनुभव कार्यक्रम अंतर्गत कृषीदुत ग्रुप प्रत्यक्ष कृतीतून शेतकऱ्यांना आधूनिक तंत्रज्ञानाचे माहिती देत आहेत.

कृषी विज्ञान केंद्रातील कृषी दूतांनी प्रत्यक्ष कृतीतून शेतकऱ्यांना बीजप्रकिया व त्याचे फायदे, माती परिक्षण का करावे, नवीन अवजाराची ओळख ,पीक नियोजन व शेतीविषयक शासनाच्या विविध योजना, निबोळी अर्क कसे बनवायचे , पाणी व्यवस्थापन ,बीज उगवण क्षमता चाचणी, फळबाग तसेच विविध फळ झाडाचे कलम कसे करावे इ.त्यासाठी प्रात्यक्षिक दाखवत आहेत. या उपक्रमात भाटेगाव ग्रुपचे कृषीदुत कृषीदुत जाधव देवानंद कृषीदुत जाधव शुभम कृषीदुत जाधव अभिजित कृषीदुत गडबे अरूण कृषीदुत गजभिये स्वप्निल कृषीदुत गडुमवाड गजानन कृषीदुत जी.व्यंकटेश गौड कृषीदुत डुडेकुला मनसुर यांनी शेतकऱ्यांना माहिती दिली.भाटेगाव येथील कृषीदूतांना प्राचार्य डॉक्टर एस.जी. जाधव कार्यक्रम समन्वयक प्रा.शिंदे सर तसेच विषयतज्ञ प्रा.लोमटे सर (मृदाविज्ञान), प्रा.ढवळे सर (उद्यानविद्या), डॉक्टर कांबळे सर (विकृतीशास्त्र), डॉक्टर नवलकर

सर (वनस्पती शरीरशास्त्र) प्रा.जाधव सर (किटकशास्त्र) प्रा.वाढवे सर (पशुविज्ञान) तसेच प्राध्यापिका सोनकुसरे मॅडम(कृषी अर्थशास्त्र) व प्राध्यापिका जमदाडे मॅडम (कृषी विस्तार शिक्षण) यांनी कृषीदुतांना प्रात्यक्षिकासाठी मदत व मार्गदर्शन केले तसेच माळी जाधव मामा व काशीनाथ टार्फे यांनी सहकार्य केले.

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शुक्रवार दि. ३ नोव्हेंबर २०१७

कृषिदुतांचा सत्कार

कळमनुरी/प्रतिनिधी

वसंतराव नाईक मराठवाडा कृषी विद्यापीठ व कृषी महाविद्यालय तोंडापूर यांच्या ग्रामीण कृषी कार्यानुभव कार्यक्रम २०१७ अंतर्गत कृषी महाविद्यालय तोंडापूर चे कृषीदूत भाटेगाव येथे जुन महिन्यापासुन कार्यरत होते.कृषी दूतांनी या चार महिन्यामध्ये शेतकर्यांना मार्गदर्शन केले. यासाठी ग्रामस्थांनी कृषीदूतांचे आभार मानून निरोप दिला. यावेळी भाटेगाव येथील जगदेवराव हाके, देविदास राठोड, उत्तमराव चायकुळे, संतोष राठोड, बालाजी वायकुळे, सचिन जाधव, रामराव हाके, विजय राठोड, साईनाथ वायकुळे आदी शेतकरी उपस्थित होते.

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RAWE Schedules

1

SOIL CONSERVATION MEASURES ADAPTED BY THE FARMERS.

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RAWE-AGRICULTURAL ENGINEERING

RAWE SCHEDULE-AG-ENGG-I

SOIL AND WATER CONSERCATION MEASURES ADOPTED BY THE FARMERS

Name of the student : Jadhav Devanand Sandipan

Registration No. : 43A/COAT/14 19.

College : College of Agriculture, Tondapur.

Centre to which attached : COA Tondapur.

A} Soil conservation measures adopted by the farmers

Type of structure	Year of construction	Size (lengh,width)	Condition (functioning or not)	Area of field Under structure	Repairs & Maintenance (if any)	Crop Grown
Contour Bunds	—	—	—	—	—	—
Graded Bunds	2014	90 x 1.5m	Functioning		No	Soyabean
Terrace	—	—	—	—	—	—
Tide Ridges	—	—	—	—	—	—
Compartmental Bunding	2013	45 x 2m	functioning	—	No	green gram
C.C.T/Staggered Terraces	—	—	—	—	—	—
Vegetative Bunds	—	—	—	—	—	—

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B) Rainwater harvesting structures in the area

Type of structure	Year of construction	Storage capacity, m^3	Condition of structure (functioning or not)	Irrigated area under structure, ha
Cabin Gabion structure	–	–	–	–
K.T.Weir	–	–	–	–
Check dams	–	–	–	–
Nala Bund a. Earthen b. Cement				
Farm pond	–	–	–	–
Percolation dam				

C) Impact assessment of above measures A & B including irrigated

a) Irrigated area before construction of structures ..... 2 ..... ha

b) Irrigated area after construction of structures ..... 3 ..... ha

c) Depth of water table in well before structures. ..... 7 ..... m.

d) Depth of water table in well after structures. ..... 6 ..... m.

e) Method of recycling of the harvested rainwater → stored in well

f) Purpose of utilization of harvested rainwater → use for irrigation as well for drinking.

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ON FARM WATER MANAGEMENT

A) Sources of irrigation water of the host farmer with water lifting device

Sources of irrigation water

Particulars	No.	Four monthly Area (ha)	%	Eight monthly Area (ha)	%	Perennial Area (ha)	%	Quality of irrigation water
Canal	01	0.20	–	0.40	–	1 ha	–	good
Dug wells	01	0.20	=	–	–	1 ha	–	good
Bore wells	–	–	–	–	–	–	–	–
Govt. lifts	–	–	–	–	–	–	–	–
Private lift	–	–	–	–	–	–	–	–
Co-op lift	–	–	–	–	–	–	–	=
Tanks	–	–	–	–	–	–	–	–
Ponds	–	–	–	–	–	–	–	–
Other (Specify)	–	–	–	–	–	–	–	–
Total								

ii) Water lifting devices

Type of device	Sources of irriga-tion water	Number of devices	Companies/brand name	Hp
Centrifugal pump	well	2	laxmi	5+7 HP
Vertical turbine pump	–	–	–	–
Submersible pump	–	–	–	–
Any other (specify)	–	–	–	–
Any problems in water lifting devices				

B) Irrigation methods adopted by the farmers

S.N.	Irrigation method	Types of crops	Types of soils	Area ha	% area	List any advantages/ limitations observed
1.	Free flooding					
2.	Border	cotton	Black soil	0.80 ha	–	
3.	Furrow	–	–	–	–	–
4.	Check basin	–	–	–	–	–
5.	Drip	Turmeric	Black soil	1 ha.		saving water
6.	Microsprinkler	–	–	–	–	–
7.	Overhead Sprinkler	–	–	–	–	–
8.	Raingun	–	–	–	–	–
9.	Other(specify)	–	–	–	–	–

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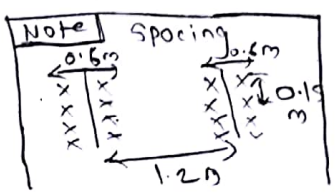
C) Technical details of the existing pressurized/traditional irrigation system

a) Pressurized Irrigation System:

Particulars	Recorded Observation
Type of irrigation system	Drip irrigation
Name of the crop	Turmeric
Crop Spacing, m	Row - 1.2 m Plant - 0.15 m.
Irrigation interval, days	Daily
Depth /quantity of water applied per irrigation	6 mm/ day
Type of emitters	Inline
System specifications: i) Emitter discharge ii) Emitter spacing iii) lateral diameter iv) lateral spacing v) diameter of submain pipeline vi) diameter of main pipelines	 1.8 LPH 0.4 m 1.6 mm 1.2 m 63 mm 75 mm (90 mm, 110mm)
Area under irrigation(ha)	10,000 m²
Cost (Rs/ ha)	50,000 (only material & establishment cost)
Details of fertigation equipment	1.5 venturi
Details & interval of chemical treatment	-
Details & interval of system flushing	3 to 4 day.
Details & interval of screen filter cleaning	Disc filter (Daily flushing)
Details & interval of sand filter backwash	Sand filter
Pump type and Hp	7 Hp
List any limitations in system operation	-

b) Traditional method of Irrigation:

Types of irrigation method: – Surface, Ridge and furrow.
H.P. of Electric Motor/Oil Engine – Electrical motor (5, 7 HP
Size of the pump (Suction and delivery) – 3 inch.
Suction and delivery head. – 7-8
Type of pump – centrifugal pump.
Discharge of the pump –
Irrigation method adopted as per the crop – furrow and free flooding Drip irrigation
Length and width of the irrigation layout.



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RAWE Schedules

2

FARM MECHANIZATION.

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FARM MECHANIZATION –SCHEDULE -II

A) Details of the equipments/implements/machinery used by the farmer:

i) Primary tillage implements/equipments, machinery ii) Secondary tillage implements/equipments iii) Harvesting and threshing equipments owned/used by the farmer.

Name of implements machinery	Source of power	Make	Size	Cost of Operation (Rs/ha)	Own Hired.
Plough	Tractor	Iron		–	Hired
Harrow	Tractor	Iron		–	Hired
Cultivator	–	–		–	–
Ridger	Tractor	Iron		–	Hired
Earthing up	–	–	–	–	–
Sara Yantra	–	–	–	–	–
Seed drill	Bullocks	wooden			Hired
Hoe	Bullocks	wooden			own
Sprayer	manual	plastic			own
Duster	–	–	–	–	–
Harvesting equipments	manual	Sickle			own
Thresher	mechanical	Iron			Hired
Tractor	–	–	–	–	–
Any other (Specify)	–	–	–	–	–

15) Post harvest and value addition of cereals, pulses and oilseed crops

i) Grain/seed processing technique

S. N.	Crop/Seed	Moisture Content (%)	Technique adopted				
			Cleaning	Grading	Packaging	Storage	marketing
	Soyabean	11 %	yes	–	–	–	Agent
	Turmeric	–	yes	yes	–	–	Agent
	green gram	11 %	yes	–	–	–	Agent

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RAWE Demonstrations

1

TITLE :- Demonstration to farm pond.

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DEMONSTRATION TO FARM POND

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VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH,PARBHANI
COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE

(2017-18)

Center : COA _Tondapur

Name of Student : Jadhav D. S. Host Farmer : Halke T.D.

Reg No. : 43/COAT/14/B Alloted Village : Bhategaon

(1)

Title :- DEMONSTRATION TO FARM POND

Introduction :-

The water requirement of agriculture increase day by day very tremondously Hence there is need to consery or save the water is necessary.

The 7.5% of Indian agriculture is rainfed hence seasonal water requirement is more. water is lossed through surface runoff so that we adapted the water harvesting technique constrant the farm ponds. etc.

FARM POND

Farm ponds are small tank or reservior like structure or construction are constructed for the purpose of storing the surface runoff water generated from the catchment area.

For integrated farming system farm pond is very weful because it provided allied enterprises. like fishery, poultry, etc.

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COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

* Objective :-

- To calculate storage capacity of farm pond.
- To provide the information about the actual use of farm pond for agriculture and allied enterprises.
- To provide the information to farmer about government schemes related to farm pond construction.
- To provided the scientific information to the farmer about cropping scheme and better use of available pond water.
- To provided the message to rural people about saving water and proper use of farm pond water.

* Selection of Site :-

- Farm pond should be constructed near the runoff water source because it is easy to collect water from surface runoff in farm pond.
- The farm pond constructed on one site of farm area while constructed ~~indi~~ individually.

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COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

- Farm pond should be constructed on enear the utilization place away from the public place.

- Farm pond should be constructed at place which reduced cost on pipeline.

- Avoid the site where the soil is porous and sandy textured.

- Select the place away from public disturbance.

* Design of Farm Pond :-

(A) Selection of site :

Most commonly factor such as watersshed characteristics, topography and soil type are counted for selection of good site for the construction of farm pond.

(B) Pond Capacity

Farm pond capacity varies from each other, according to need, cost of cultivation and available source of water.

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© Size of farm pond

In size of farm pond length and which is same or different the shape of farm pond is various from rectangular to square.

(D) Annual water yield -

Annual water content in farm pond should be necessary for complete, function of enterprises its depend on availability source, size and capacity of farm pond.

* Construction of Farm pond.

- proper construction should be followed to avoide potential problem and ensure safty.
- Building the farm pond ~~size~~ require equipment according physical and chemical propeties of soil.
- First mark the size of farm with accurate measurement.

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RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

- With the help of tractor, pooled wheel scraper and JCB Trapazoidal shape of farm pond should be constructed.

- Black polythene should be use to cover the base internal structure of farm pond.

- Fire five to ten HP motor with good pipeline to carried out irrigation water.

- Make the fencing around the farm pond to avoide the damage from livestock animal or other animal.

* Advantages :-

- This help to supply water to agriculture in off season area.

- This is the essential for harvesting runoff water and conserving them for irrigation purpose

- A farm pond also have significant role in rainfed farming for storage of water.

- Farm pond play vital role in drought prone area.

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- It help to increase the yield of farmer with allied enterprises.
- Loss of surface runoff in reduced due to farm pond.
- It help to increase soil water table.
- Increase the average yield of the farmer.
- proper utilization of water.

* Conclusion :-

- We got field knowledge about the farm pond and pond structure like surface pond, sub surface pond and various types ponds.
- The farm pond is useful to the farmer in agricultural areas. once the farm pond project is completed it may irrigated few acres of land and it can provide drinking water facility to few villages.
- Farm ponds are also used in industrial areas residental buildings etc.

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COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

- Although farm ponds are costly but saves water and nutrient rich top soil from permant loss.

- There is a need to have active and holding mechanism for making any programme a success.

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RAWE Demonstrations

2

Title :- Demonstration of Engineering Tools for preparatory operation.

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DEMONSTRATION OF ENGINEERING TOOLS FOR PREPARATORY OPERATION.

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VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH,PARBHANI
COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE

(2017-18)

Center : COA _Tondapur

Name of Student : Jadhav D. S. Host Farmer : Hake J. D.

Reg No. : 43 /COAT/ 14/B Alloted Village : Bhategaon

(2)

TITLE :- DEMONSTRATION OF ENGINEEING TOOLS FOR PREPARATORY OPERATION

INTRODUCTION :-

Preparatory tillage operations that are carried out from the time of harvest of crop to the sowing of the next crop are known as preparatory tillage.

- These are time consuming and costly but are two be performed at right stage of soil moisture and with right implements it helps in good growth of crops.

- These includes sequence, ploughing, clod crushing levelling discing, harrowing, manure mixing & compacting the soil and implement to be used are plough, clod crusher, disc plough ag harrow bladed harrow etc.

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- It include primary and secondary tillage operation primary tillage it mainly include ploughing which is opening of the compacted soil with the help of different plough.

- Secondary tillage is lighter or finer operation performed on soil after primary tillage that is levelling harrowing.

* Objective :-

- Preparation of seedbed to obtain good tilth.
- Management of crop residues to enhance humus and fertility.
- Increasing or decreasing infiltration rate of the soil killing weeds.
- Breaking soil crust to enhance soil aeration.
- Destroying soil insect and their breeding place.
- Reducing the disease incidence.

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RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

* Classification of tillage :-

Tillage is divided into three classes.

1) Primary tillage.
2) Secondary tillage.
3) Conventional tillage.

1) Primary tillage.

The operation performed to open up any cultivable land with a view to prepare a seed-bed for growing crop is known as primary tillage.

2) Secondary tillage

Tillage operation following primary tillage, which are performed to create proper soil tilth for seeding and planting are called secondary tillage.

3) Conventional tillage.

In this tillage conventional mould board or disc plough for seedbed preparation used.

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COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

* Types of tillage :-

1) Minimum tillage.
2) Strip tillage.
3) Rotary tillage.
4) Combined tillage.

* Classification of tillage implements

A) According to tillage operation:

I) Primary Tillage Implements

1) ploughing : i) Indigenous plough
ii) Soil turning plough.
iii) M.B. plough.
iv) Disc plough.
v) Harrow plough.
vi) Rotary plough.

II) Secondary Tillage Implements

1) Harrow
2) Clod crushing : i) Narvegaion harrow
ii) Disk harrow.
3) Leveling : i) Deccan harrow
ii) disc ~~harrow~~. kolvan petari
iii) Buck scraper

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4) Manure mixing : i) Deccan blade harrow.
ii) single plants
iii) double plants.

5) Compaction : i) Inverted harrow
ii) Single plants.

3) Seed covering..
i) Light blade harrow ii) plants.

4) Ridging

5) Interculturing
i) weeding hook ii) hoe iii) ploughing
iv) Thinning v) Gap filling.

6) Tillers:- Tilling in standing crops.

B) According to the source of power used

1) Hand operated tools.
2) Animal drawn implements.
3) Tractors drawn or mounted implement.

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VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH,PARBHANI
COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE (2017-18)

* IMPLEMENTS

① M.B. PLOUGH

*** Features:**

- It is tractor operated implement and it consist of share point, share, mould board, landside, frog, shank, frame and hitch system.
- The share point is of bar type and is made from high carbon steel or low alloy steel.
- The share is also made from high carbon steel or low alloy steel.
- Both are hardended and tempered to suitable hardness (about 45 ARC).
- The working of the plough is controlled by hydraulic system of the tractor.

*** Specification :-**

- No. of bottom - 2-4
- Length (mm) - 1778 - 2392
- Width (mm) - 889 - 1194.
- Height (mm) - 1092 - 1092

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- Capacity (ha/day) - 1.5 - 2.0
- power requirement (hp/kw) - 30-40/22.5-30.

• Use :-

1) It is used for primary tillage operations.
2) It cuts trash and buries its completely.
3) It is also for turing green manures crop for decaying under soil, which adds humus to the soil.
4) It is also used for turning and mixing compost, fym, or lime into the soil.

② Disc plough

* Features :-

▶ The plough consist of common main frome, disc beam assemblies, rockshaft category -1 and category -2 a have spring loaded furrow wheel and guage wheel.

▶ In some model disc plough is designed to operate as 2, 3, or 4 bottoms, by adding or removing sub beams the sub beam assemblies according to requirement.

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- The disc angle ranges from 40-45° to obtain the desired width of cut and the tilt angle range from 15-20° for penetration.

- Disc plough is used for primary tillage and it is specially used where M.B. plough is not useful such as hard and dry soil.

* Specification :-

- No. of furrow - 2-4
- Disc size (mm) - 600 - 800
- Length (mm) - 1180 - 2362
- Height (mm) - 1092 - 1118
- width of cut per disc (mm) - 200 - 300
- weight (kg) - 236 - 376
- power requirement (hp/kw) - 25-30 / 18.75-37.5 tractor.

* Use :-

1) Disc plough is used for primary tillage. and is especially useful in hard and dry, trashy, stony or stumy land condition and in soil where scooing is major problem.

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③ Disc Harrow

* Features:-

- The traetor mounted disc harrow consist of two ganga of disc mounted one behind the other.
- The disc on front gang throws soil outwords and the rear gang inward.
- Disc harrow is secondary tillage implement. It is used after the primary tillage.
- It is used to break the clod developed during primary tillage operation.

* Specifications:-

- Length (mm) - 1980 - 2260
- Width (mm) - 1150 - 1990
- Height (mm) - 1143 - 1350
- No. of disc C - 10 - 16
- pitch of disc - 457 - 660
- weight (kg) - 390 - 480
- capacity (ha/day) -- ~~350~~ - ~~450~~ 2.5
- power requirement (hp/kw) - 20-60 / 15-45 traetor.

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* Question Asked By Farmers

Q.1. What is preparatory tillage operation ?

=> preparatory tillage operation that are carried out from the time of harvest of crop to the sowing of the next crop are known as preparatory tillage.

Q.2.

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RAWE Demonstrations

3

TITLE :- Demonstration of Engineering tools for Intercultural operations.

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DEMONSTRATION OF ENGINEERING TOOLS FOR INTERCULTURAL OPERATION.

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COLLEGE OF AGRICULTURE,TONDAPUR

RURAL AGRICULTURAL WORK EXPERIENCE

(2017-18)

Center : COA _Tondapur

Name of Student : Jadhav O.S. Host Farmer : Hake J.D.

Reg No. : 43/COAT/14/B Alloted Village : Bhateggon

Title :- DEMONSTRATION OF ENGINEERING TOOLS FOR INTERCULTURAL OPERATIONS

*Introduction :-

All the lighter and finer operation carried out on the soil, between sowing had harvesting are termed as intercultural operations.

They include weeding, fertilizer application mulching, hoeing, mulching etc.

- The machineries and implement used for this purpose are called intercultural operations.

- Harrows are used to break the clods, pulverize the soil and cut the weed at the time of preparing seed beds.

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- Some of the important function are to prepare the seed bed, to cover seeds, to stir and spread FYM and fertilizer in the field, to aerate the soil and to control the weeds.

- **Intercultural Implements:-**
  1. Harrow
  2. Hoe
  3. Hand weeder
  4. Khurpi
  5. Sickle.

* **Objective:**

1. To know the improved and new technology of incultural operation to the farmers.

2. To know well about talking care of implement and tools which are using for intercultural operation.

3. Farmer should be adapted New tools released by research centre.

4. to minimize time operation for doing harrows interculture operation ie. more work in less time in low cost.

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* Different Intercultural implements :-

1. Wooden hoe.
2. Wheel hand hoe.
3. Khurpi
4. Sickle.
5. Cultivar
6. Harrow
7. planks.

① Wooden hoe.

Wooden hoe are implement made from wood that are used for secondary tillage operations.

Hoeing is done in soyabean, Turmeric by bullock pair in farmer field.

② Hand hoe :-

Hand wheel Hoe is widely accepted weeding tool for weeding in the intercultural in row crops.

- It is long handled various from 1 to 2 diameter depend upon the design.

- The no. of wheel varies from 1 to 2.
- The farmer has got provision to accomodate a straight blade, reversible blades sweeps V-blade.

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- The working depth of the tool & handle height is adjusted & the wheel hoe is operated by repeated push-pull action which allowes the soil working componen to penetrate into the soil and cut the weed in bet the crops.

③ Sickle.

A sickle is hand-held agricultural tools ~~operation~~ designed with variously curved blades and typically used for harvesting the crops.

The sickle is used for removing weed in various crop like Soyabean, Turmeric and crops.

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