

Information Technology in Agriculture

Country Report

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Principal Scientist



Central Institute of Agricultural Engineering
Bhopal – 462 038 INDIA



Panaromic view of Main Building



A view of Agro Processing Division Building



A view of Agricultural Mechanization Division

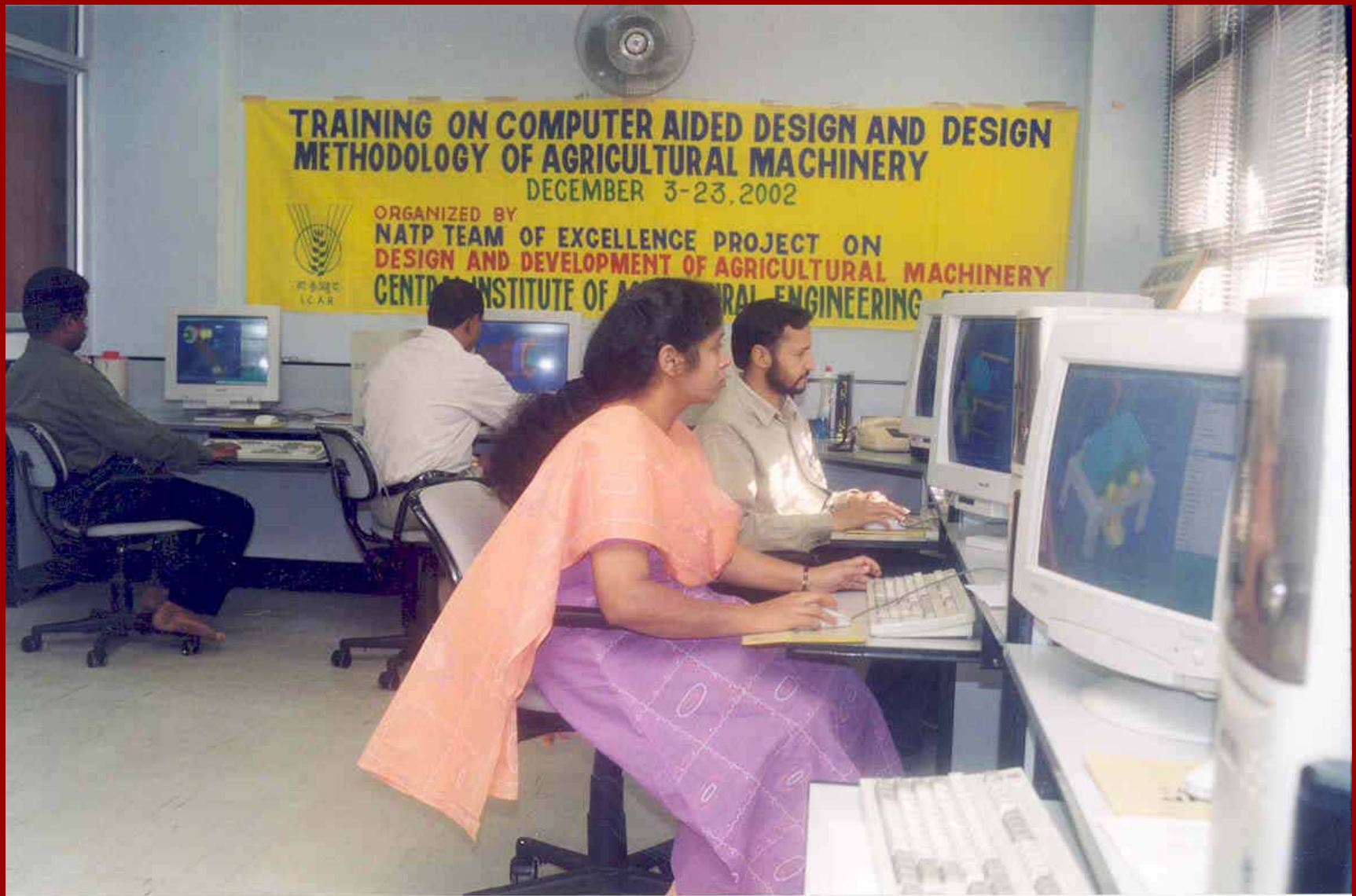


CIAE Guest House



Workshops and Laboratories at CIAE





Computer Aided Design Cell



CIAE Library

INFORMATION TECHNOLOGY

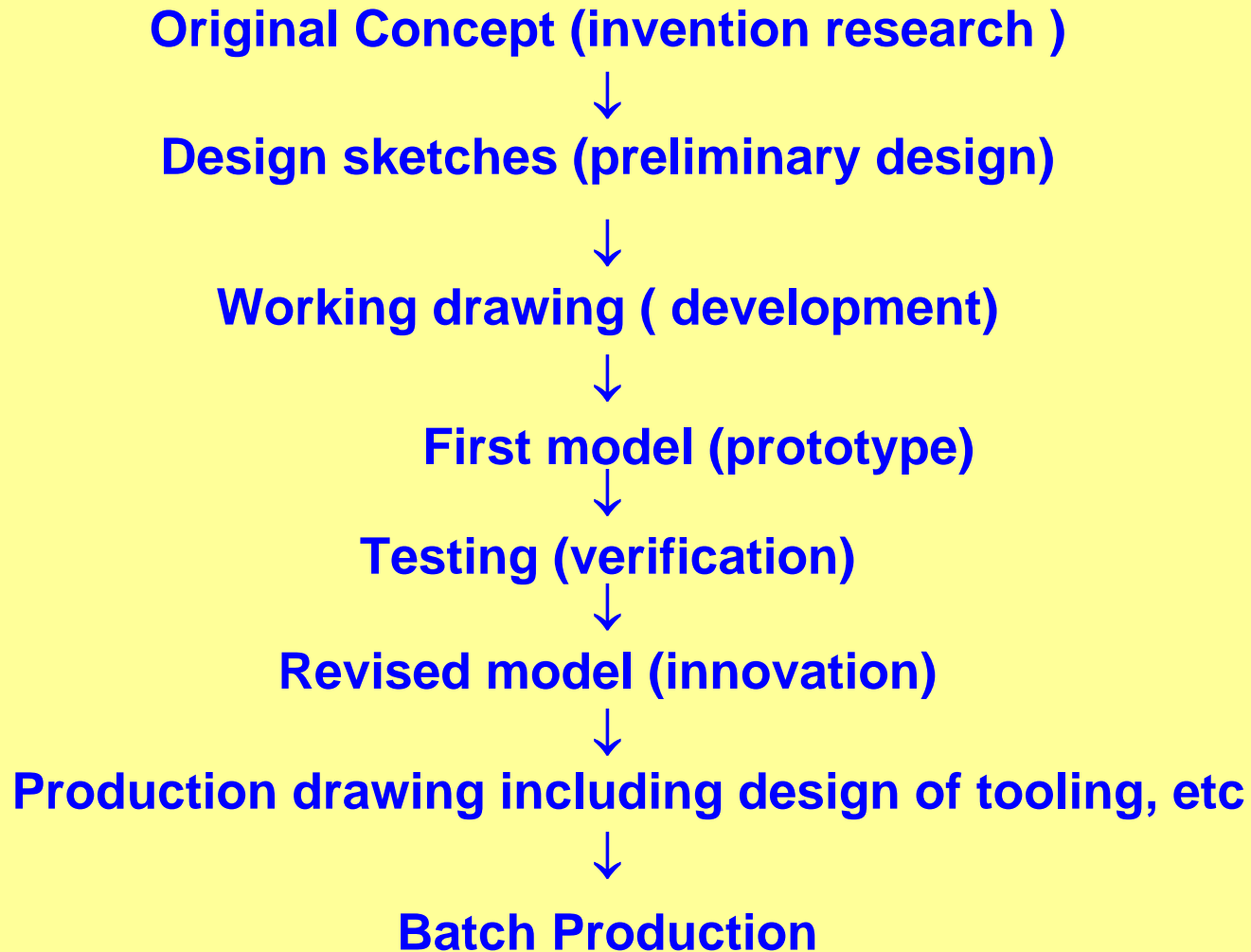
IN

AGRICULTURAL MACHINERY

DESIGN

COMPUTER AIDED DESIGN

**To convert a CONCEPT into a finished PRODUCT
general steps involved are;**



CAD ADVANTAGE TO DESIGNERS

Presently most of design work is carried by manual drafting techniques which takes lot of time. Frequent design modifications and refinements on the prototypes during the process of development also necessitates the changes to be incorporated in the design drawings. The process continues till the designer is satisfied with the performance of the prototype. This is labour intensive and time consuming process and sometimes due to time constraints the design changes/modifications are not incorporated.

CAD can help the engineer/ researcher in designing from Concept to Product Stage by following the standard design procedures, material selection and design analysis for optimal design of various components of the prototype.

Use of CAD would minimize the design modifications required during field testing and thus accelerate the finalization of design. This can also reduce the cost and time gap between conceptual design and functional design and production designs.

CAD ADVANTAGE TO MANUFACTURERS

Most of the agricultural equipment are fabricated by village artisans, small scale manufacturers who normally employ semi-skilled or unskilled workers for fabrication work. These workers usually do not understand 2-dimensional design drawings, and to visualize the actual design of machine a sample prototype is required.

Three dimensional (3-D) model designs of the prototype, with views from different angles, showing finer details of equipment, can be of great help to manufacturers.

Thus the computer aided design and development techniques can increase the efficiency of scientists/ researchers and reduce the time gap between conceptual design and actual availability of prototype to the farmers.

Software for Computer Aided Designing

2-D Design Drafting Software (AutoCAD)

The 2-dimensinal design drawing software follow the instructions and quickly produces the exact drawing we want. Their features allow us to correct drawing errors easily and make revisions without redoing the entire drawing. Clean, precise final drawings can be made and a completed CAD drawing looks identical to the same drawing carefully prepared by hand. 2-D CAD can greatly improve accuracy and efficiency of drawing.

3-D Solid Modeling CAD Software

These software allow the designers to;

- ☐ Conceptual design/ sketches
- ☐ Detailed product design (solid modeling of components and assemblies)
- ☐ Detailed product design drafting (creation of design documentation)
- ☐ Surface design
- ☐ Design of Sheet Metal Components
- ☐ Mechanism Design
- ☐ Design Animation
- ☐ Engineering Information such as mass properties
- ☐ Tolerance Analysis

Surface modeling

For design and modification of geometric and free form surfaces on solid parts. The software can create and modify the planar and ruled surfaces, surface of revolution, lofting, sweeping, mesh of curves, etc,

Design of Sheet Metal

The software can provide complete parametric design functions and capabilities and are capable of feature based sheet metal part modeling, sheet metal bending/ folding, unfolding and automatic stress relief, etc. A comprehensive catalogue of sheet metal features for incorporation in sheet metal parts are also included.

MECHANISM DESIGN

Useful for simulating complex motion of articulated mechanisms

Enables designers to quickly and easily assemble parts and subassemblies using pre-defined connections (pin joints, ball joints, sliders, etc.) to create a mechanism assembly. These connections are intelligent features and can be used in conjunction the traditional assembly constraints like mate, align and insert. The mechanism can then be interactively dragged through its range of motion, or by using 'drivers', animations of pre-defined motion can be created, stored and replayed.

Design Analysis/ Simulation Software (FEM/ FEA)

- ☐ **Structural Analysis**
- ☐ **Fatigue Analysis**
- ☐ **Thermal Analysis**
- ☐ **Motion Analysis**
- ☐ **Computational Fluid Analysis (CFD)**

STRUCTURE ANALYSIS (FEM/ FEA)

The software allows design engineers to evaluate, understand, and optimize the static and dynamic structural performance of their designs in a real-world environment. Precise representations of CAD geometry, and adaptive solution technology provides fast, accurate solutions automatically to help to improve product quality, while decreasing costs associated with extended development times and ineffectual prototypes.

Fatigue Advisor

Fatigue Advisor allows engineers to predict and improve the fatigue performance of their designs. This can reduce design iteration and costly test programs on multiple prototypes.

Fatigue Advisor can be used early in the design process to assess the durability of a design subject to repeated loading, and to help design engineers to understand the effects of design changes on the fatigue life of the component.

MOTION SIMULATION/ ANALYSIS PACKAGE

Allow design engineers to create, evaluate, and optimize the motion of an assembly in a real-world environment to best meet engineering and performance requirements.

Motion Simulation evaluates and optimizes moving assemblies by supporting driven kinematic and force-based dynamic simulations, in full 3D.

Engineers can evaluate velocity, part angular acceleration, part mass properties, point position, point velocity, point acceleration, net force, point-to-point separation, separation speed, separation speed change, mechanism redundancies, kinetic energy, and part-to-part true angles by animating actual CAD geometry, rather than manually interpreting mathematical relationships.

COMPUTATIONAL FLUID DYNAMICS

For simulation of flowing liquids and gases CFD software known as computational fluid dynamics is available.

The effects of fluid flow impact the performance of a wide range of products. From automotive fuel injectors, fans, pumps and filters, to tiny microfluidic “labs-on-a-chip,” CFD can have complicated and profound effects on product designs.

CFD software package can analyze how the designs will respond to the effects of steady-state or transient fluid flow and heat transfer.

Establishment and Use of CAD Facilities in ICAR Institute/ and State Agricultural Universities

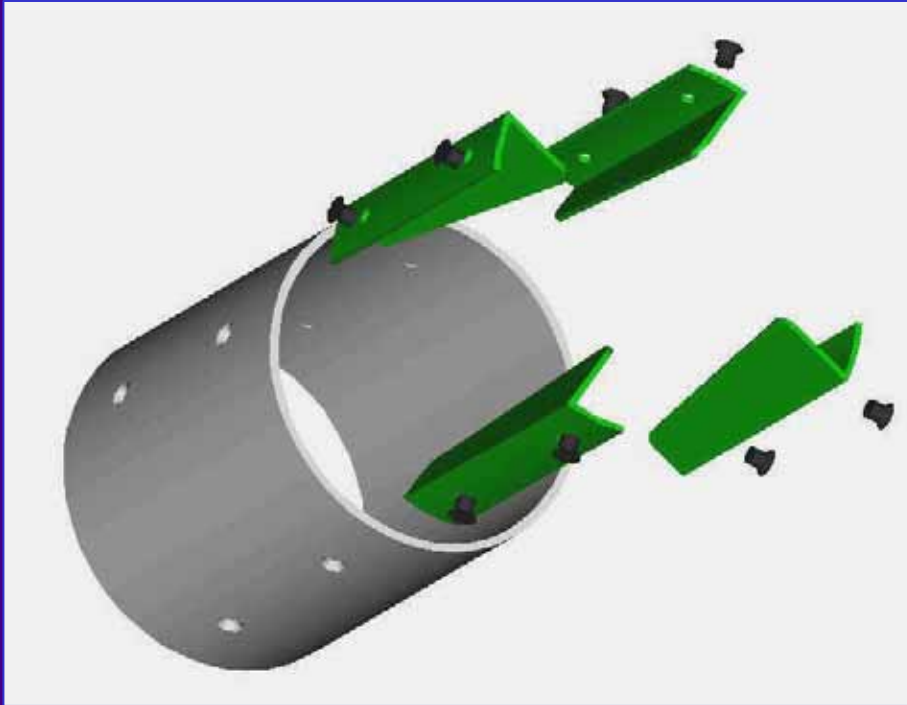
Computer Aided Design Facilities at R&D Centres of All India Coordinated Research Project on Farm Implements and Machinery and other Research Centers.

CAD Software being used are;

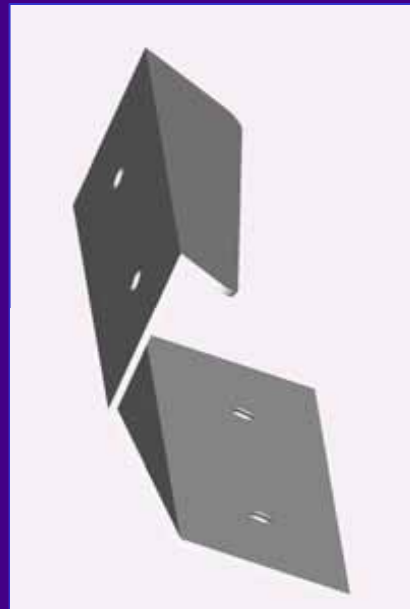
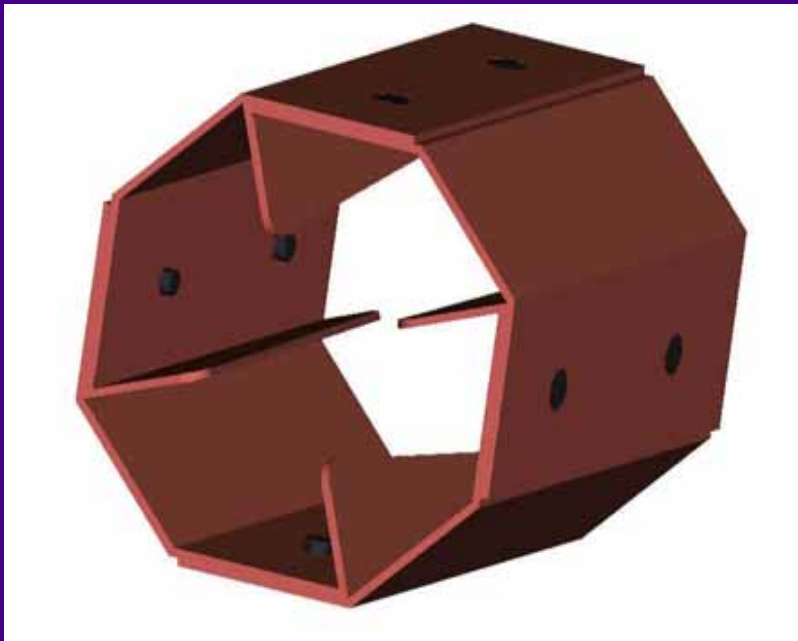
- 1. Pro/Engineer**
- 2. CATIA**
- 3. IDEAS**

These Research Centers are using the CAD for Design of new equipment, design refinement of existing equipment, preparation of Manufacturing drawings, preparation of production Manuals, design of tooling and design analysis (FEM/ FEA).

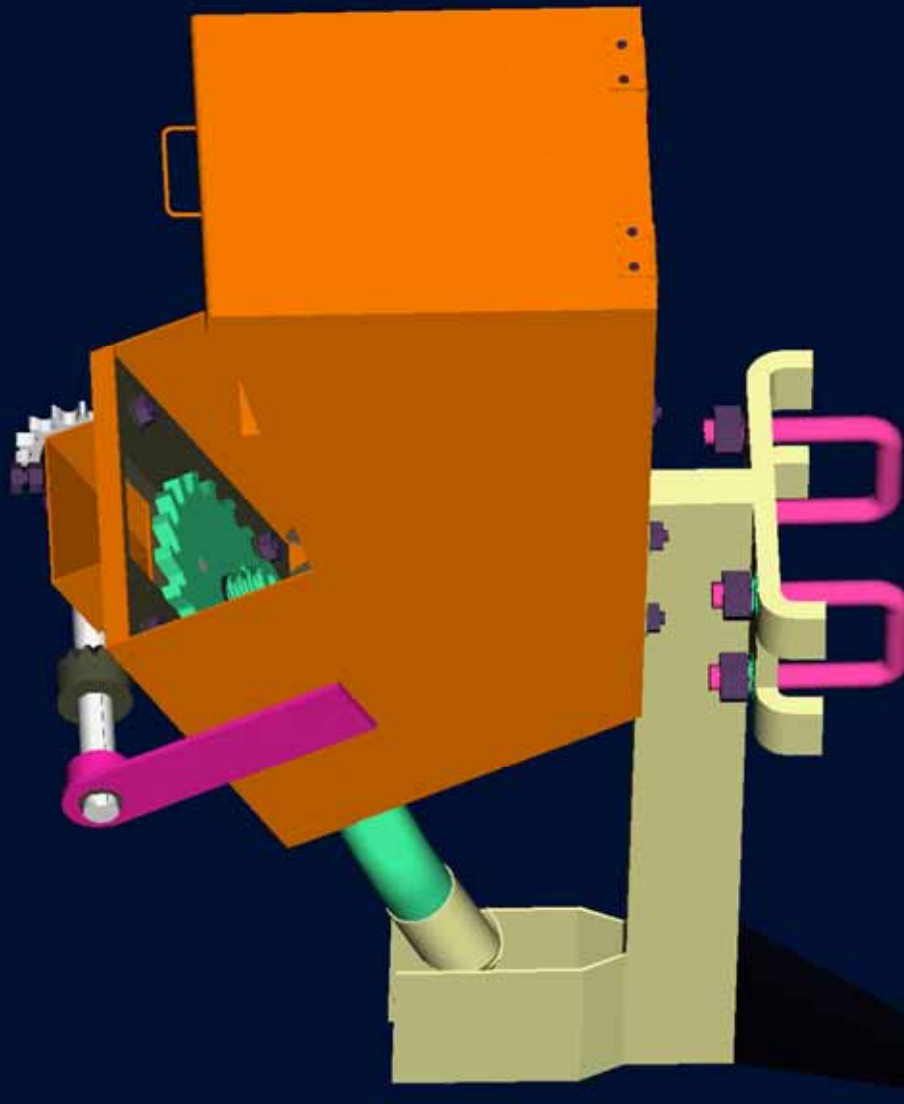
At CIAE Production/Manufacturing drawings of most (more than 60 designs) of CIAE developed equipment have been prepared on CAD.



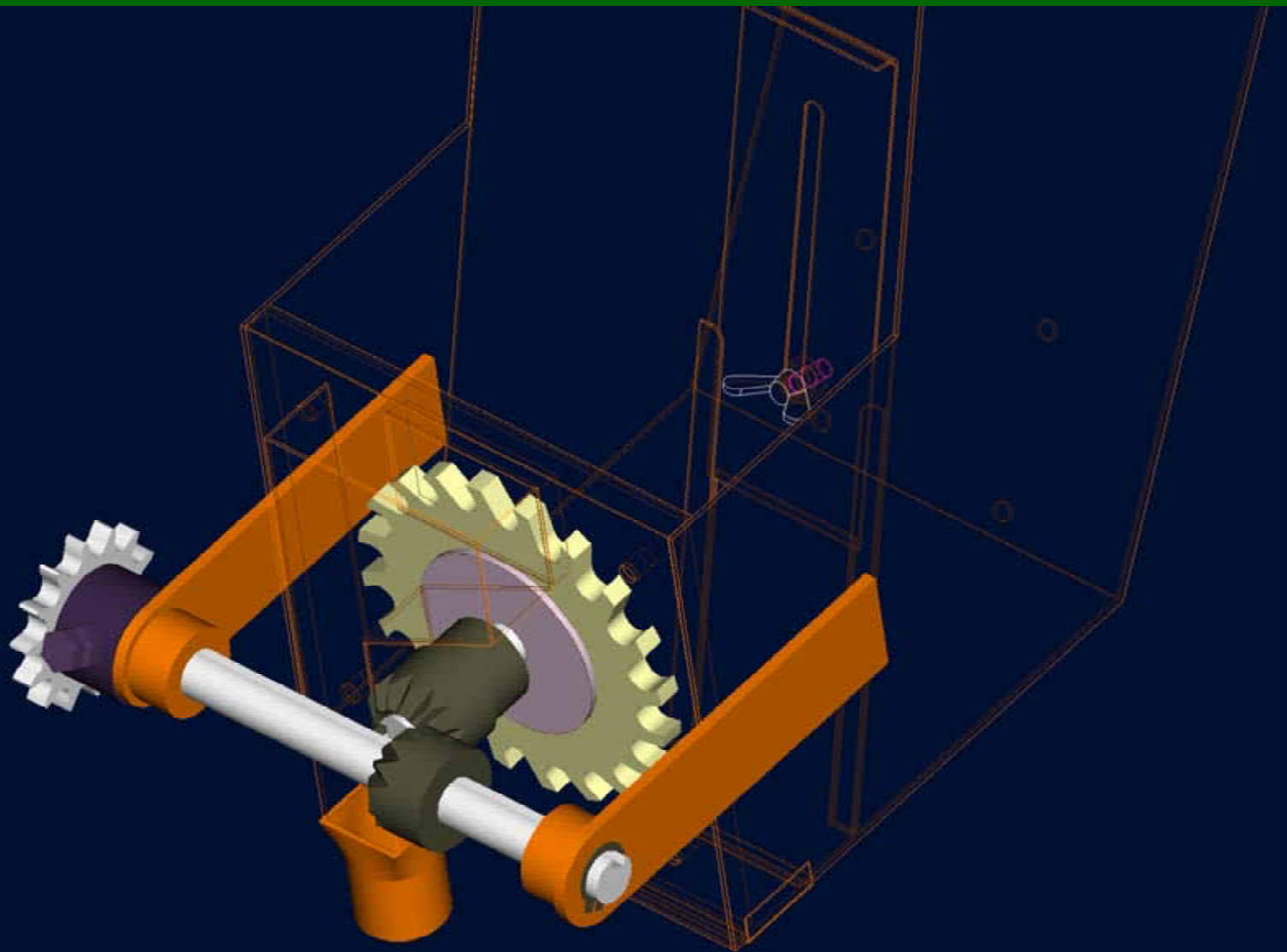
**Tubular Hand Maize
Sheller**



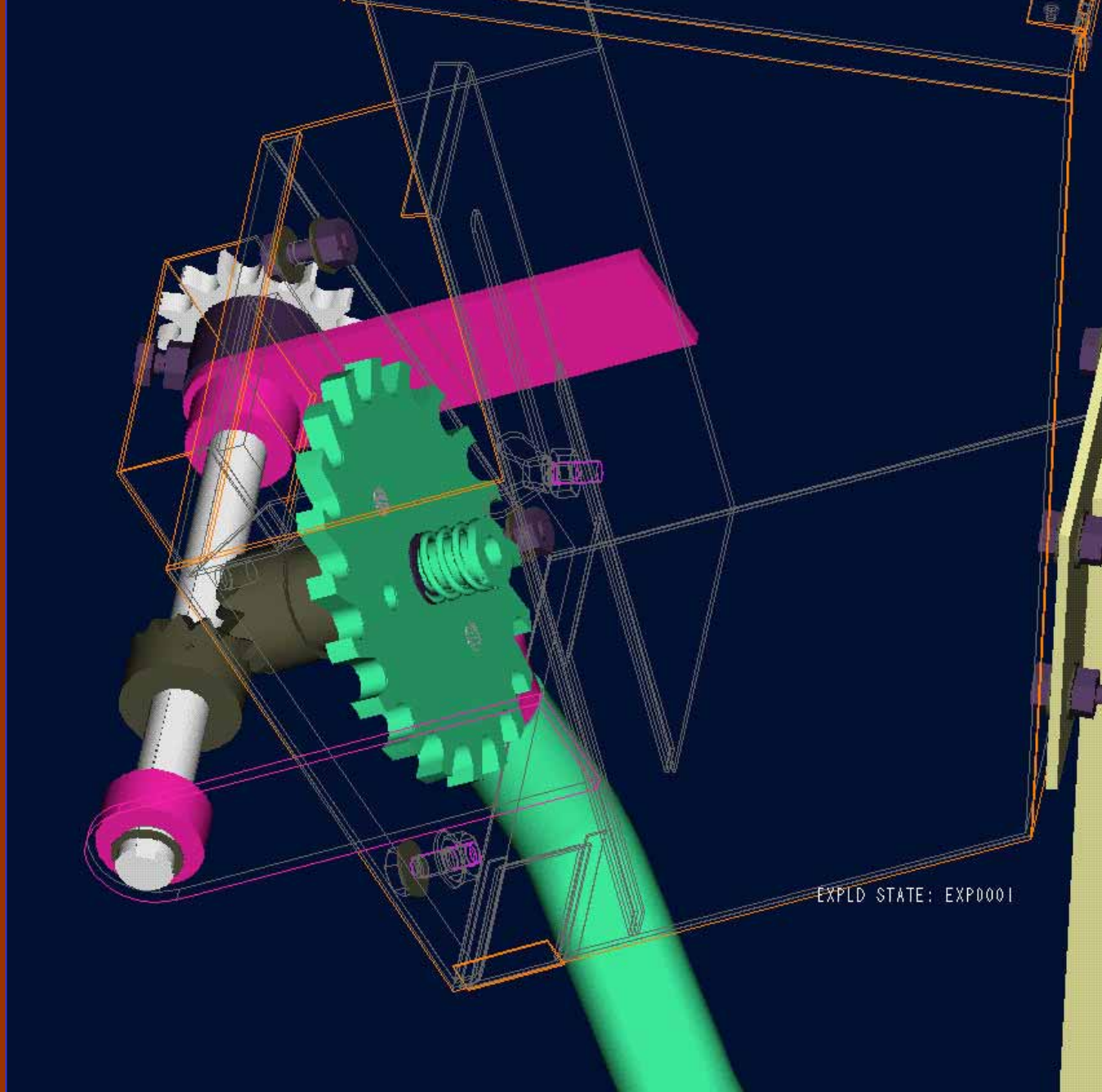
**Body cum Fin
part and
Octagonal Maize
Sheller**



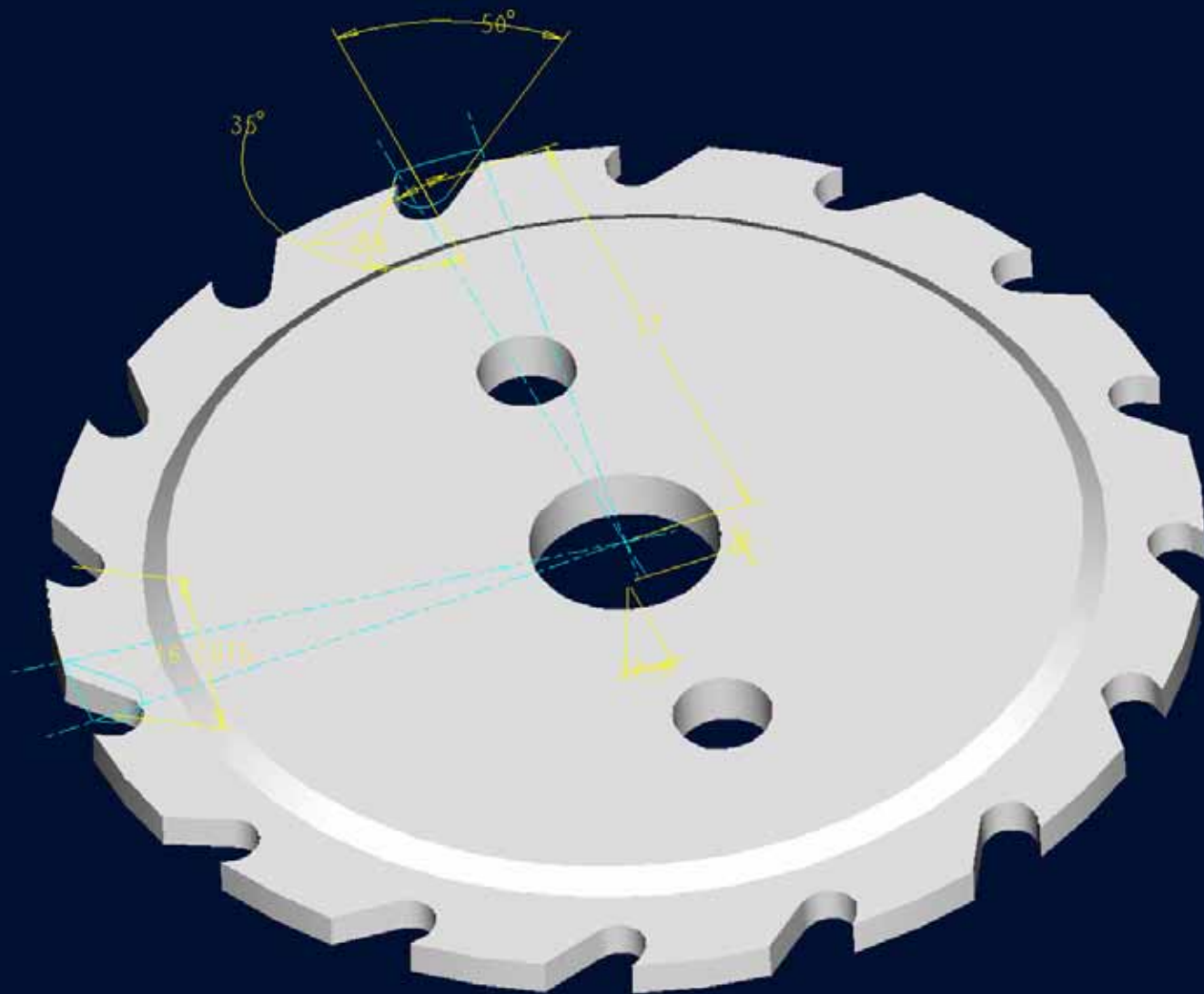
CAD Solid Model of Seed box and Furrow Opener Assembly of Planter



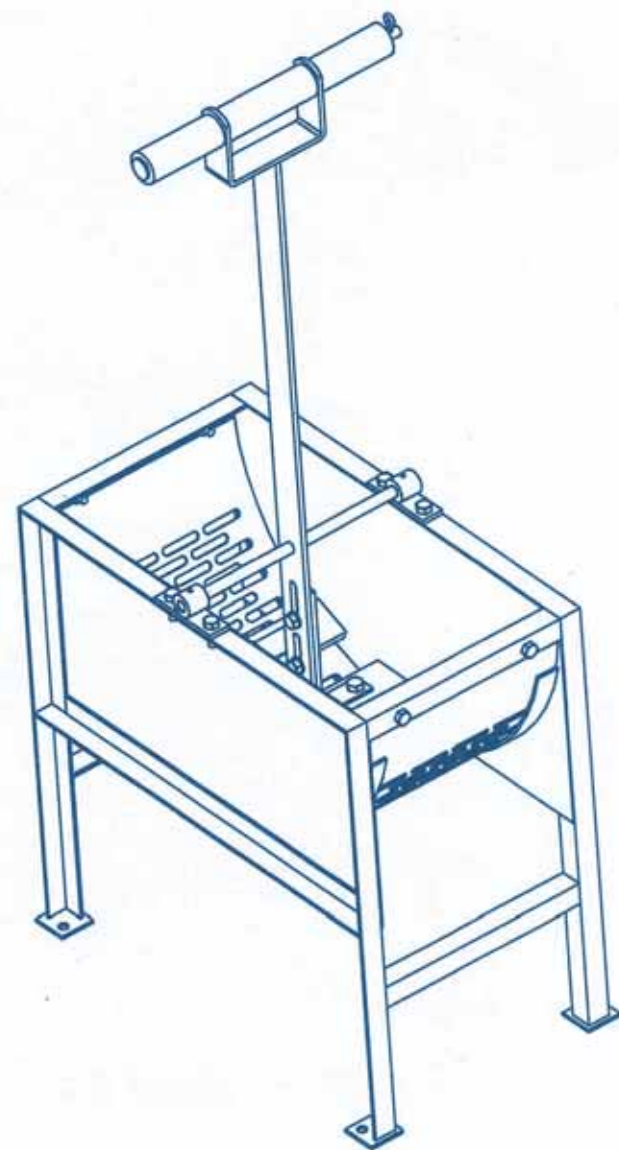
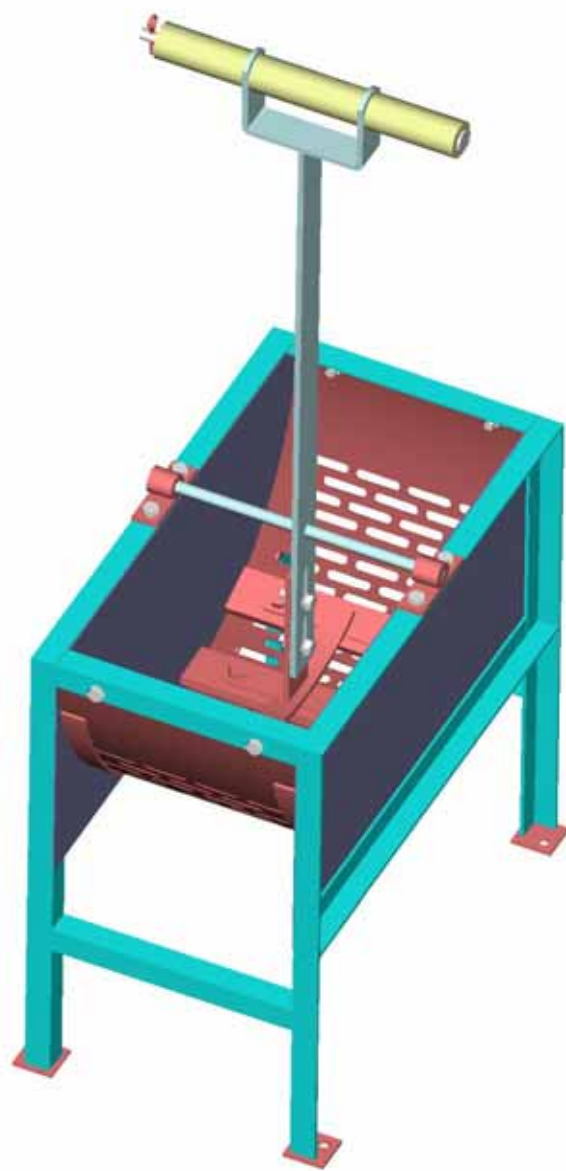
Seed Metering System of Planter



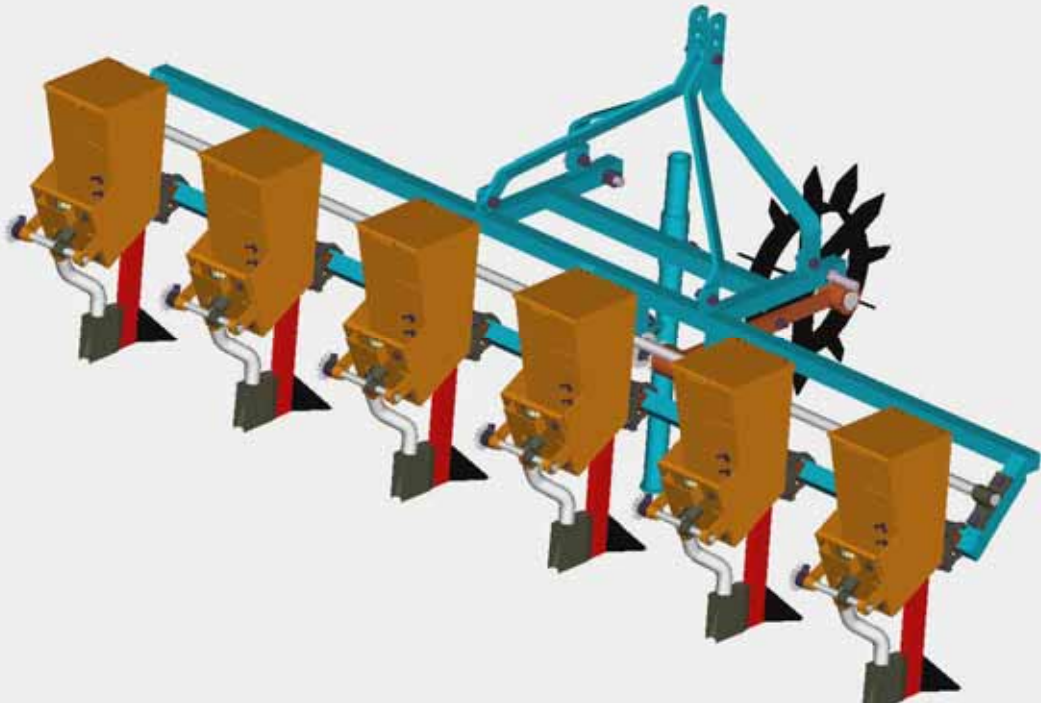
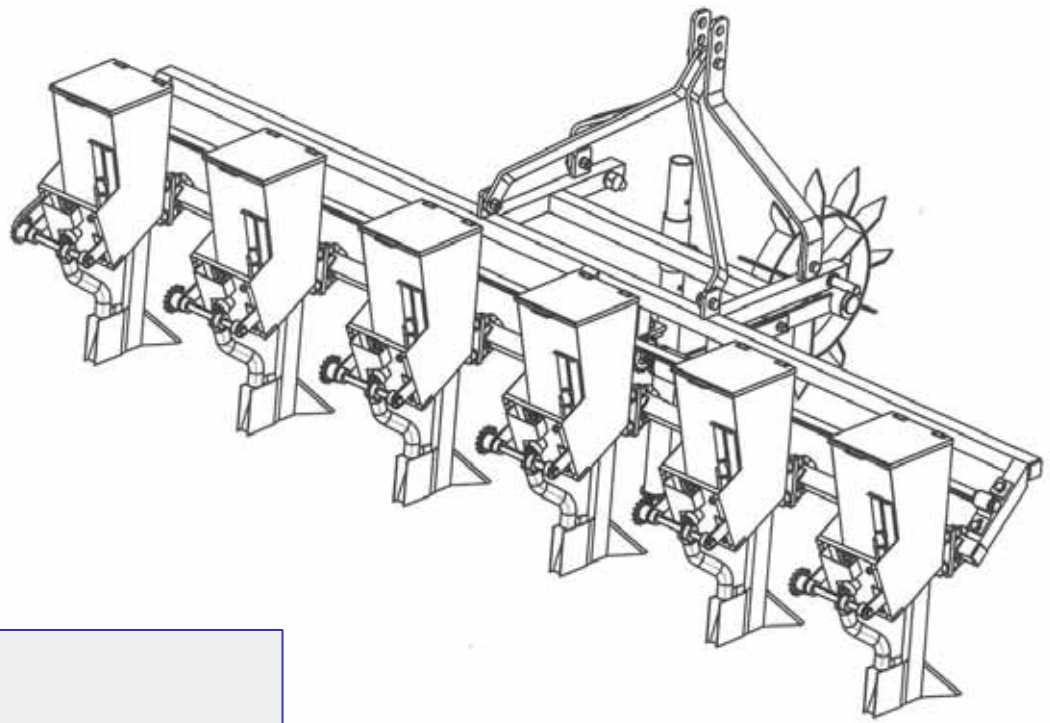
Seed Metering System of Planter



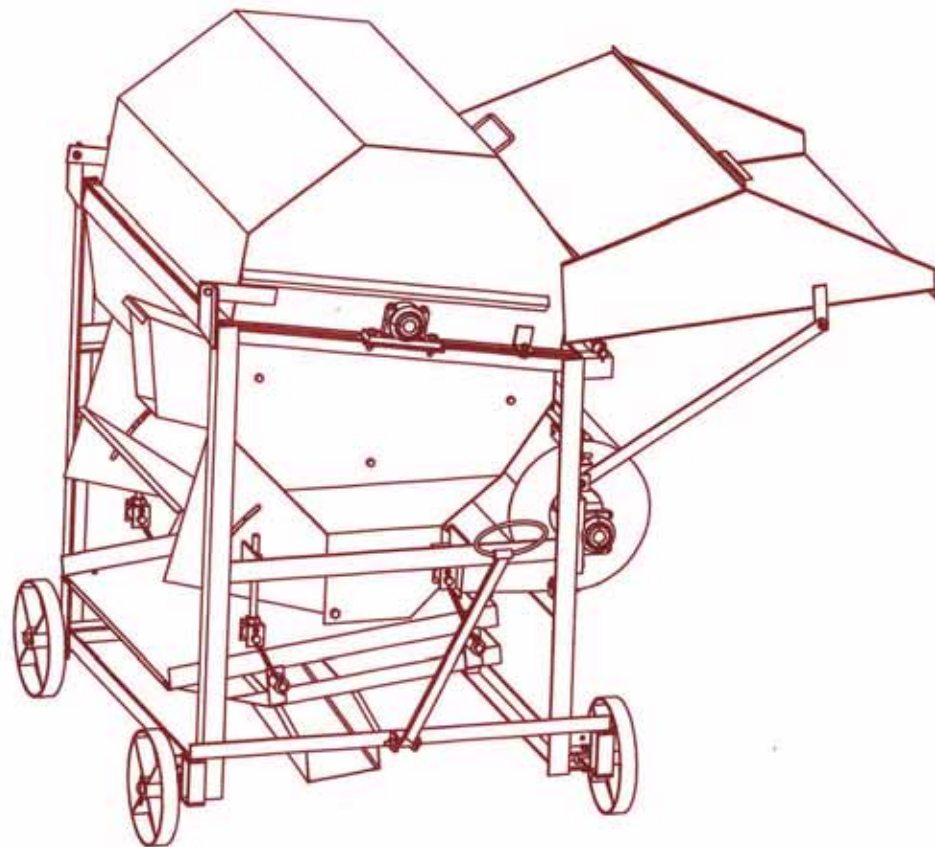
Seed Plate Design for Planter



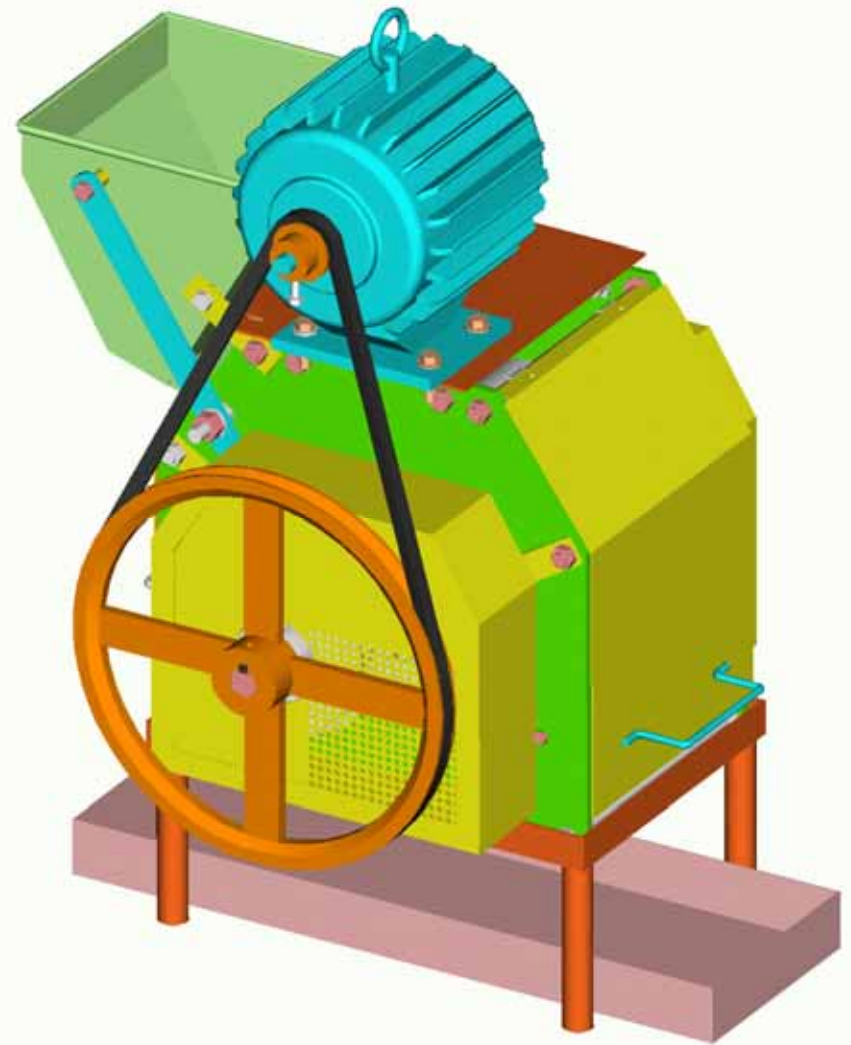
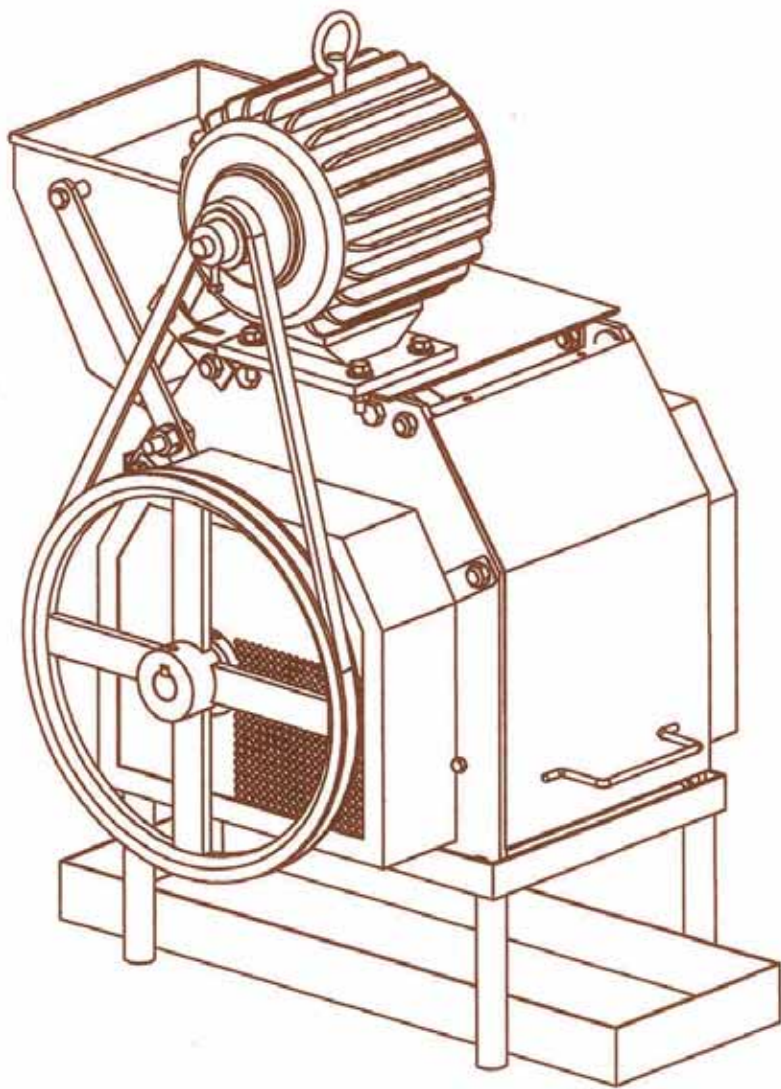
CIAE Manual Groundnut Decorticator



**CIAE Tractor
drawn Inclined
Plate Planter**

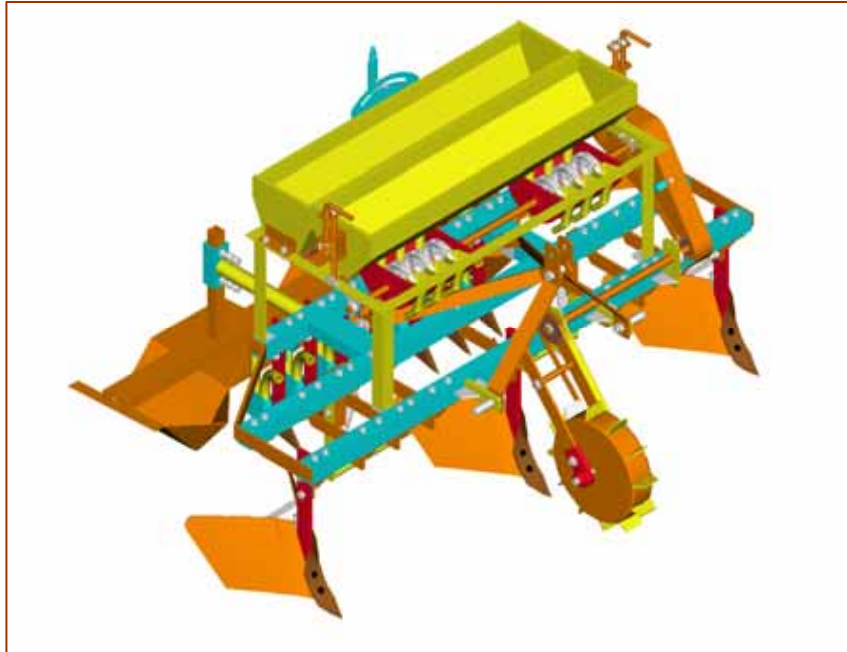


CIAE Power Operated Groundnut Stripper/ Thresher



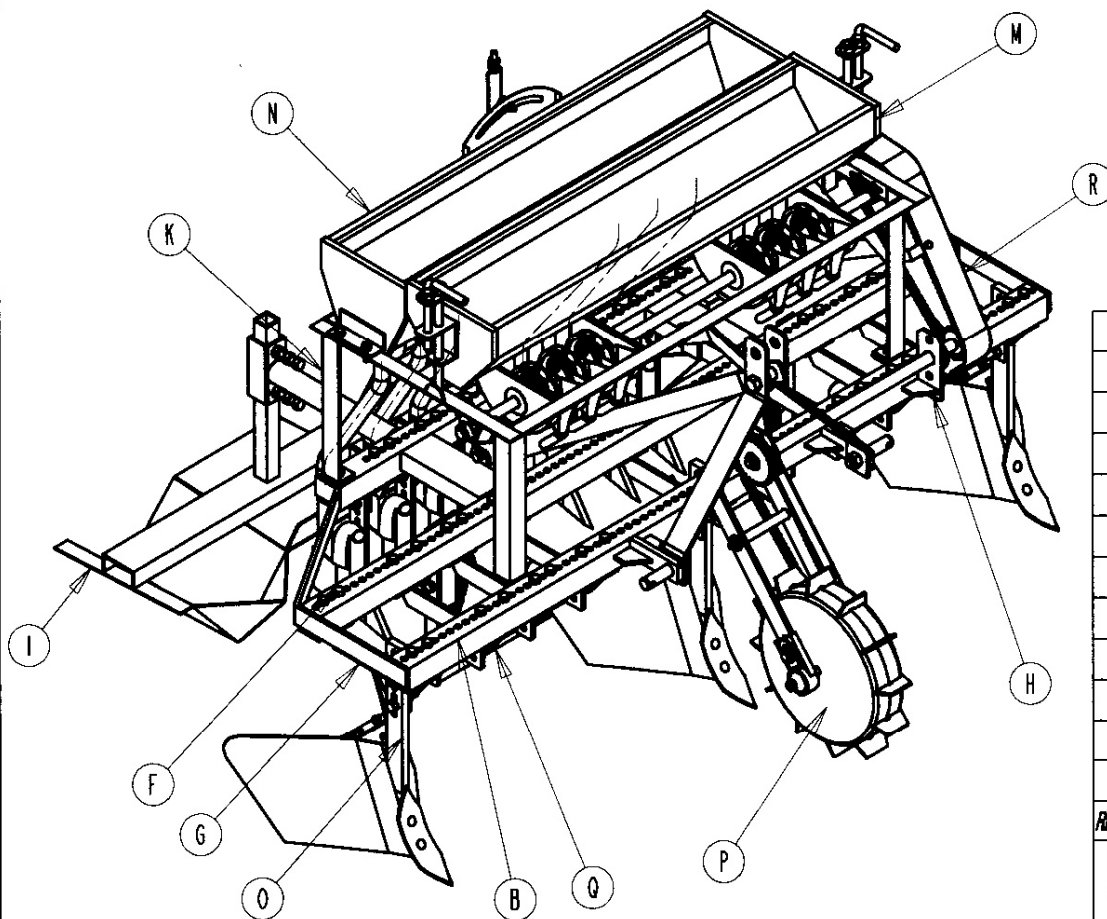
CIAE Soybean Flaking Machine

Design Drawings of *Tractor Mounted Raised Bed Planter*



COMPUTER AIDED DESIGN CELL

**Central Institute of Agricultural Engineering
Nabibagh Berasia Road, Bhopal 462038**



R	S&P65-R	CHAIN COVER ASSEMBLY	01
Q	S&P65-Q	BED LEVELER ASSEMBLY	01
P	S&P65-P	GROUND DRIVE WHEEL ASSEMBLY	01
O	S&P65-O	RIDGER BOTTOM ASSEMBLY	03
N	S&P65-N	SEED BOX ASSEMBLY	01
M	S&P65-M	PRIMARY FERTILIZER BOX ASSEMBLY	01
K	S&P65-K	HOPPER SUPPORT ASSEMBLY	01
I	S&P65-I	BED SHAPER ASSEMBLY	01
H	S&P65-H	MOUNTING FRAME ASM.FOR RIDGER BOTTOM-02	04
G	S&P65-G	MOUNTING FRAME ASM.FOR RIDGER BOTTOM-01	05
F	S&P65-F	FURROW OPENER ASSEMBLY	06
B	S&P65-B	MAIN FRAME ASSEMBLY	01
REF.CODE	REFERENCE DRAWING NO.	PART / ASSEMBLY NAME	NO. OFF

ALL DIMENSIONS IN mm
STANDARD TOLERANCES
AS PER IS: 919
LINEAR : ± 0.1
ANGULAR : $\pm 0.5^\circ$

COMPUTER AIDED DESIGN CELL

TITLE: TRACTOR OPERATED RAISED BED PLANTER

SCALE: 1:20



DESIGN
CAD
CHECKED
APPROVED

N. PAKHALE

USED IN:

DWG. No.: S&P65-A

SHEET :

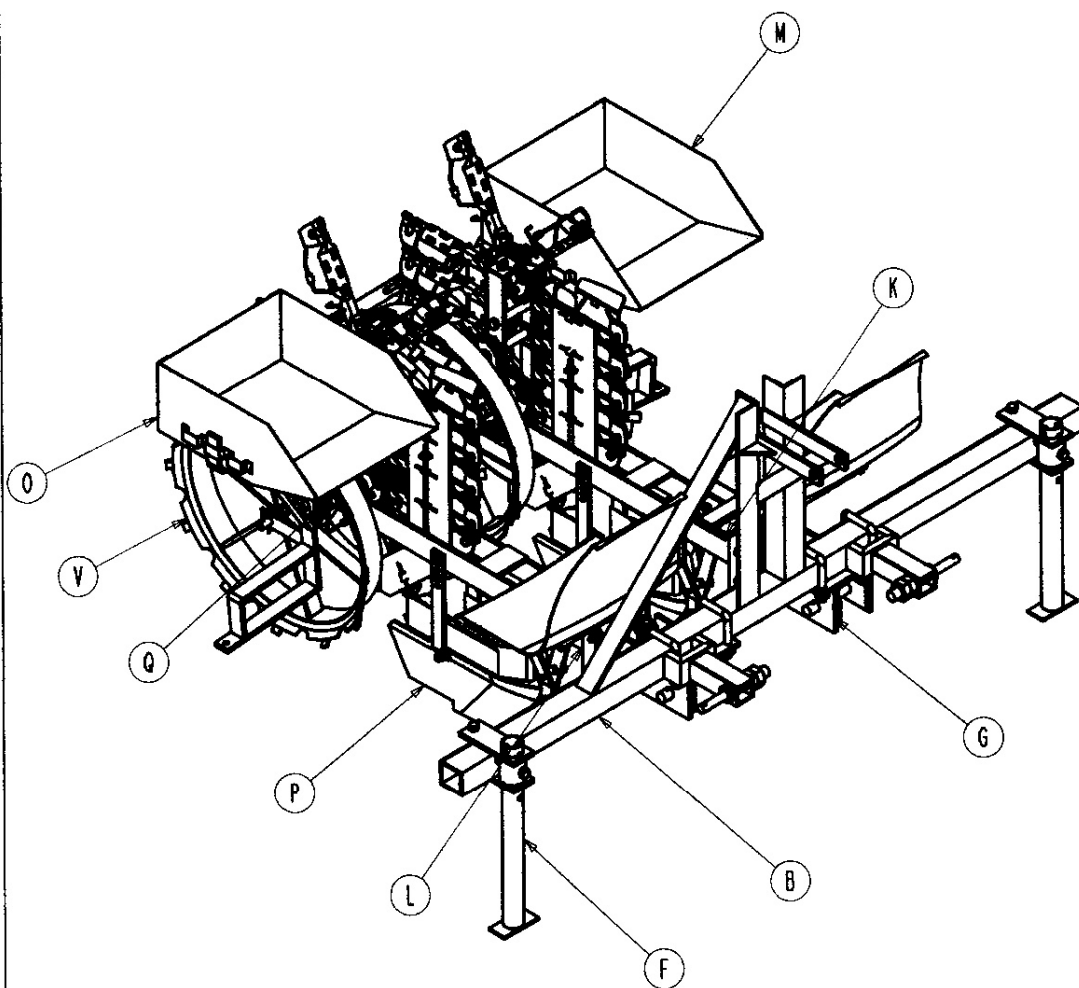
CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING (ICAR)
BHOPAL-462 038, MP, INDIA.

Design Drawings of *CIAE Tractor Mounted Vegetable Transplanter*



COMPUTER AIDED DESIGN CELL

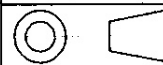
**Central Institute of Agricultural Engineering
Nabibagh Berasia Road, Bhopal 462038**



V	S8P66-V	COVERING WHEEL ASSEMBLY	02
Q	S8P66-Q	CHAIN ASSEMBLY-01	02
P	S8P66-P	FURROW OPENER ASSEMBLY	02
O	S8P66-O	LEFT TRAY WITH FOOTREST ASSEMBLY	01
M	S8P66-M	RIGHT TRAY WITH FOOTREST ASSEMBLY	01
L	S8P66-L	LEFT SEAT SUPPORT ASSEMBLY	01
K	S8P66-K	RIGHT SEAT SUPPORT ASSEMBLY	01
G	S8P66-G	MODULAR UNIT ASSEMBLY	02
F	S8P66-F	FRAME STANDASSEMBLY	02
B	S8P66-B	TOOL BAR & HITCH ASSEMBLY	01
REF CODE	REFERENCE DRAWING NO.	PART / ASSEMBLY NAME	NO. OFF

ALL DIMENSIONS IN mm
STANDARD TOLERANCES
AS PER IS:919
LINEAR : ± 0.1
ANGULAR : $\pm 0.5^\circ$

SCALE: 1 : 10



COMPUTER AIDED DESIGN CELL
TITLE: CIAE VEGETABLE TRANSPLANTER

DESIGN	D. CHAUDHURI	USED IN:	
CAD	N. PARKHALE	DWG. No.:	S8P66-A
CHECKED	D. CHAUDHURI	SHEET :	
APPROVED			

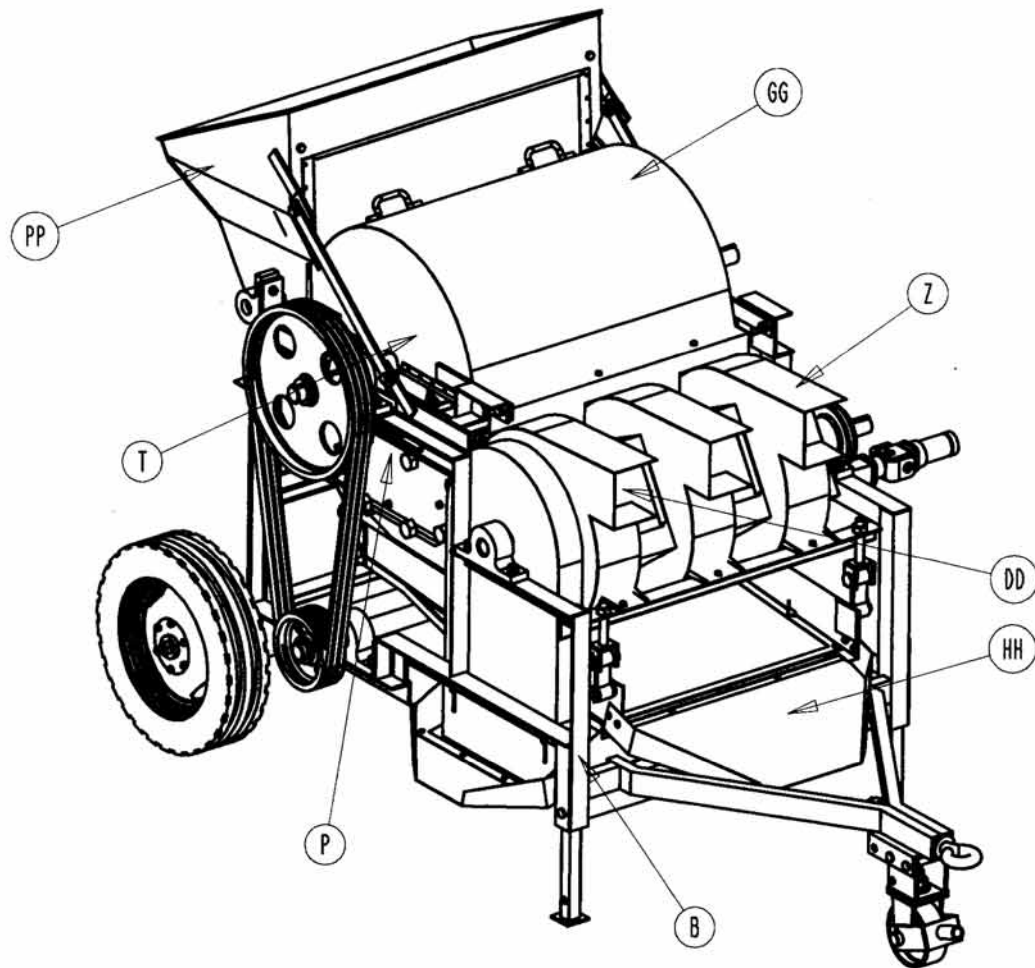
CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING (ICAR)
BHOPAL, MP INDIA 462 038

Design Drawings of *CIAE High Capacity Multicrop Thresher*



COMPUTER AIDED DESIGN CELL

**Central Institute of Agricultural Engineering
Nabibagh Berasia Road, Bhopal 462038**



PP	THR06M-PP	FEED HOPPER ASSEMBLY	01
HH	THR06M-HH	SIEVE SHAKER ASSEMBLY	01
GG	THR06M-GG	TOP COVER ASSEMBLY	01
DD	THR06M-DD	BLOWER ASSEMBLY	03
Z	THR06M-Z	BLOWER HOUSING ASSEMBLY	01
T	THR06M-T	CYLINDER ASSEMBLY	01
P	THR06M-P	CONCAVE ASSEMBLY	01
B	THR06M-B	BODY ASSEMBLY	01
REF. CODE	REFERENCE DRAWING NO.	PART / ASSEMBLY NAME	NO. OFF

ALL DIMENSIONS IN mm
STANDARD TOLERANCES
AS PER IS:919
LINEAR : ± 0.1
ANGULAR : $\pm 0.5^\circ$

COMPUTER AIDED DESIGN CELL

TITLE: REFINED HIGH CAPACITY MULTICROP THRESHER

SCALE: 1:20

DESIGN

KL MAJUMDAR

USED IN:

CAD

N. PAKHALE

DWG. No.:

THR06M

CHECKED

KL MAJUMDAR

SHEET:

APPROVED

CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING (ICAR)
BHOPAL, MP INDIA 462 038

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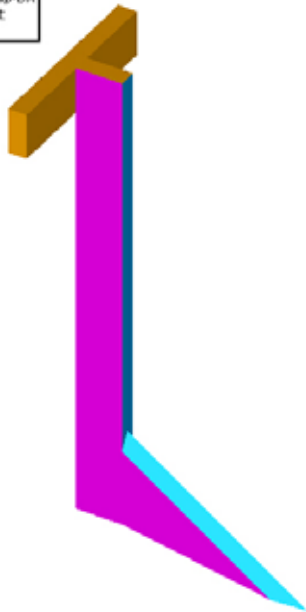


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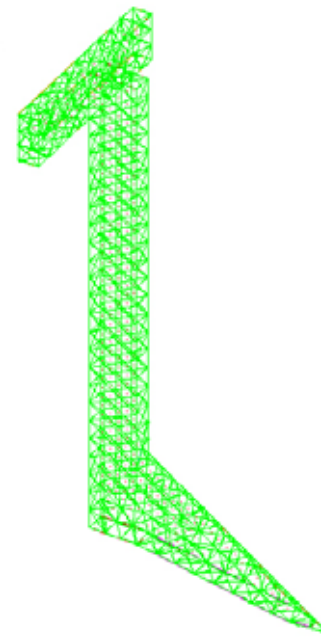


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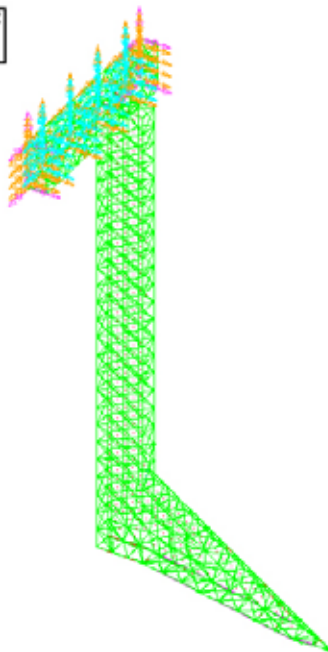
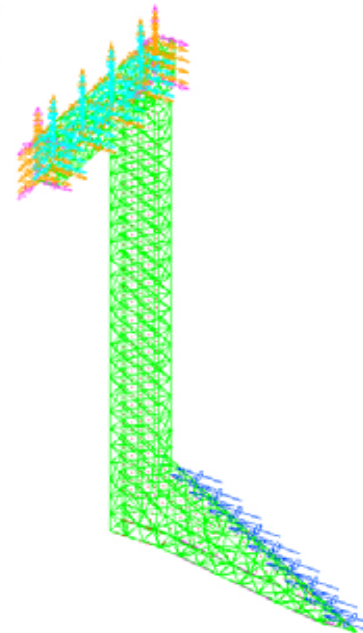


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IDEAS Visualizer

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Display 1

Fem1

B.C. 1,STRESS_3,LOAD SET 1

E:\Work_IDEAS\planter.mf1

STRESS Von Mises Unaveraged Top shell

Min: 2.25E-001 N/mm² Max: 1.95E+003 N/mm²

B.C. 1,DISPLACEMENT_1,LOAD SET 1

E:\Work_IDEAS\planter.mf1

DISPLACEMENT XYZ Magnitude

Min: 0.00E+000 mm Max: 2.18E+001 mm

Part Coordinate System

N/mm²

1.95E+003

1.85E+003

1.75E+003

1.65E+003

1.56E+003

1.46E+003

1.36E+003

1.26E+003

1.17E+003

1.07E+003

9.73E+002

8.75E+002

7.78E+002

6.81E+002

5.84E+002

4.86E+002

3.89E+002

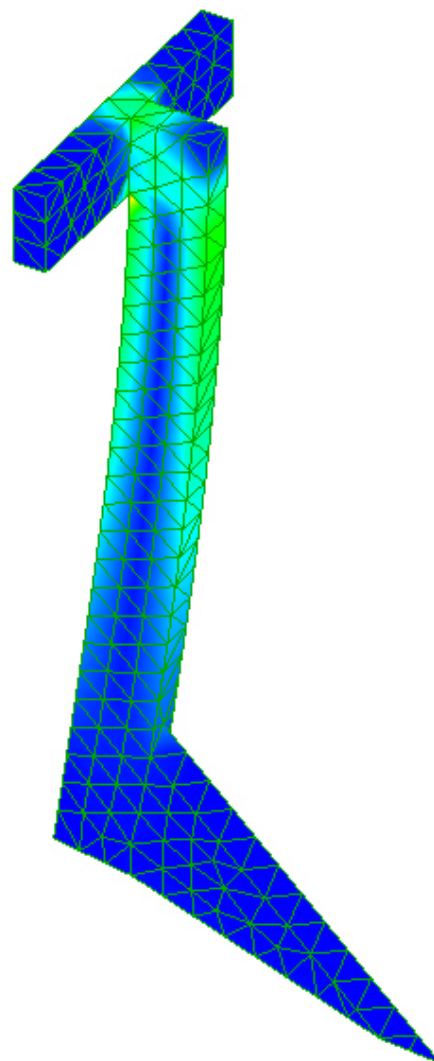
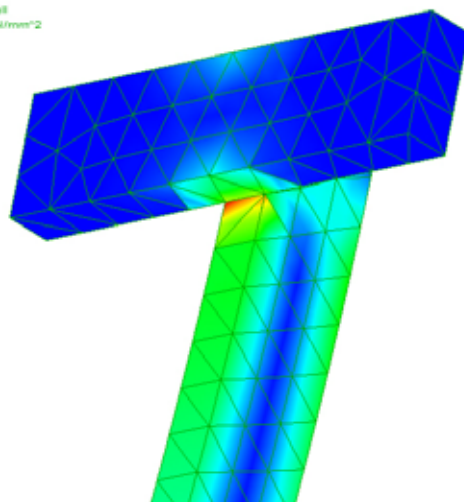
2.92E+002

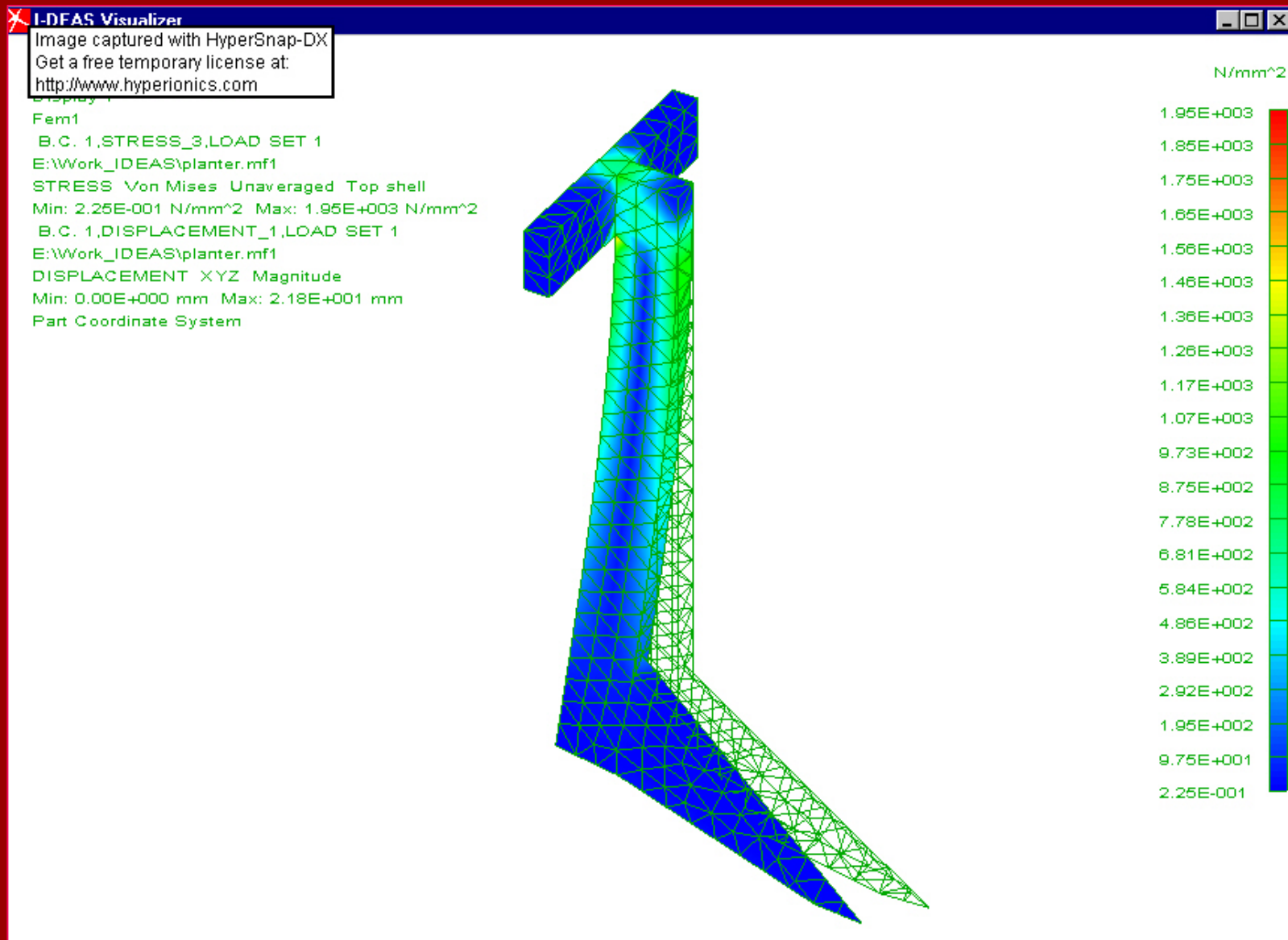
1.95E+002

9.75E+001

2.25E-001

LOAD SET 1
(er.mf1)
Unaveraged Top shell
V2 Max: 1.95E+003 N/mm²
ENT_1,LOAD SET 1
(er.mf1)
V2 Magnitude
Max: 2.18E+001 mm
um





**AGRICULTURAL
RESEARCH
INFORMATION
SYSTEM
(ARIS)**

Agricultural Research Information System (ARIS)

With the advent of revolution in information technology (IT) ICAR launched the Agricultural Research Information System (ARIS) during 1995-96, creating ARIS Cells and Networking almost all SAUs (28), ICAR Institutes (49), PDs (9) and NRCs (30) and selected KVKs for E-mail, Internet and databases through RF linked V-Sat/ Dial-up or leased line.

Information Modules such as, Agricultural Research and Financial Information System(ARFIS), Agricultural Research Personnel Information System(ARPIS) are operational, and Agricultural Research Management Information Service (ARMIS) and Agricultural Research Library Information System (ARLIS) are in the pipeline. There is also an Agricultural Research Information Centre (ARIC) at Krishi Anusandhan Bhavan to create data base on research projects sponsored by ICAR. ARIC also abstracts selected Indian journals for AGRIS of FAO.

INFORMATION MODULES

ARPI S

- Bio-data of ICAR Staff
- Sci. Recruit. System
- Bio-data of Sci. at SAUs

ARFI S

- Monthly Accounts
- Fin. Monitoring of AICRP, AP-Cess Fund Research & Revolving Fund Projects
- Salary Billing
- Provident Funds

A R I S

Agricultural
Research
Information
System

HRD in IT
& STI

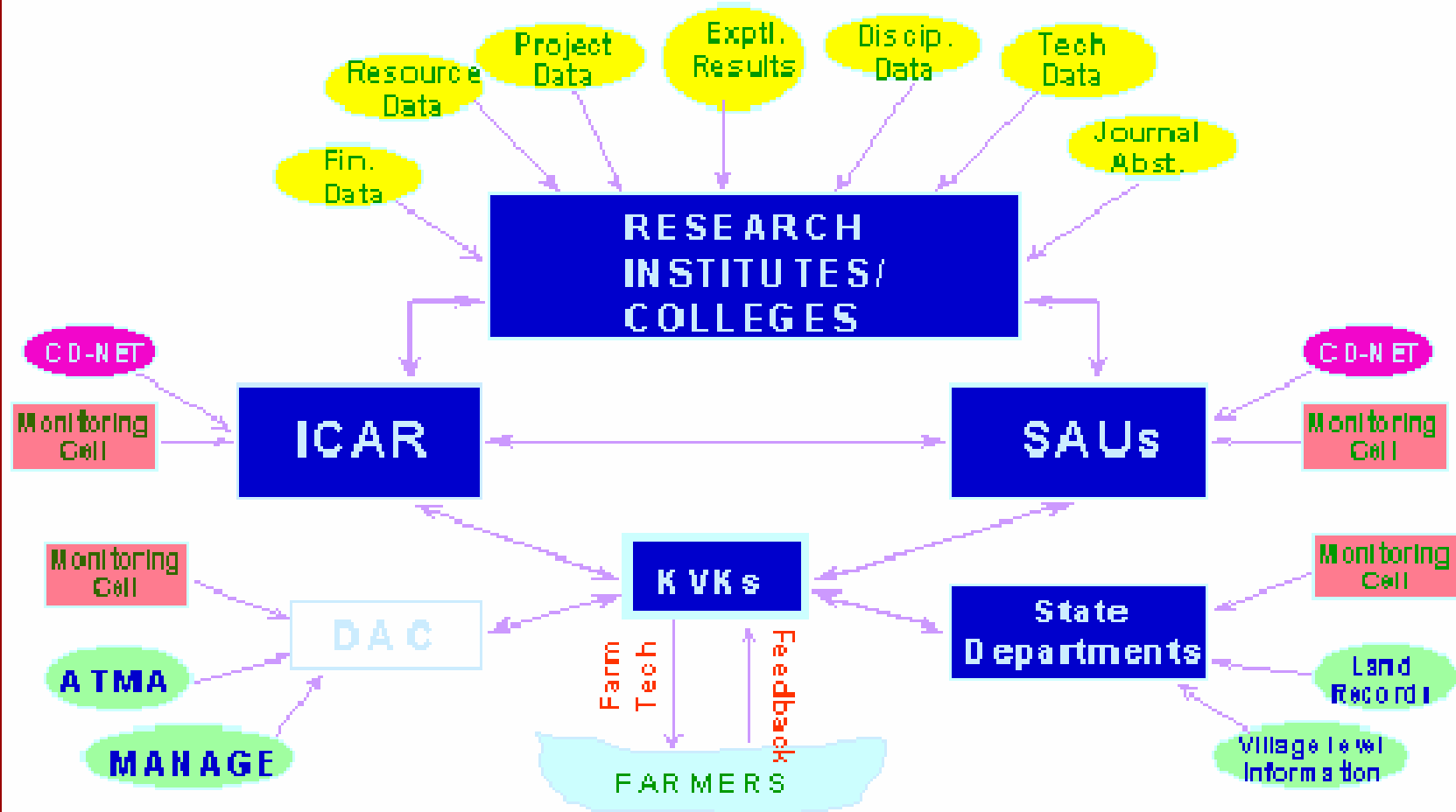
ARLI S

- Lib. Automation
- Scientific Abstracts Database
- Electronic Access to Libs
- Access to Int'l Libs

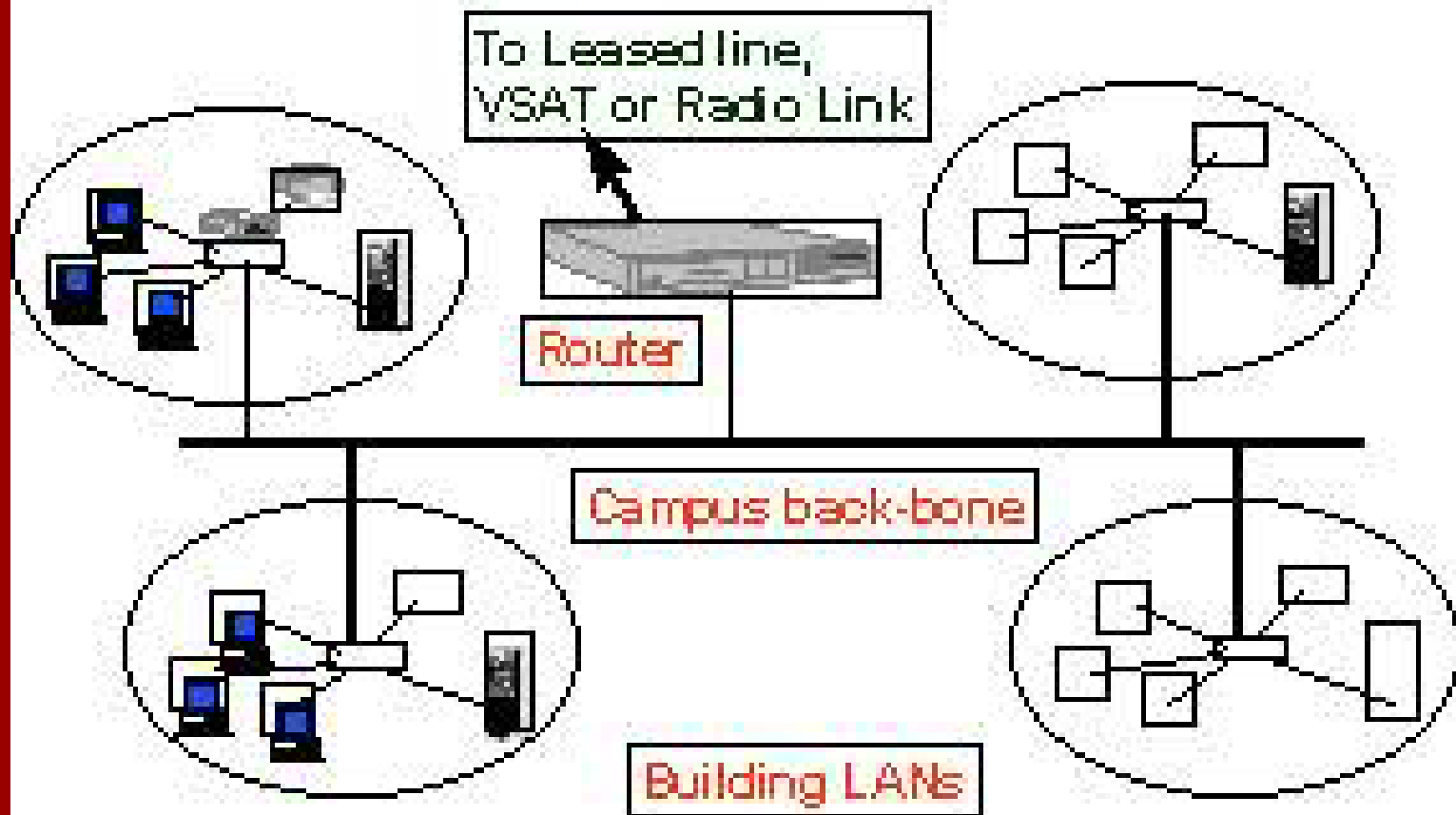
AR MIS

- WEB pages
- Admin. Management
- Parliamentary Questions
- Agric. Projects Information System

Information System Model



Suggested layout for campus LAN



ICAR

RESEARCH INSTITUTES

and

STATE AGRICULTURAL
UNIVERSITIES (SAU's)

Under

NATIONAL AGRICULTURAL
RESEARCH SYSTEM(NARS)

Central Agricultural Research Institute, Port Blair
Central Arid Zone Research Institute, Jodhpur, Rajasthan
Central Avian Research Institute, Izatnagar, Uttar Pradesh Central Inland Fishries
Research Institute, Barrackpore, West Bengal
Central Institute for Cotton Research, Nagpur, Maharashtra
Central Institute for Research on Goats, Farah, Uttar Pradesh
Central Institute for Research on Cotton Technology, Mumbai, MaharashtraCentral
Institute for Research on Cotton Technology, Mumbai, Maharashtra Central
Institute of Agricultural Engineering, Bhopal, Madhya Pradesh
Central Institute of Brakishwater Aquaculture, Chennai, Tamilnadu
Central Institute of Freshwater Aquaculture, Bhubaneswar, Orissa
Central Institute of Fisheries Education, Mumbai, Maharashtra
Central Institute of Post Harvest Engineering & Technology, Ludhiana, Punjab
Central Marine Fisheries Research Institute, Kochin, Kerala
Central Plantation Crops Research Institute, Kasaragod, Kerala
Central Research Institute for Dryland Agriculture, Hyderabad, Andhra Pradesh
Central Research Institute for Jute and Allied Fiber, Barrackpore, West Bengal
Central Rice Research Institute, Cuttack, Orissa
Central Sheep & Wool Research Institute, Avikanagar, Rajasthan
Central Soil Salinity Research Institute, Karnal, Haryana

Central Tuber Crops Research Institute, Thiruvananthapuram, Kerala

Indian Agricultural Research Institute, New Delhi

Indian Agricultural Statistics Research Institute New Delhi

ICAR Research Complex For Goa, Ela Old, Goa

Indian Grassland and Fodder Research Institute, Jhansi

Indian Institute of Horticultural Research, Bangalore, Karnataka

Indian Institute of Pulses Research, Kanpur, Uttar Pradesh

Indian Institute of Soil Science , Bhopal, Madhya Pradesh

Indian Institute of Spices Research, Calicut, Kerala

Indian Institute of Sugarcane Research, Lucknow, Uttar Pradesh

Indian Institute of Vegetable Research, Varanasi, Uttar Pradesh

Indian Lac Research Institute, Namkum, Ranchi

National Academy of Agricultural Research Management, Hyderabad, Andhra Pradesh

National Dairy Research Institute, Karnal, Haryana

National Institute of Animal Nutrition and Physiology, Bangalore, Karnataka

National Institute for Research on Jute & Allied Fibres Technology, West Bengal

Sugarcane Breeding Institute, Coimbatore, Tamilnadu

Vivekanand Parvatiya Krishi Anusandhan Sansthan, Almora, Uttaranchal National

National Bureaus

National Bureau of Animal Genetic Resources, Karnal, Haryana

National Bureau of Fish Genetic Resources, Lucknow, Uttar Pradesh

National Bureau of Plant & Genetic Resource, New Delhi

National Bureau of Soil Survey & Land Use Planning, Nagpur, Maharashtra

National Research Centres

National Centre for Agril Economics & Policy Research, New Delhi

National Research Centre for Agroforestry, Jhansi, Uttar Pradesh

National Research Centre for Cachew, Puttur, Karnataka

National Research Centre on Camel, Bikaner, Rajasthan

National Research Centre for Coldwater Fisheries, Bhimtal, Uttaranchal

National Research Centre on Equines, Hissar, Haryana

National Research Centre for Groundnut, Junagadh, Gujarat

National Research Centre for Integrated Pest Management, New Delhi

National Research Centre for Medicinal & Aromatic Plants, Boriavi, Gujarat

National Research Centre for Mithun, Nagaland National Research Centre for
Mushroom, Solan, Himachal Pradesh

National Research Centre for Onion and Garlic, Rajgurunagar, Pune, Maharashtra

National Research Centre for Oilpalm, Pedavegi, Andhra Pradesh National

Research Centre for Weed Science, Madhya Pradesh

National Research Centre for Yak, Dirang, Arunachal Pradesh

Project Directorates

Project Directorate of Biological Control, Bangalore

Project Directorate on Cattle, Meerut, Uttar Pradesh

Project Directorate of Cropping System Research, Modipuram, Uttar Pradesh

Project Directorate of Oilseed Research, Rajendranagar, Hyderabad

Project Directorate of Poultry, Rajendranagar, Hyderabad,

Project Directorate of Rice Research, Hyderabad

Water Technology Centre for Eastern Region, Bhubaneswar, Orissa

Others

Krishi Vigyan Kendra - Babhaleshwar, Maharashtra

All India Coordinated Project of Micro and Secondary Nutrients and Pollutant
Elements in Soils & Plants

State Agricultural Universities (SAU.s)

Name and Email Address	Address
Acharya N G Ranga Agricultural University (APAU) Email: root@apau.ap.nic.in	Rajendranagar Hyderabad Andhra Pradesh PIN 500030
Agricultural University Udaipur (AUU)	University Campus Udaipur, Rajasthan PIN 313001
Assam Agriculture University (AAU) Email: vc@aau.ren.nic.in Web Site: www.aau.ac.in	Jorhat Assam PIN 785013
Bidhan Chandra Krishi Vishva Vidyalaya (BCKVV) Email: root@bckv.wb.nic.in	Haringhatta PO Mohanpur Nadia, West Bengal PIN 741246
Birsa Agricultural University (BAU) Email: root@bau.bih.nic.in Web Site: www.icar.org.in/birsa/BAU.htm	Kanke Ranchi Bihar PIN 834006
CCS Haryana Agricultural University (HAU) Email: root@hau.pnp.nic.in Web Site: hau.nic.in	Hisar, Haryana PIN 125004
Central Agricultural University (CAU) Email:	JROISEMBA Imphal, Manipur PIN 795001
Chandra Shekhar Azad University of Agriculture & Technology (CSAUT) Email: csauknp@hotmail.com Web Site: www.csauk.org	Kanpur Uttar Pradesh PIN 208002

Dr. Panjabrao Deshmukh Krishi Vishwa Vidyalaya (PKV) Email: vc@pdkv.mah.nic.in Web Site: pdkv.mah.nic.in	Krish Nagar, Akola Maharashtra PIN 444104
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University of Agricultural Sciences (UAS) Web Site: uasbng.kar.nic.in	Bangalore Karnataka PIN 560065
University of Agricultural Sciences (UAS) Email: root@uasd.kar.nic.in aris@uasd.net Web Site: www.uasd.net	Krishi Nagar Dharwad Karnataka PIN 580005
West Bengal University of Animal & Fishery Sciences (WBUA&FS)	68, Khudi Ram Bose Sarani, Belgachia Kolkata West Bengal PIN 700037
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***INTEGRATED NATIONAL AGRICULTURAL
RESOURCES
INFORMATION SYSTEM***

Co-Operating Centre: CIAE, BHOPAL

Indian agriculture is characterized by fragmented farm holdings, over dependence on monsoons, lack of sophisticated inputs and farming practices. It is synonymous with the small farmers having an average land holding of less than 1.5 hectares. The knowledge residing in the National Agricultural Research System (NARS), if transferred effectively to the 156 million hectares of cultivated land, spread across rich and diverse agro-climatic regions, has the potential to not only meet the growing needs of the domestic market, but also be a competitive source for attractive global markets.

The Indian Council of Agricultural Research, under the National Agricultural Technology Project (NATP) conceptualized an information system to provide a data warehouse on various requirements of agriculture along with socio economic and geographical features on a single platform. The data warehouse generated under the Integrated National Agricultural Resources Information System (INARIS) is expected to evolve methodologies for planning and development purposes. The interaction among basic resources such as soil, water, climate, animals, fisheries, crops and cropping systems and farm mechanisation is expected to help determine the carrying capacity of the region.

The farm mechanisation component, being handled by CIAE, Bhopal is expected to provide first hand information on the mechanisation status and gaps throughout the Country.

The project is being implemented as a Technology Mission with the following objectives:

Major Mission and Goals

- To provide most comprehensive information on a region for decision making on optimum uses of resources, preservation of environment and judicious choice of priorities for favorable natural resource management
- To monitor the status of limited natural resources, animal resources, socio-economic status, agricultural development and diversification taking place as a natural process of human civilization
- To have a privileged website, which can be accessed by research workers with a provision for entry restrictions, to the database.
- To enhance the human resource wisdom in the planning process through active expert-user interaction.
- To reduce cost involved in data updating, validation and dissemination in the future course of database management

Major Objectives of INARIS

- ☐ To integrate existing databases of crops, climatic parameters, horticultural crops, plantation crops, animal genetic resources, socio-economic resources, farm mechanisation, plant genetic resources and spices
- ☐ To design and develop databases on the above
- ☐ To develop resource maps based on the developed databases through Geographic Information System (GIS)
- ☐ To develop the warehouse of the above databases

To develop, integrate the existing databases in the different areas following centers are cooperating in the Project.

IASRI, New Delhi	<p>To develop architectural infrastructure for Central Data Warehouse.</p> <p>To develop extraction, cleaning and loading tools of warehouse.</p> <p>To develop warehouse management and querying tools of Warehouse</p>
NBSS&LUP, Nagpur	<p>To develop and integrate database on Soil parameters and recourses of country including resource map on soil parameters through GIS</p>
CRIDA, Hyderabad	<ul style="list-style-type: none">➤ To develop and integrate database on physical climatic parameters and resources of country.➤ Generation of physical and climatic databases on agro-ecological sub regions➤ Digitization of various climatic variables through GIS
IIHR, Bangalore	<p>To develop and integrate database on horticultural crops including resource maps of major horticultural crops through GIS</p>

CPCRI, Kasargod	To develop and integrate database on important Plantation Crops including development of resource map of plantation crops through GIS
PDCSR, Modipuram	To develop the database on Cropping Systems in the Country including the resource map of through GIS
NBFGR, Lucknow	<ul style="list-style-type: none"> ➤ To integrate existing database on Fish resources and develop database on fish genetic resources. ➤ Development of resource map on fisheries resources through GIS
NCAP New Delhi	<ul style="list-style-type: none"> ➤ To integrate existing database on socio economic database relevant to agricultural research in particular and agricultural development in general. ➤ Design and development of various socio economic parameters for few identified cropping system in selected regions. ➤ Develop resource map on important socio economic parameters through GIS

NRC- AF Jhansi	Design and develop and database on agro forestry system in the country including development of resource map of different agro- forestry system through GIS
DWMR Patna	To develop and integrate database on water resources including development of water resource map of the country through GIS
HSR Calicut	To develop and integrate database on spices including development of resource map of important spices of the country through GIS
NBPGR New Delhi	To develop and integrate database on plant genetic resources including development of resource maps of plant genetic resources of the country through GIS
CIAE Bhopal	To design, develop and integrate database on various aspects agricultural farm mechanization including development of agricultural farm mechanization resource maps of the country through GIS

Farm Mechanization Database

Agricultural Engineering provides the technology to facilitate agriculture through efficient utilization of inputs and timeliness of operations besides reducing drudgery. It is generally believed that only the large farmers have availed of the benefits of modern farm technology. Small farmers have also been found to utilize selected farm equipment through custom hiring.

OBJECTIVES OF MECHANIZATION DATABASE

1. To collect, collate and compile the data on various agricultural machineries for production and processing
2. To identify and collect the specifications of various power sources
3. To develop the resource map on the status of mechanization in various parts of the country
4. To develop the database on the manufacturers of agricultural machineries in the country
5. To make the data available on the INARIS website in a suitable form

Design of Farm Mechanization Database

- ☐ Chalking out of various requirements of the database on farm mechanisation by interaction with various subject matter specialists from ICAR Institutes, State agricultural universities and agricultural departments of state governments.
- ☐ Finalization of, various major classes of equipment and information considered relevant in respect of these classes on the basis of interactions.

Type of Databases

The information would be available under three categories of databases.

- ❑ **Technology Database**– This database has been designed to provide information on technical specifications of farm equipment and machineries, their suitability to different crops and the questions performed.
- ❑ **Statistical Database** – This has been designed to provide information on the number of equipment and machineries in a particular area.
- ❑ **Projects Database** – This has been designed to provide information about the brief details of research projects carried out under the NARS relating to the development equipment and machineries, their technical programmes and salient achievements/outputs

CLASSES FOR THE FARM MACHINERY DATABASE

1. CROP PRODUCTION AND LAND DEVELOPMENT EQUIPMENT
2. IRRIGATION EQUIPMENT
3. POULTRY EQUIPMENT
4. DAIRY MACHINERY & EQUIPMENT
5. FISHERIES EQUIPMENT INCLUDING TRAWLERS
6. CROP PRODUCTION AND VALUE ADDITION EQUIPMENT
7. RENEWABLE ENERGY GADGETS
8. POWER UNITS
9. ALLIED MACHINERY
10. ENVIRONMENT SAFETY EQUIPMENTS
11. MECHANIZATION INDEX

CLASS CATEGORIES

1. CROP PROD & LAND DEV EQUIPMENT

- a. TILLAGE
- b. SOWING
- c. PLANTING
- d. PUDDLING
- e. INTERCULTURE
- f. PLANT PROTECTION
- g. HARVESTING
- h. THRESHING

CLASS CATEGORIES (Contd..)

2. IRRIGATION EQUIPMENT

- a. LOW LIFT PUMP
- b. SPRINKLER SYSTEM
- c. DRIP IRRIGATION
- d. SAND FILTERS
- e. SCREEN FILTERS
- f. LLDPE PIPES
- g. HDPE PIPES
- h. DRIPPERS
- i. MICRO TUBES
- j. NON RETURN FLOW VALVE
- k. IRRIGATION PUMPS

CLASS CATEGORIES (Contd..)

3. POULTRY EQUIPMENT

- a. FEEDER PLANT**
- b. PROCESSOR PLANT**
- c. WATER SUPPLY PLANT**
- d. TEMPERATURE CONTROLLING DEVICES**
- e. INCUBATORS**
- f. BROODERS**

CLASS CATEGORIES (Contd..)

4. DAIRY MACHINERY & EQUIPMENT

- a. BUTTER MAKING EQUIPMENT
- b. CENTRIFUGAL SEPARATOR
- c. HOMOGENIZER
- d. GHEE FILTRATION EQUIPMENT
- e. UST PASTURISERS
- f. STURLISER
- g. CREAM SEPARATOR
- h. STAINLESS STEEL ACCESSORIES
- i. DEEP FREEZERS
- j. ICE CUBE MAKING MACHINE
- k. SPIRAL DEEP FREEZER

CLASS CATEGORIES (Contd..)

5. FISHERIES EQUIPMENT

- a. EGG ALBUMEN POWDER PLANT
- b. FISH AND MEAT PROCESSING EQUIPMENT
- c. FISH HATCHERY
- d. MEAT GRINDING MACHINERY
- e. MEAT PROCESSING MACHINERY
- f. SHRIMP PROCESSING MACHINERY

CLASS CATEGORIES (Contd..)

6. CROP PROD. & VALUE ADD. EQUIPMENT

- a. GRADER
- b. SCREENER
- c. HULLER
- d. MILLER
- e. DRYER
- f. ROASTER
- g. FLAKING MACHINE

CLASS CATEGORIES (Contd..)

7. RENEWABLE ENERGY GADGETS

- a. SOLAR ENERGY EQUIPMENTS
- b. BIO GAS PLANT
- c. GASIFIER
- d. WIND ENERGY
- e. GEO THERMAL ENERGY EQUIPMENT
- f. TIDAL ENERGY EQUIPMENT
- g. BIO MASS ENERGY EQUIPMENT

CLASS CATEGORIES (Contd..)

8. POWER UNITS

- a. GENERATOR
- b. POWER TILLER
- c. TRACTOR
- d. ELECTRIC MOTORS
- e. ENGINE

CLASS CATEGORIES (Contd..)

9. ALLIED MACHINERY

- a. Mulching Machine
- b. Straw baler
- c. Cotton Gin
- d. Bale Densifier
- e. Cotton Cleaner
- f. Cotton Seed Delinter
- g. Post Hole Digger

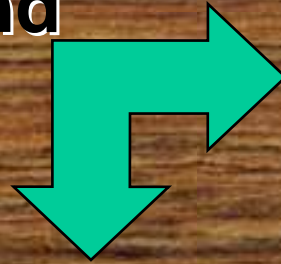
CLASS CATEGORIES (Contd..)

10. ENVIRONMENT SAFETY EQUIPMENTS

- **Face Mask**
- **Safety Bells and Gongs**
- **Safety Helmets**
- **Safety Shields and Goggles**
- **Fire Retardant Clothing**
- **Wash Fountains**

Name of Equipment under various category

Categories for Class
“Crop Production and
Land Devel. Equipmt”



Cat.: PLANTING

- PNEUMATIC PLANTER
- **INCLINED PLATE PLANTER**
- POTATO PLANTER
- **RICE TRANSPLANTER**
- **VEGETABLE TRANSPLANTER etc**

Cat.: TILLAGE

- INDIGENOUS PLOUGH
- **MB PLOUGH**
- DISC PLOUGH
- **ROTARY PLOUGH**
- HARROW PLOUGH
- **CHISEL PLOUGH**
- MOLE PLOUGH
- **SUBSOILER**
- DISK HARROW
- **BLADE HARROW**
- ROTAVATOR
- **PATELA HARROW**
- **ROTARY BAKHAR etc**

1. Table Name : Crop

<i>Field</i>	<i>Type</i>	<i>Primary/ Foreign key</i>	<i>Size</i>	<i>Description</i>
Crop_code	Long Integer	Primary key (PK)	4	Code for different crops
Crop	Text		50	Name of the crop

2. Table Name : States

state_code	Text	Primary key	5	Code for state/district
statedistrict	Text		100	Name of the state/district

3. Table Name : Farm Category (fm_category)

fm_category_code	Text	Primary key	4	Farm Category Code
fm_category	Text		255	Name of the farm category
fm_class_code	Text	Foreign key (FK)	2	Class code for different classes

4. Table Name : Farm Class (fm_class)

fm_class_code	Text	Primary key	2	Class code
fm_class	Text		100	Class of the farm Mech DB

5. Table Name : Farm Equipment (fm_eqpt)

fm_eqpt_code	Long Integer	Primary key	4	Code for different farm equipment
Equipment	Text		255	Name of equipment
Keywords	Text		50	Keywords
Utility	Memo		-	Utility of eqpt.on field
Comments	Memo		-	Comments on equipment
Limitation	Memo		-	Limitations of equipment.

6. Table Name : Farm Equipment Crop (fm_eqpt_crop)

fm_eqpt_crop_code	Long Integer	Primary Key	4	Code for implement used and crop
fm_eqpt_code	Long Integer	Foreign Key	4	Equipment code
Crop_code	Long integer	Foreign Key	4	Crop code

7. Table Name : Farm Equipment Object (fm_eqpt_object)

fm_eqpt_object_code	Long Integer	Primary Key	4	Std.code for farm equipment object
fm_eqpt_code	Long integer	Foreign Key	4	Code for farm equipment
Object_desc	Memo		-	Description of object
Object_path	Text		255	Path of the object

8. Table Name : Farm Equipment Category (fm_eqpt_category)

fm_eqpt_category_code	Long Integer	Primary key	4	Code for farm equipment category
fm_eqpt_code	Long integer	Foreign key	4	Code for farm equipment
fm_category_code	Long integer	Foreign key	4	Farm category code

9. Table Name : Farm Equipment Operation (fm_eqpt_operation)

fm_eqpt_opt_code	Long Integer	Primary key	4	Std.code for farm equipment operation
fm_eqpt_code	Long integer	Foreign key	4	Code for farm equipment
fm_opt_code	Long integer	Foreign key	4	Code for farm operation

10. Table Name : Farm Equipment Supplier (fm_eqpt_supplier)

fm_eqpt_supplier_code	Long Integer	Primary key	4	Code for farm equipment supplier
fm_eqpt_code	Long integer	Foreign key	4	Code for farm equipment
fm_supplier_code	Long integer	Foreign key	4	Code for supplier

11. Table Name : Farm Operation (fm_operation)

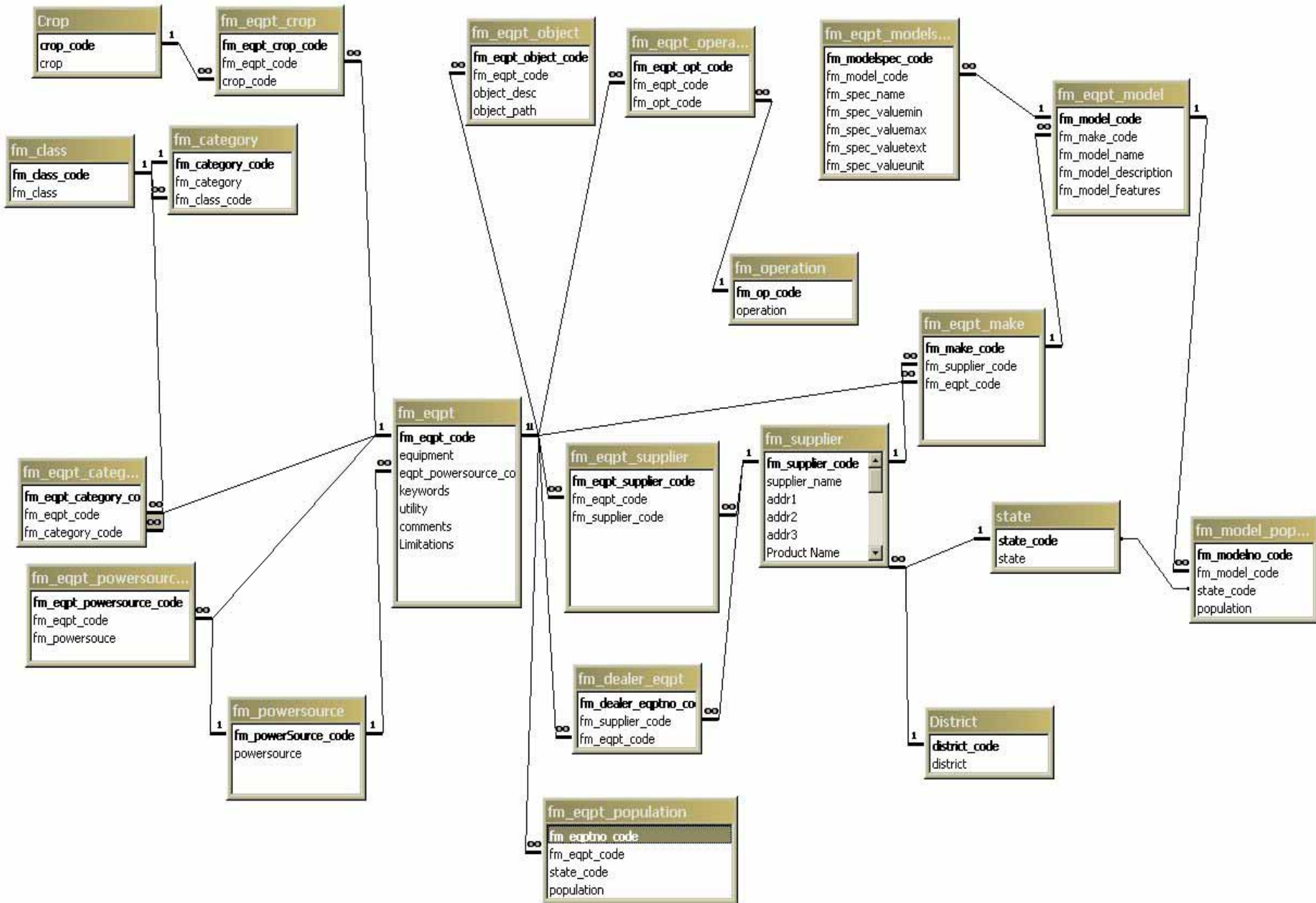
fm_opt_code	Long Integer	Primary key	4	Code for farm operation
Operation	Text		255	Operation perform by implements

12. Table Name : Farm Powersource (fm_powersource)				
fm_powersource_code	Long Integer	Primary Key	4	Code for powersource
Powersource	Text		255	Name of powersouce
13. Table Name : Farm Supplier (fm_supplier)				
fm_supplier_code	Long Integer	Primary key	4	Code for equipment supplier
Supplier_name	Text		255	Name of supplier
Addr1	Text		100	Address of supplier
Addr2	Text		100	Address of supplier
Addr3	Text		100	Address of supplier
City	Text		50	Name of city of supplier
Pincode	Long integer		4	Pincode of city
Phone	Text		50	Phone numbers of supplier
Fax	Text		50	Supplier's office Fax number
Email	Text		50	Supplier's email address
District_code	Text	Foreign key	10	District code
Web site	Text		80	Supplier's office Web site
Remark	Text		100	

14. Table Name : Project List (Proj_List)				
Proj_no	Long Integer	Primary key	4	Sr. numbers for the projects
division	Text		50	Name of division undertaking project
Inst_code	Text		20	Code of institute
Icar_code	Text		20	Code of ICAR
Proj_title	Text		250	Title of the project
Investigator1	Text		100	Project investigator
Investigator2	Text		100	Name of the project investigators
Starting_year	Text		5	Starting Year
Ending_year	Text		5	Year, when project is closed
Proj_objective	Text		250	Objectives of project
Proj_outcome	Text		250	Outcome of project
15. Table Name : fm_eqpt_make				
Fm_make_code	Long Integer	Primary key	4	Code for different makes of Farm machines
Fm_make_name	Text		50	Name of the make
Fm_supplier_code	Long Integer	FK	4	Supplier code as foreign key
Fm_eqpt_code	Long Integer	FK		Equipment code as foreign key

16. Table Name : fm_eqpt_model				
Fm_model_code	Long Integer	Primary key	4	Code for different models of equipment and machines
Fm_make_code	Long Integer	Foreign key	4	Make code as foreign key
Fm_model_name	Text		50	Name of the model
Fm_model_description	Text		250	Description of the model
Fm_model_features	Text		250	Features of the model
17. Table Name : fm_eqpt_modelspec				
Fm_modelspec_code	Long Integer	Primary key	4	Model specs code
Fm_model_code	Long Integer	Foreign Key	4	Model code
Fm_spec_name	Text		50	Specs name
Fm_spec_valuemin	Long Integer		4	Specs minimum value
Fm_spec_valuemax	Long Integer		4	Specs maximum value
Fm_spec_valuetext	Text		100	Specs text value
Fm_spec_valueunit	Text		50	Specs unit
18. Table Name : fm_model_population				
Fm_modelno_code	Long Integer	Primary key	4	Code of model no.
Fm_model_code	Long Integer	FK	4	Code of model
State_code	Text		5	State code
Population	Long Integer		4	Population of equipment

19. Table Name : fm_eqpt_population				
Fm_eqptno_code	Long integer	Primary key	4	Equipment no. code
Fm_eqpt_code	Long integer	FK		Equipment code
State_code	Text		5	State code
Year	Text		9	Year
Population	Long integer		4	Population
20. Table Name : fm_dealer_eqpt				
Fm_dealer_eqptno_code	Long integer	Primary key	4	Dealer equipment code
Fm_supplier_code	Long integer	FK	4	Supplier code
Fm_eqpt_code	Long integer		4	Equipment code
21. Table Name : fm_eqpt_powersource				
Fm_eqpt_powersource_code	Long integer	Primary key	4	Equipment powersource code
Fm_eqpt_code	Long integer	FK	4	Equipment code
Fm_powersource_code	Long integer	FK	4	Powersource code
22. Table Name : fm_mech_index				
Mech_index_code	Long integer	Primary key	4	Mechanisation index code
State_code	Text		5	State code
Year	Text		9	Year
Total_power	Float			Total power
Total_area	Float			Total area



Relationship Diagram amongst the developed tables

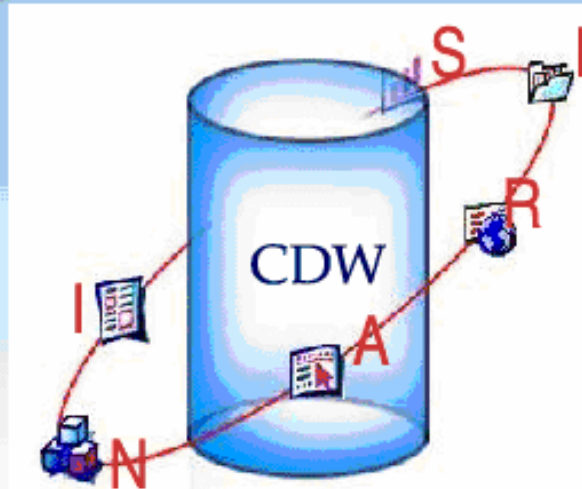
Data Dictionary

Add Update Search Exit

An NATP Mission Mode Project

*I*ntegrated *N*ational *A*gricultural *R*esources *I*nformation *S*ystem

Data Dictionary Module



Developed By INARIS team, IASRI, New Delhi

Coding Structure for FMD (Sample)

CLASS I : CROP PRODUCTION AND LAND DEVELOPMENT EQUIPMENT

Class	Category	Description	Equipment Code
-------	----------	-------------	----------------

TILLAGE

01	01	Indigenous Plough	0101001
----	----	-------------------	---------

01	01	MB Plough	0101002
----	----	-----------	---------

01	01	Rotary Plough	0101003
----	----	---------------	---------

SEEDING AND PLANTING EQUIPMENT

01	02	Press Dibbler	0102001
----	----	---------------	---------

01	02	Rotary Dibbler	0102002
----	----	----------------	---------

01	02	Seed cum Fertiliser Drill	0102003
----	----	---------------------------	---------

CLASS II : IRRIGATION EQUIPMENT

02	01	Drippers	0201001
----	----	----------	---------

02	01	Sprinklers	0201002
----	----	------------	---------

02	01	Irrigation pumps	0201003
----	----	------------------	---------

CLASS III : DAIRY MACHINERY AND EQUIPMENT			
03	01	Dip cup	0301001
03	02	Anti kick bar	0301002
03	03	Calf puller	0301003
CLASS IV : FISHERIES EQUIPMENT			
04	01	Trawlers	0401001
04	02	Gill nets	0401002
04	03	Liners	0401003
CLASS V : POULTRY EQUIPMENT			
05	01	Trap nest	0501001
05	02	Roost	0501002
05	03	Brooders	0501003
CLASS VI : CROP PROCESSING AND VALUE ADDITION EQUIPMENT			
06	01	Screen grain cleaner	0601001
06	02	Coco dryer	0601002
06	03	Pulse miller	0601003

CLASS VII : RENEWABLE ENERGY GADGETS			
07	01	Floating dom biogas plant	0701001
07	02	Smoke less chulha	0701002
07	03	Solar cooker	0701003
CLASS VIII : POWER UNITS			
08	01	Electric motor	0801001
08	02	Diesel pump	0801002
08	03	Tractor	0801003
CLASS IX : ALLIED MACHINERY			
09	01	Silt removing crane	0901001
09	02	Barrow wheel	0901002
09	03	Chain saw machine	0901003
CLASS X : ENVIRONMENT SAFETY EQUIPMENT			
10	01	Safety masks	10001001
10	02	Hand gloves	10001002
10	03	Safety Glasses	10001003

DATA BASE

DATABASE STATUS EXIT HELP

FM_CLASS
FM_CATEGORY
FM_EQPT
CROP
FM_EQPT_CATEGORY
FM_EQPT_POWERSOURCE
FM_POWERSOURCE
FM_EQPT_CROP
FM_EQPT_OPERATION
FM_EQPT_MAKE
FM_EQPT_OBJECT
FM_EQPT_SUPPLIER
FM_DELEAR_EQPT
FM_EQPT_POPULATION
FM_OPRATION
FM_EQPT_MODEL
FM_SUPPLIER
FM_EQPT_MODELSPEC
FM_MODEL_POPULATION
STATES
STATUS1

FARM MECHANISATION DATA BASE

CENTRAL INSTITUTE OF AGRICULTURAL
ENGINEERING

NABHI BAGH , BERASIA ROAD ,BHOPAL-468 032

Data Entry Module

fm_eqpt

FM_EQPT_CODE	0
EQUIPMENT	REVESIBLE PLOUGH
KEYWORDS	TL
EQPT_POWERSOURCE	4
UTILITY	SEED BED PREPARATION
LIMITATION	
COMMENTS	MANUFACTURED BY PRATAP AGRI. IMPL

Add Edit Delete Refresh Close

Record: 1

Data Enquiry, Entry and Modification in "fm_dealer_eqpt" table

fm_dealer_eqptno_code

(Primary Key)

1

Data from table "fm_equipment"

Equipment Code

27

Utility

FOR REMOVING SEED AND HUSK FROM

Equipment Name

TAMARIND DEHUSKER CUM

Comments

GKVK,Banglore

Equipment Power Source Code

Limitations

FOR REMOVING SEED AND HUSK FROM

Keywords

VA

Data from Table "fm_supplier"

Supplier Code

33

Supplier Name

ASHOK INDIA AGRO PRODUCTS

Address 1

C-5/2 AJANTA ROAD

Address 2

Address 3

City

JALGAON

PinCode

425001

District

District Code

State Code

11_00

Phone

0

State

MAHARASHTRA

Fax

Remarks

Email

Website

Add New

Modify

Clear

Close

Home page of the Farm Mechanisation Database

INARIS Home Page - Microsoft Internet Explorer

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Back Forward Stop Home Search Favorites History Print Mail News RSS Feeds

Address <http://192.168.1.202/INARIS02/> Go



Farm Mechanisation Database
Integrated National Agricultural Resources Information System

Central Institute of Agricultural Engineering
Nabi-Bagh, Berasia road, Bhopal (M.P.)

Integrated National Agricultural Res

Welcome To Farm Mechanisation Database

Integrated National Agricultural Res



[Know about Farm Mechanisation Database](#)

[GIS based information about Farm Mechanisation Database](#)

[Query based information](#)

[Information on Research projects](#)

[Complex search](#)

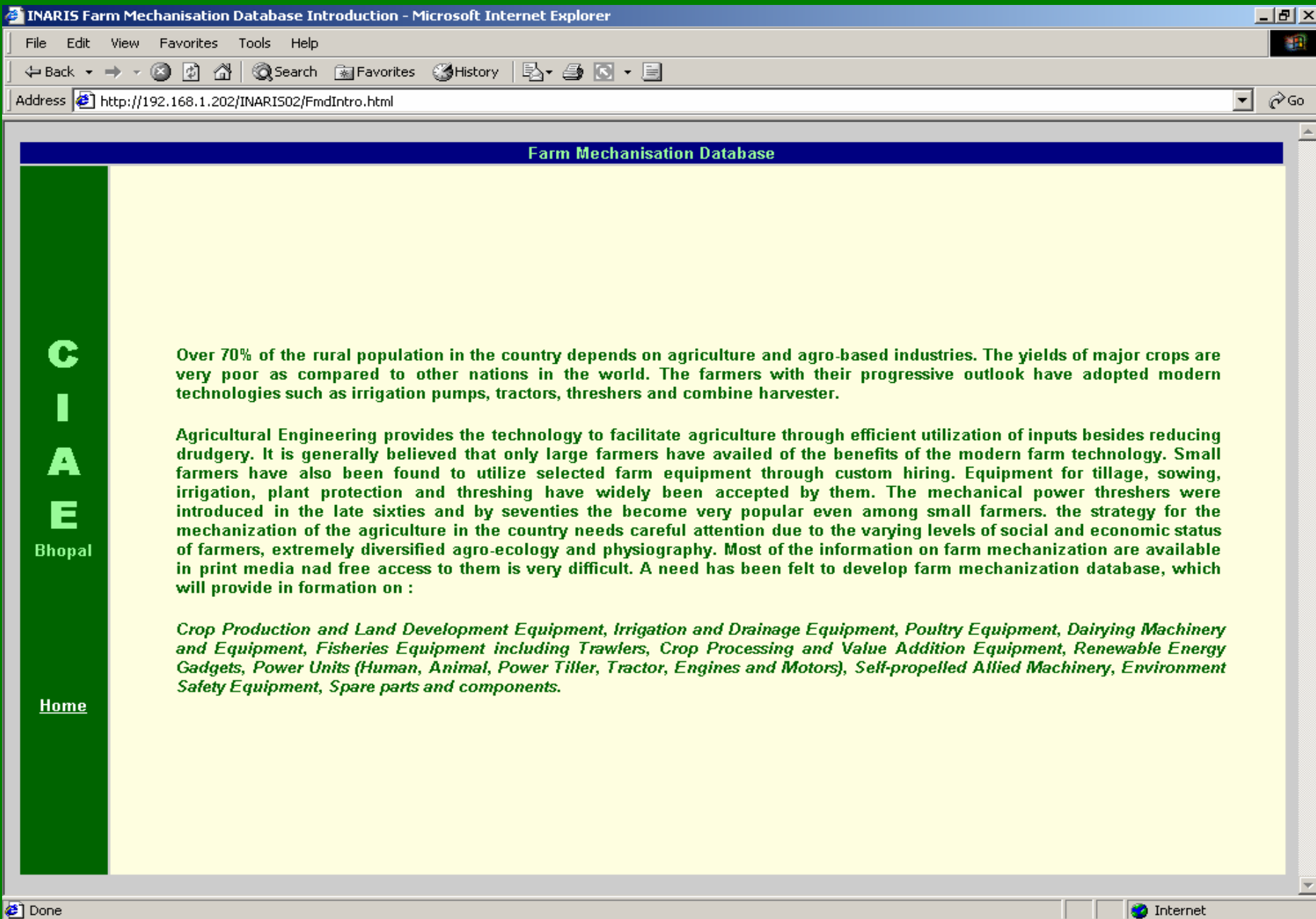
[Frequently Asked Question \(FAQ \)](#)

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Nabi bagh, Berasia road, Bhopal - 462038
[Contact Us](#)

Best viewed with ie 6, Netscape 7, Mozilla 1.1 with 800X600px resolution

Done Internet

About Farm Mechanisation Database





Ways of searching the Farm Mechanisation Database

INARIS Query based information - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://192.168.1.202/INARIS02/QueryBasedInfo.html> Go



Farm Mechanisation Database
Integrated National Agricultural Resources Information System
(Query Based Information)

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Bhopal
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- [Complete list of Equipment](#)
- [Crop based list of Equipment](#)
- [Equipment based list of Suppliers](#)
- [Keyword based searching](#)
- [Make and Models with detail Specification](#)
- [Operation based list of Equipment](#)
- [Powersource based list of Equipment](#)
- [Statewise list of Suppliers](#)
- [Statewise population of Equipment](#)
- [Class and Category based list of Equipment](#)

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View of Research Project Database

INARIS Research Projects Information - Microsoft Internet Explorer

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Address http://192.168.1.202/INARIS02/ResearchProjFrameset.html Go

Project Title

ALL A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z

[Adaptation and devepment of a power operated groundnut decorticator for seed purposes](#)

[Adaptation/ development of matching devices for 5m diameter horizontal axis wind rotor](#)

[Adaptive trials of mini 40 Srew Press \(Oil Expeller\)](#)

[Adaptive trials on solar energy gadgets developed at various centres of the RES scheme](#)

[Adoption and modification of pedal cum power operated air screen cleaner for oilseeds](#)

[Adoption and/or development of appropriate post harvest equipments for tree borned min](#)

[Adoption of TNAU lawn mower for matching with 8 to 10 hp power tiller](#)

[Adoption of existing diesel engines to run on biogas](#)

[Adoption, development and popularization of self propelled rice and wheat harvester through manufacturers](#)

[Adoption,testing and development of a reaper for harvesting soybean](#)

[Analysis of weather data of Bhopal for](#)

Farm Mechanisation Database
Integrated National Agricultural Resources Information System

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Project Detail

Project Title	Adaptation and devepment of a power operated groundnut decorticator for seed purposes
Division	Post Harvest Engineering
Investigator-1	BD Shukla
Investigator-1	KK Singh
Institute Code	CIAE/PHT/PHE/91-24
ICAR Code	P1-91/24-IAE-N20/332
Duration	1991 -1992
Project Objectives	---
Project Outcomes	---

Shortcut to ResProjDesc.asp?ProjCode=251

Internet

Complex Search for Database

INARIS Complex Search - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://192.168.1.202/INARIS02/CmpSearch.html> Go

Wel-Come To Farm Mechanisation Database (Integrated National Agricultural Resources Information System)

Complex Search

(Enter Search Text Here)

Irrigation

Proceed Search

[Home](#)

केन्द्रीय कृषि अभियांत्रिकी संस्थान, नबी-बाग, बैरसिया रोड़, भोपाल-462038

Done Internet

Results of Complex Search

INARIS Complex Search Results - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://192.168.1.202/INARIS02/ProcSearch.asp> Go

[Home](#) Results for search text : Irrigation [Back](#)

S.No.	Search Result	Result Category
1.	Solar Irrigation Pump	Equipment
2.	Irrigation	Operation
3.	Jain Irrigation System Limited	Supplier
4.	Hallmark Irrigation Eqp Private Limited	Supplier
5.	Green Gold Irrigation Private Limited, Kolkata	Supplier
6.	Bharat Irrigation	Supplier
7.	Dinesh Irrigation Private Limited	Supplier
8.	Satya Agro Irrigation Co.	Supplier
9.	Aditi Micro Irrigation	Supplier
10.	Rungta Irrigation Limited	Supplier
11.	Harvel Irrigations Pvt. Ltd.	Supplier
12.	Surya Irrigation Private Limited	Supplier
13.	Hallmark Irrigation Equipment Pvt. Ltd.	Supplier
14.	Jain Irrigation Systems Ltd.	Supplier
15.	Jain Irrigation Systems Ltd.	Supplier
16.	Vedant Enviro-Agro & Irrigation Tech.(P) Ltd.	Supplier
17.	Sterling Irrigations Limited	Supplier
18.	Premier Irrigation Equipment Ltd.	Supplier
19.	Krishi Irrigation Pvt. Ltd.	Supplier
20.	Renown Irrigation Systems Ltd	Supplier
21.	Jain Irrigation Systems Ltd.	Supplier
22.	Green Gold Irrigation Pvt. Ltd	Supplier
23.	Rungta Irrigation Ltd.	Supplier
24.	Platro Irrigation System Ltd.	Supplier
25.	Banshamai Irrigation Ltd.	Supplier

Internet

Frequently Asked Question

INARIS Frequently Asked Question - Microsoft Internet Explorer

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Address <http://192.168.1.202/INARIS02/faqFrameset.html> Go

FAQ
(Frequently Asked Question)

[Q. What is INARIS ?](#)

[Q. What is Farm Mechnisation Database ?](#)

[Q. What type of information can be access through this Database ?](#)

[Q. How the Farm Mechanisation database developed under INARIS is different from the existing databases?](#)

[Q. Who are the potential beneficiaries of this database?](#)

[Q. How the data is organised in the database ?](#)

[Q. Whether the database provide the details of different models of a machine?](#)

[Q. Whether the database provide limitations of the machine?](#)

[Q. Whether the database provide list of manufacturers of the machines?](#)

[Q. Whether any search criteria is available in the database ?](#)

Integrated National Agricultural Resources Information System
(Farm Mechanisation Database)

Question : What type of information can be access through this Database ?

Answer : The information related to Farm Machinery and their manufacturers for the country can be accessed through this database. Using this Database you can access the information about:

- Farm Machinery detail with photograph.
- Manufacturer of equipment.
- Supplier of equipment.
- Dealer of equipment.
- Equipment related crop,powersource and operation.

Internet

Equipment Search

INARIS Complete List of Equipment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.1.202/INARIS02/compFrameset.html Go

Integrated National Agricultural Resource Farm Mechanisation Database (Information About Equipments) Integrated National Agricultural Resource

Home ALL A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Back

No	Equipment	Utility	Limitations	Comments	Photograph
1	Abrasive Type Horizontal Emery Polisher	For Polishing Raw Rice	-	-	Photograph
2	Acme Harrow	For Seedbed Preparation	-	-	Photograph
3	Adjustable Row Marker	For Making Rows At Different Spacing According To Crop	-	-	Photograph
4	Aeroblast Sprayer	To Apply Pesticides, Fungicide And Insecticide.	Cost Of Operation Is High	-	Photograph
5	Ageing Vat	Used For Circulation Of Water	-	-	Photograph
6	Agriculture Tractors Soil	-	-	-	Photograph
7	Air Screen Groundnut Pod Cleaner	Efficient Cleaning Of Groundnut Pods	-	Manufactured By Osaw Agro Industries	Photograph
8	Air Assisted Sprayer	For Apply Pesticides, Fungicide And Insecticide.	-	-	Photograph
9	Air Atomizing Burner	For Heating Purpose	-	-	Photograph
10	Air Blast Doffing Saw Gin	For Removing Seed From Cotton	-	-	Photograph
11	Air Compressors	For Air Compression	-	-	Photograph
12	Air Cooled Engine	To Act As A Prime Mover	-	-	Photograph
13	Air Screen Grain Cleaner	Efficient Cleaner Grains	-	Manufactured By Osaw Agro Industries	Photograph
14	Air Screen Seed Grader	Efficient Cleaning And Grading Of Seeds Of All Crops Such As Wheat, Paddy, Barley, Maize, Millets, Oilseeds Coffee Seeds Etc.	-	Manufactured By Osaw Agro Industries	Photograph
15	Airplane Duster	For Apply Fungicide And Insecticide.	-	-	Photograph
16	Angle Bar Type Thresher	For Threshing Crops	-	-	Photograph
17	Angling Type Dozer	For Primery Tillage Operation	-	-	Photograph
18	Animal Cart	For Transportation Of Agricultural Goods	-	-	Photograph

Done Internet

Equipment Search based on Crop

Farm Mechanisation : Crop Based Equipments - Microsoft Internet Explorer

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Address <http://192.168.1.202/INARIS02/cropFrameset.asp?CropCode=641&CropName=Alfaalfa%20For%20Forage%20+%20Silage> Go

Crop Name

[Abaca\(Manila Hemp\)](#)

[Agave Fibres Nes](#)

[Alfaalfa For Forage + Silage](#)

Integrated National Agricultural Resources Information System

Farm Mechanisation Database

Crop Based Equipment List

[Home](#)

(Selected Crop: Alfaalfa For Forage Silage)

[Back](#)

No	Equipment	Utility	Limitations	Comments	Photograph
1	Acme Harrow	For Seedbed Preparation	-	-	Photograph
2	Agriculture Tractors Soil	-	-	-	Photograph
3	Bale Binding Machine	For Binding The Compacted Straws Of Cotton	-	-	Photograph
4	Bale Opening Machine	For The Baled Material	-	-	Photograph
5	Baling Press	The Clean Fibre Hydraulically Bale For Easy Storage Handling And Despatch	-	Machine Presses Fiber Into Bales Weighing 35 Kg. Measuring 30" X 26" X20"	Photograph
6	Cultivator	Used For Inter Row Cultivation	-	-	Photograph
7	Disc Harrow	For Secondry Tillage Operation	-	-	Photograph
8	Disk Harrow	Seedbed Preparation	-	Manufactured By Pratap Agri. Implements	Photograph
9	Forage Harvester	For Forage Harvesting	-	-	Photograph
10	Kurpe Reaper	For Cutting Grain Crops	-	-	Photograph
11	Mould Board Plough	For Tillage Opration	-	-	Photograph
12	Mower	For Forage Harvesting	-	-	Photograph
13	Rake Type Leaf Collector	For Leaves Collection	-	-	Photograph
14	Rakes	For	-	-	Photograph
15	Ram Type Pick Up Baler	For Binding The Harvested Crops	-	-	Photograph
16	Rasp Bar Thresher	For Threshing Crops	-	-	Photograph
17	Single Disk Harrow	For Tillage Operation.	-	-	Photograph
18	Straw Baler	-	-	-	Photograph
19	Straw Baler	-	-	-	Photograph
20	Tractor Mounted Reaper Binder	For Harvesting Grain Crop And Binding Them In Bundle	-	-	Photograph
21	Tractor Pick Up Baler	-	-	-	Photograph

Done Internet

Supplier search based on Equipment

INARIS Equipment Based Supplier - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Link

Address <http://192.168.1.202/INARIS02/equipFrameset.asp?EqptCode=1&EqptName=Acme%20Harrow> Go

Equipment Name Integrated National Agricultural Resources Information System

[Abrasive Type Horizontal Emery Polisher](#)

[Acme Harrow](#)

[Adjustable Row Marker](#)

[Home](#) (Selected Equipment : Acme Harrow) [Back](#)

Farm Mechanisation Database
Equipment Based Supplier Information

No	SupplierName	Product	Address	Contacts	Remarks
1	Acme Solder	Agricultural Implements	Ts-75, Guindy Industrial Estate, Ekkaduthangal City: Chennai District: Chennai State: Tamilnadu -600097	Phone: Fax: Email: Website:	-
2	Karnal Agricultural Industries Ltd	Agricultural Machinery Like Poly Disc Harrows, Trailing Type Harrows, Levelers, Disc Plows, Tillers And Trailors Etc, Agricultural Harrow Discs/Blanks & Agricultural Forgings Of All Types	International Business Division, Indri Road, City: Karnal District: Karnal State: Haryana -132001	Phone: 250826/273260 Fax: 255518 Email: Website:	-
3	Khalsa Agro Engg. Works	Agriculture Implements& Farm Machinery	2015, Railway Road, Narela, City: Delhi District: Delhi State: Delhi -110040	Phone: 7281415 Fax: Email: Website:	-
4	Poonam Chandra Vyas	-	Plot No.-U-16,17&21,22, Industriel Aria, City: Malanpur District: Bhind State: Madhya Pradesh -477116	Phone: 83314 Fax: 3232145 Email: Website:	-
5	Shri Ganesh Industries	Sowing And Planting Equipments, Hand Tools	Mini Industrial Estate, Kuruvilassery, City: Male District: Male State: Kerala -680306	Phone: Fax: Email: Website:	-
		Sowing And Planting	Mini Industrial Estate, Kuruvilassery,	Phone: Fax:	

Shortcut to [equipFrameset.asp?EqptCode=1&EqptName=Acme Harrow](http://192.168.1.202/INARIS02/equipFrameset.asp?EqptCode=1&EqptName=Acme Harrow) Internet

Equipment Search based on keyword

INARIS Keyword Based Equipment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.1.202/INARIS02/keyFrameset.asp?KeyCode=CL&KeyName=CL-Cultivation%20Equipment Go

Keyword **Integrated National Agricultural Resources Information System**

AM-Allied Machinery

CL-Cultivation Equipment

DR-Dairy Equipment

[Home](#) (Selected Keyword : CL-Cultivation Equipment) [Back](#)

No	Equipment	Utility	Limitations	Comments	Photograph
1	Apau Star Weeder	For Weeding Operation In All Types Of Row Crops	-	Apau,Rajendra Nagar	Photograph
2	Ciae Pege Type Dryland Weeder	For Interculture And Weeding Operations In Black Cotton Soil	-	Tnau,Coimbatore	Photograph
3	Ciae Single Wheel Hoe	For Weeding And Mulching In Row Crops	-	Ciae, Bhopal	Photograph
4	Coil Roller	For Crushing Clod	-	-	Photograph
5	Cone Weeder	For Inter Row Cultivation	-	-	Photograph
6	Cotton Weeder	For Weeding In Cotton Crop	-	-	Photograph
7	Cultipacker	Breaking Clods And Packing Of Soil Thereby Conserving Moisture	-	-	Photograph
8	Cultivator	Used For Inter Row Cultivation	-	-	Photograph
9	Digging Hoe	For Weeding And Interculture Operation	-	-	Photograph
10	Disk Cultivator	Seedbed Preparation	Wear And Tear Of Disk In Stony Field	-	Photograph
11	Garden Hoe	-	-	-	Photograph
12	Grubber	For Weeding Operation	-	-	Photograph
13	Hoe	For Tillage Operation	-	-	Photograph
14	Khurpi	For Weeding Operation	-	-	Photograph
15	Multi Purpose Hoe	For Weeding And Interculture Operation In Groundnut,Sunflower,Sorghum,Soybean And Other Row Crops	-	Mpkv,Pune	Photograph
16	Paddy Weeder	For Weeding And Interculture Operation	-	-	Photograph
17	Pau Wheel Hand Hoe	For Weeding And Interculture In Upland Row Crops	-	Pau,Ludhiana	Photograph

Done Internet

Search for Equipment's Models

INARIS Make And Model Information of Equipment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.1.202/INARIS02/MakeModelFrameset.asp?MfgName=Alpha%20Diesel%20Engine Go

Name of Manufacturer

[Almighty](#)

[Alpha Diesel Engine](#)

[Amar](#)

[Amar Engineering Works](#)

[Aspee](#)

Name of Equipment(s)
Mfg.By : Alpha Diesel Engine

[Diesel Engine](#)

Integrated National Agricultural Resources Information System
Farm Mechanisation Database
Different Models of Selected Equipment

[Home](#) [Back](#)

Equipment	Diesel Engine
Model	High Speed Engine 20 H.P.
Description	2-Cylinder
Features	-

Model Specification			
Specification	Min Value	Max Value	Unit
Cubic Capacity(Swept Volume)	1797	0	CC
Fuel Tank Capacity	12	0	LITRES
Fuel Injection Equipment	0	0	-
Fuel Consumption	250	0	KWH
Lubrication Oil	0	0	-
Lubrication Oil Consumption	50	0	HR/LTR
Net Weight	310	0	KGS
Main Bearing	0	0	-
Length	980	0	MM
Width	710	0	CM
Height	890	0	CM

Equipment	Diesel Engine
Model	High Speed Engine 25 H.P.
Description	2-Cylinder
Features	-

Model Specification			
Specification	Min Value	Max Value	Unit
Rpm	1500	0	
Bore	114	0	MM
Stroke	110	0	MM
Cubic Capacity(Swept Volume)	2257	0	CC

Done Internet

Equipment Search based on Operation

INARIS Operation Based Equipment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.1.202/INARIS02/OptnFrameset.asp?OptnCode=47&OptnName=Cutting Go

Operation Name

[Balling](#)

[Boiling](#)

[Bottle Filling](#)

[Home](#)

Integrated National Agricultural Resources Information System

Farm Mechanisation Database
Operation Based Equipment

(Selected Operation: Cutting)

[Back](#)

No	Equipment	Utility	Limitations	Comments	Photograph
1	Cheese Cutter	For Cutting Cheese Into Pieces	-	-	Photograph
2	Copra Cutter	For Cutting Copra	-	-	Photograph
3	Cream Storage Tank	For Storage Of Milk Cream	-	-	Photograph
4	Cylinder Cutting Head Type Thresher	For Crop Threshing.	-	-	Photograph
5	Flywheel Type Cutting Head Thresher	For Crop Threshing.	-	-	Photograph
6	Hedge Cutter	For Hedge Cutting	-	-	Photograph
7	Pearl Millet Cutter	For Cutting Weeds In Water	-	-	Photograph
8	Power Operated Sugarcane Set Cutting Machine	For Cutting Sugarcane Setts For Planting	-	lisr,Lucknow	Photograph
9	Raw Mango Cube Cutter	To Make Mango Cubes For Pickle Making	Mango Should Be Fully Raw	lihr,Hesargatta	Photograph
10	Self Propelled Flail-Type Bush Cutter	For Cutting Bushy Crops Like Parthenium	-	Tnau,Coimbatore	Photograph
11	Shurb Cutter	For Cutting Shurbs	-	-	Photograph
12	Side Cutting Surry Ridger - Pratap-	Soil Breaking And Developing Fast Growth Of Roots(For Sugarcane Growing)	-	Manufactured By Pratap Agri. Implements	Photograph
13	Sugarcane Cutter Planter	For Seed Sowing	-	-	Photograph
14	Sugarcane Cutter Planter With Discs	For Cutting And Planting Sugarcane Seets And Application Of Granual Fertilizer In Single Operation	-	lisr,Lucknow	Photograph
15	Sugarcane Set Cutter	For Cutting Sugarcane	-	-	Photograph
16	Tractor Mounted Ridger Type Sugarcane Cutter Planter	For Cutting And Planting Sugarcane Seets And Application Of Granual Fertilizer	-	lisr,Lucknow	Photograph

Internet

Equipment Search based on Power Source

INARIS Powersource Based Equipment - Microsoft Internet Explorer

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Address http://192.168.1.202/INARIS02/pwsrcFrameset.asp?PwsrcCode=4&PwsrcName=Tractor Go

Powersource Name Integrated National Agricultural Resources Information System
Animal Drawn Farm Mechanisation Database
Electric Powersource Based Equipment
Engine (Selected Powersource: Tractor) [Back](#)

[Home](#)

No	Equipment	Utility	Limitations	Comments	Photograph
1	Acme Harrow	For Seedbed Preparation	-	-	Photograph
2	Agriculture Tractors Soil	-	-	-	Photograph
3	Apau Tractor Mounted Cultivator Planter	For Planting Castor, Maize, Wheat	-	Apau, Rajendra Nagar	Photograph
4	Auto Seed-Cum-Fert Drill(3-Tyne)	For Seed And Fertilizer Application	-	-	Photograph
5	Auto Seed-Cum-Fert Drill(2-Tyne)	For Seed And Fertilizer Application	-	-	Photograph
6	Bale Binding Machine	For Binding The Compacted Straws Of Cotton	-	-	Photograph
7	Bale Opening Machine	For The Baled Material	-	-	Photograph
8	Bar Point Plough	Seedbed Preparation	-	Manufactured By Pratap Agri. Implements	Photograph
9	Basin Lister	For Water And Conservation Of Soil And Moisture	-	It Was Developed At Tnau Coimbatore	Photograph
10	Bed Planter	For Bed Planting Of Seeds	-	-	Photograph
11	Bed-Furrow Former	Capable For Farming Alternate Base And Channels	-	-	Photograph
12	Beet Harvester	For Harvesting Beet Crops.	-	-	Photograph
13	Berry Thresher	Threshing Berry Crop	Cost Of Operation Is High	-	Photograph
14	Blade Harrow	For Tillage Operation.	-	-	Photograph
15	Blower Duster	To Apply Fungicide And Insecticide.	Time Consuming	-	Photograph
16	Buck Scraper	For Levelling Land And Filling Soil In Depression	-	-	Photograph
17	Bund Former	For Formation Of Bunds	-	-	Photograph
18	Cage Harrow	For Seedbed Preparation	-	-	Photograph

Internet

Supplier Search based on State

INARIS Statewise Supplier Information - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://192.168.1.202/INARIS02/StateSupplFrameset.asp?SstateCode=03-00&SstateName=Bihar> Go

State **Integrated National Agricultural Resources Information System**

[Andhra Pradesh](#) [Arunachal Pradesh](#) [Assam](#) [Home](#) (Selected State: Bihar) [Back](#)

Farm Mechanisation Database
Statewise Population of Supplier

No.	SupplierName	Product	Address	Contacts	Remarks
1	A. M. Industries	-	13-B, Madhav Baug Colony, Mango, City: Jamshedpur District: Jamshedpur State: Bihar -832110	Phone: 460943 Fax: 463721 Email: Website:	-
2	A.M. Industries	Manufacturers & Exporters Of Agricultural Implements.	13 B, Madhav Baug Colony, City: Jamshedpur District: Jamshedpur State: Bihar -832110	Phone: 460943,2460943 Fax: 463721,246372 Email: Website:	-
3	Agricultural Implements Co	-	Sati Mandir Lane, City: Ranchi District: Ranchi State: Bihar -834001	Phone: Fax: Email: Website:	-
4	Allied Casting & Ancillary Industries	Diesel Engine	Mrufgunj, City: Patna District: Patna State: Bihar -800008	Phone: Fax: Email: Website:	-
5	Allied Engineering Corpn.	Hand Tools	Krishna Chowk, P.B. No. 49, City: Patna District: Patna State: Bihar -800001	Phone: Fax: Email: Website:	-
6	Aryan Engg. & Allied Industries	-	Freser Road, City: Patna District: Patna State: Bihar -800001	Phone: Fax: Email:	-

Shortcut to StateSupplFrameset.asp?SstateCode=32-00&SstateName=Arunachal Pradesh

Internet

Year wise Equipment Population based on State

INARIS Statewise Population of Equipment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.1.202/INARIS02/stateEqptFrameset.asp?StateCode=09-00&StateName=Kerala Go

State Integrated National Agricultural Resources Information System

[Andhra Pradesh](#)

[Arunachal Pradesh](#)

[Assam](#)

[Bihar](#)

[Delhi](#)

[Goa](#)

[Gujarat](#)

[Haryana](#)

[Himachal Pradesh](#)

[Jammu & Kashmir](#)

[Karnataka](#)

[Kerala](#)

[Madhya Pradesh](#)

[Maharashtra](#)

[Manipur](#)

[Meghalaya](#)

[Mizoram](#)

[Home](#) (Selected State: Kerala) [Back](#)

Farm Mechanisation Database
Statewise Population of Equipments

District Name	Population	Year
Population of Agriculture Tractors Soil in Kerala		
Alleppey	244	1991-96
Cannanore	8	1991-96
Ernakulam	74	1991-96
Idukki	17	1991-96
Kasaragod	44	1991-96
Kollam	88	1991-96
Koshikoda	13	1991-96
Kottayam	51	1991-96
Malappuram	178	1991-96
Palakkad	844	1991-96
Pathanam Thitta	18	1991-96
Trichur	161	1991-96
Trivandrum	75	1991-96
Wayanad	184	1991-96
Population of Animal Cart in Kerala		
Alleppey	47	1991-96
Cannanore	1	1991-96
Ernakulam	23	1991-96
Idukki	14	1991-96
Kasaragod	44	1991-96
Kollam	52	1991-96
Koshikoda	02	1991-96
Kottayam	5	1991-96
Malappuram	72	1991-96

Done Internet

Equipment Search based on Class and Category

INARIS Class and Category Based Equipment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.1.202/INARIS02/classFrameset.asp?ClassCode=01&ClassName=Crop%20Production%20And%20Land%20Development%20Equipment Go

Class Name **Category Name** **Integrated National Agricultural Resources Information System**

[Allied Machinery](#) [Seeders And Planters](#) **Farm Mechanisation Database**

[Crop Production And Land Development Equipment](#) [Transplanters](#) **Class and Category Based Equipment List**

[Dairy Machinery & Equipment](#) [Puddlers](#) [Home](#) (Selected Class: Crop Production And Land Development Equipment) [Back](#)

No	Equipment	Utility	Limitations	Comments	Photograph
1	Four Wheel Rice Transplanter (Riding)	For Transplanting Rice From Nursery To Field	-	-	Photograph
2	Manually Operated 5- Row Rice Transplanter	For Transplanting Mat Type Rice Seedling In Puddled Soils In Rows	-	Tnau,Coimbatore	Photograph
3	Manually Operated 6- Row Rice Transplanter	For Transplanting Mat Type Rice Seedling In Puddled Soils In Rows	-	Pau,Ludhiana	Photograph
4	Paddy Transplanter	For Seed Sowing	-	-	Photograph
5	Rice Transplanter	For Row Transplanting Of Root Wash Type Seedling In Puddle Field	-	Apau,Rajendra Nagar	Photograph
6	Vegetable Transplanter (Automatic)	For Transplanting Vegetable Crops	Closing Of Opened Furrow Is Not Close With High Moisture(20-22%), Cost Operation Is High	-	Photograph
7	Vegetable Transplanter (Bare Root Seedling)	For Seed Sowing	-	-	Photograph
8	Vegetable Transplanter (Pot Seedlings)	For Seed Sowing	-	-	Photograph
9	Vegetable Transplanter (Semi-Automatic)	Transplanting Vegetable Crops	Missing Are More, Operation Speed Low And As Increases Moisture Content Closing Of Opened Furrow Will Coused	-	Photograph

Internet

Equipment Detail with photograph

INARIS:Equipment's Photograph - Microsoft Internet Explorer

File Edit View Favorites Tools Help


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Address <http://192.168.1.202/INARIS02/EquipPhoto.asp?PicSrc=684&Bcp=CL> Go

[Home](#) [Back](#)

Detail of Equipment and Photograph

Equipment	Sugarcane Planter (Semiautomatic)
Utility	For Planting Sugarcane Setts In Field
Limitations	
Comments	



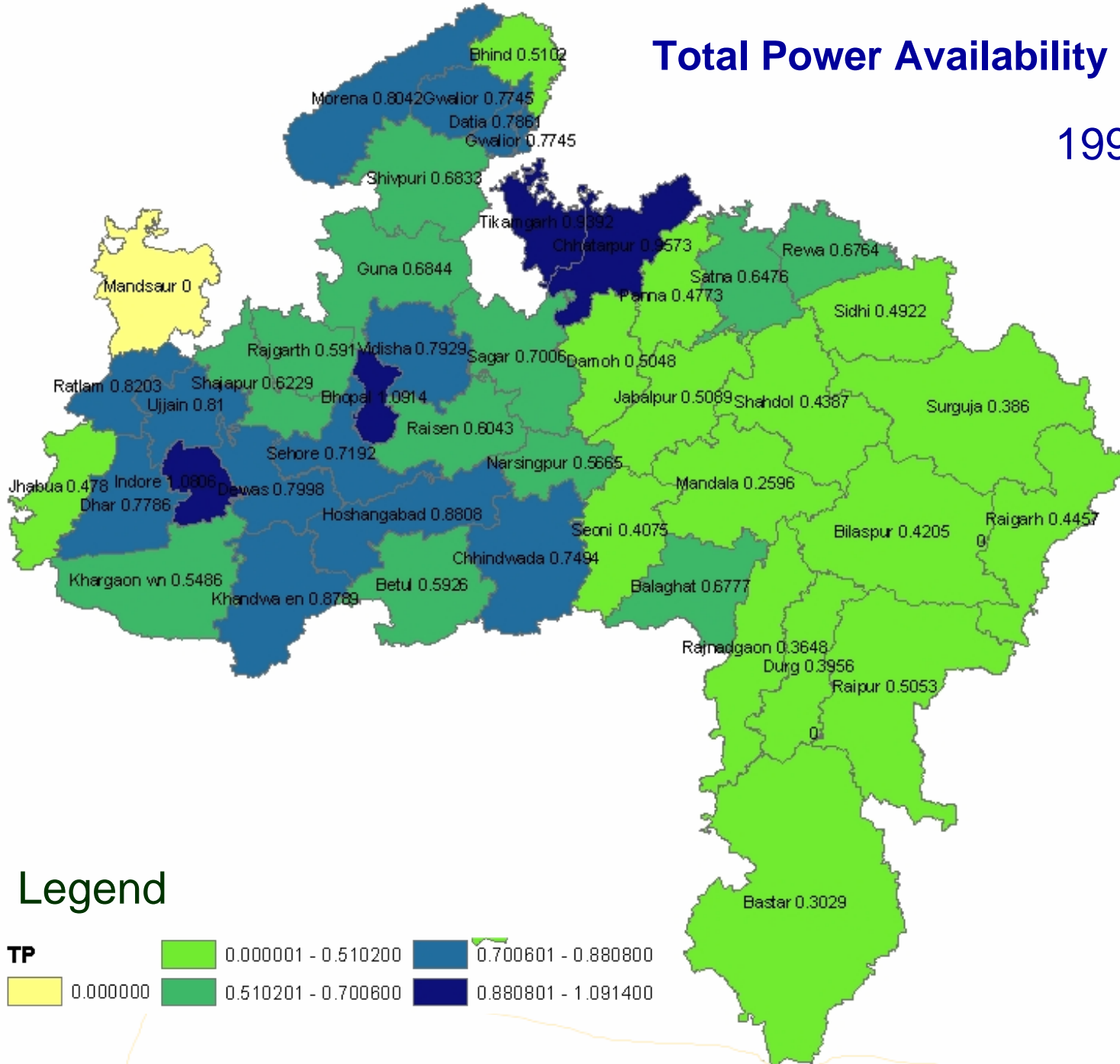
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State Boundaries

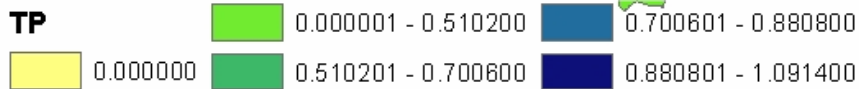


Total Power Availability in MP (kW/ha)

1991 Census



Legend



**Information and Communication
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under Government of India**

Government of India (Ministry of Agriculture)

Departments

- **Department of Agricultural Research and Education (DARE)**
- **Department of Agriculture and Co-operation**
- **Department of Animal Husbandry and Dairying**

Attached Offices

- **Directorate of Plant Protection, Quarantine and Storage**

Subordinate Offices

- **Aquaculture Authority**
- **Central Institute of Fisheries Nautical and Engineering Training (CIFNET)**
- **Directorate of Cashewnut and Cocoa Development (DCCD)**

Autonomous Bodies

- **National Institute of Agricultural Extension Management (MANAGE)**
- **National Institute of Agricultural Marketing (NIAM)**

Boards

- **Central Insecticides Board and Registration Committee**
- **Coconut Development Board**
- **National Dairy Development Board (NDDB)**
- **National Horticulture Board (NHB)**

Councils

- **Indian Council of Agricultural Research (ICAR)**

Others

- **Agriculture Marketing Information System Network (AGMARKNET)**
- **Department of Agriculture and Co-operation Network (DACNET)**
- **Integrated Fisheries Project**
- **National Agricultural Co-operative Marketing Federation of India (NAFED)**
- **National Co-operative Development Corporation (NCDC)**
- **Natural Disaster Management**
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Government of India
Ministry of Agriculture

Department of Agricultural Research And Education



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- Central Herd Registration
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OUR VISION

To be counted among the most *pioneering, innovative, farmer-focused and self-supporting* agricultural management institutes in the world.

MISSION

Facilitating the Acquisition of Managerial and Technical skills by Extension Officers, Managers, Scientists and Administrators in all sectors of Agricultural economy to enable them to provide most effective support and services to Farmers and Fishermen for practicing Sustainable Agriculture.

Public Private Partnership Management



AGRICULTURE &
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Private Extension

Approaches and challenges in the Millennium
Public-Private Partnership in Agricultural Extension Management

Public Extension Management

NATP- National Agricultural Technology Project

PAR - Participatory Adaptive Research Project

Media and Cyber Extension

 **NEW Kisan Call Center**
(www.kisancallcenter.net)

 **[Rythu Vani](#)**

Media in the Service of Farmers

 **[Cyber Extension](#)**

Changing the face of Indian Agriculture

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Kisan Call Center



The [Department of Agriculture & Cooperation](#) (DAC), Ministry of Agriculture, Govt. of India launched Kisan Call Centers on January 21, 2004 across the country to deliver extension services to the farming community.

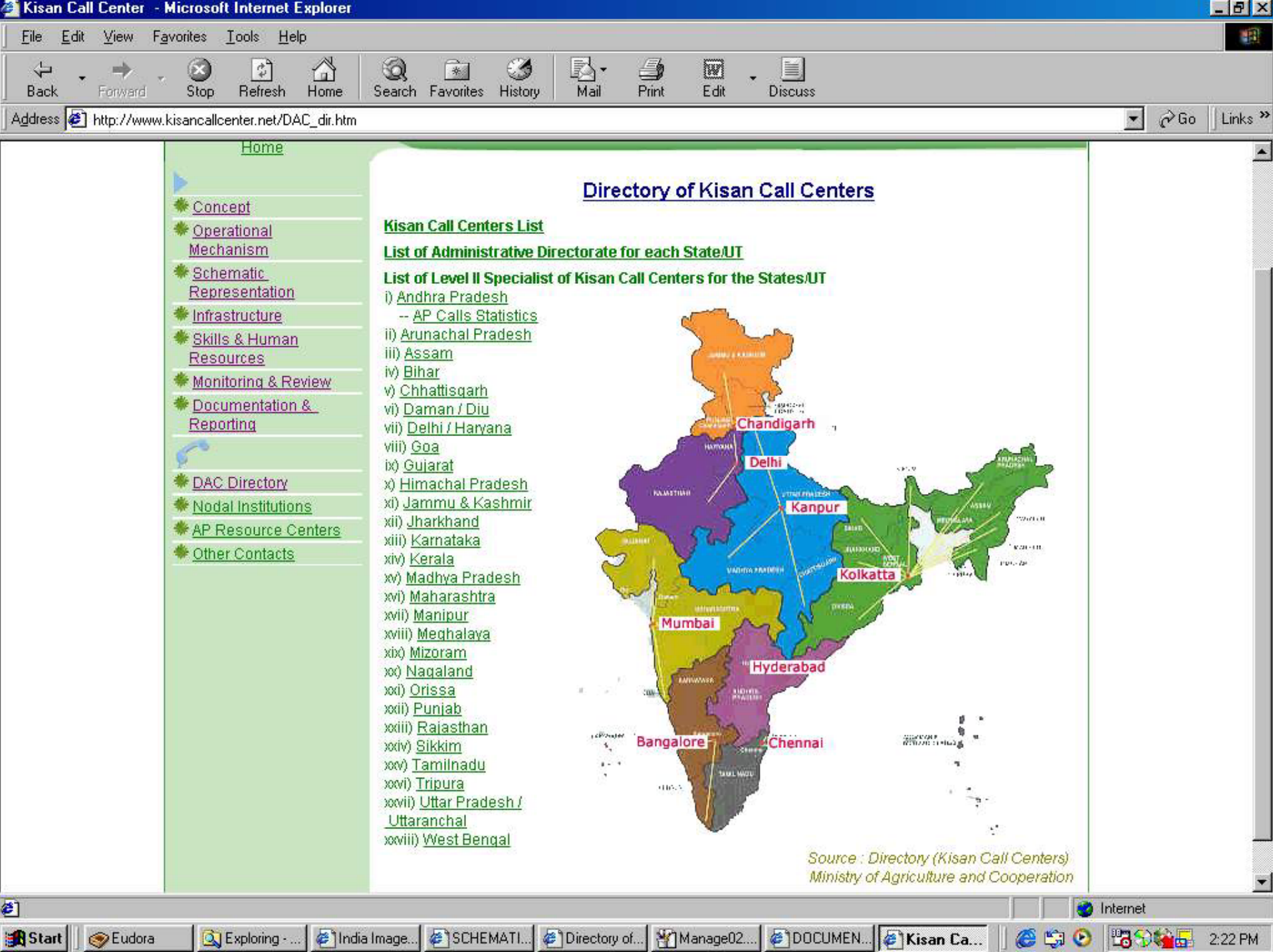
The purpose of these call centers is to respond to issues raised by farmers, instantly, in the local language. There are call centers for every state which are expected to handle traffic from any part of the country. Queries related to agriculture and allied sectors are being addressed through these call centers.

As Prime Minister Vajpayee dialled the toll-free number to launch the Kisan Call Center Scheme on January 21, 2004, he was greeted with a brisk 'Jai Kisan' welcome by a gentleman who then demanded his name before proceeding [further....](#)

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Directory of Kisan Call Centers

Kisan Call Centers List

List of Administrative Directorate for each State/UT

List of Level II Specialist of Kisan Call Centers for the States/UT

- Andhra Pradesh
 - AP Calls Statistics
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- Assam
- Bihar
- Chhattisgarh
- Daman / Diu
- Delhi / Haryana
- Goa
- Gujarat
- Himachal Pradesh
- Jammu & Kashmir
- Jharkhand
- Karnataka
- Kerala
- Madhya Pradesh
- Maharashtra
- Manipur
- Meghalaya
- Mizoram
- Nagaland
- Orissa
- Punjab
- Rajasthan
- Sikkim
- Tamilnadu
- Tripura
- Uttar Pradesh / Uttarakhand
- West Bengal



Source : Directory (Kisan Call Centers)
Ministry of Agriculture and Cooperation

CYBER EXTENSION

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Cyber Extension: Changing the Face of Indian Agriculture V.P.Sharma

A silent revolution is taking place in the communication systems in Rural India. The National Institute of Agricultural Extension Management, MANAGE, Hyderabad, has taken-up a number of "Cyber Extension" initiatives, across the country. District level Web Sites are being hosted, Information Kiosks are being established at block/ Mandal and village levels and technical and other need based information is being collected, digitized and hosted on the Internet.

Agriculture continues to be the occupation and way of life for more than half of Indian population even today. Sustainable prosperity of this class - the farmers, the land-less agricultural laborers holds the key for improving the overall Human Resource Development scenario in the country. Indian Agriculture had been on traditional lines till the first waves of Green Revolution in late 60s. The Green Revolution gave a sudden boost to the production and productivity of major cereals in the assured irrigated areas. Quick dissemination of Technological information from the Agricultural Research System to the Farmers in the field and reporting of farmers' feedback to the research system is one of the critical inputs in

ICTs for Social and Economic Development

Some Initiatives

[Gyandoot](#) : A
Community-owned
self sustainable and
low cost rural
Intranet Project.

M. S. Swaminathan
Foundation:
[telecentres in
Pondicherry](#) |
[Simputer Project](#) |
[iStation Project](#)

[Honey Bee Network](#)

[Warna Wired](#)



AGRICLINICS AND AGRIBUSINESS CENTRES

Better Farming by Every Farmer



Department of Agriculture and cooperation
Ministry of Agriculture
www.agricoop.nic.in



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*A Forum for sharing ideas
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Farmers must adopt new technologies
for improving productivity and the
quality of their produce.....[more](#)

**- Shri Ajit Singh, former Union
Minister of Agriculture**

With diversification and modernisation of agricultural
practices, there is a need to augment support and
extension services for agriculture.....[more](#)

- Finance Minister, GOI

Success Stories

[Laboratory at Sonipet, Haryana](#) *[Shri Vinay Sir](#)

List of Trainees

[Agriclincs and Agribusiness Centres : The concept](#)

[About the Scheme](#)

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AGRICLINICS AND AGRIBUSINESS CENTRES

Better Farming by Every Farmer



Department of Agriculture and
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www.agricoop.nic.in



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Rural Development

www.nabard.org



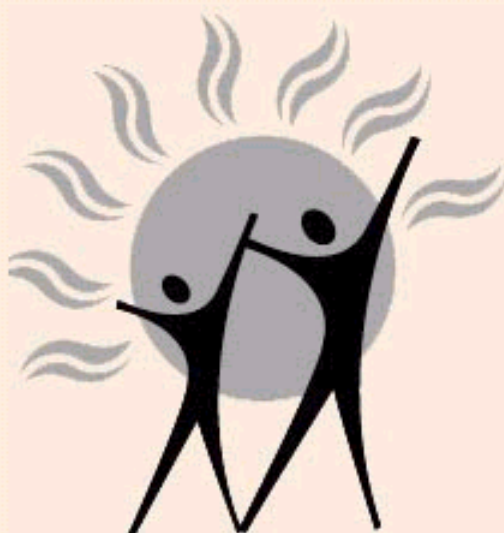
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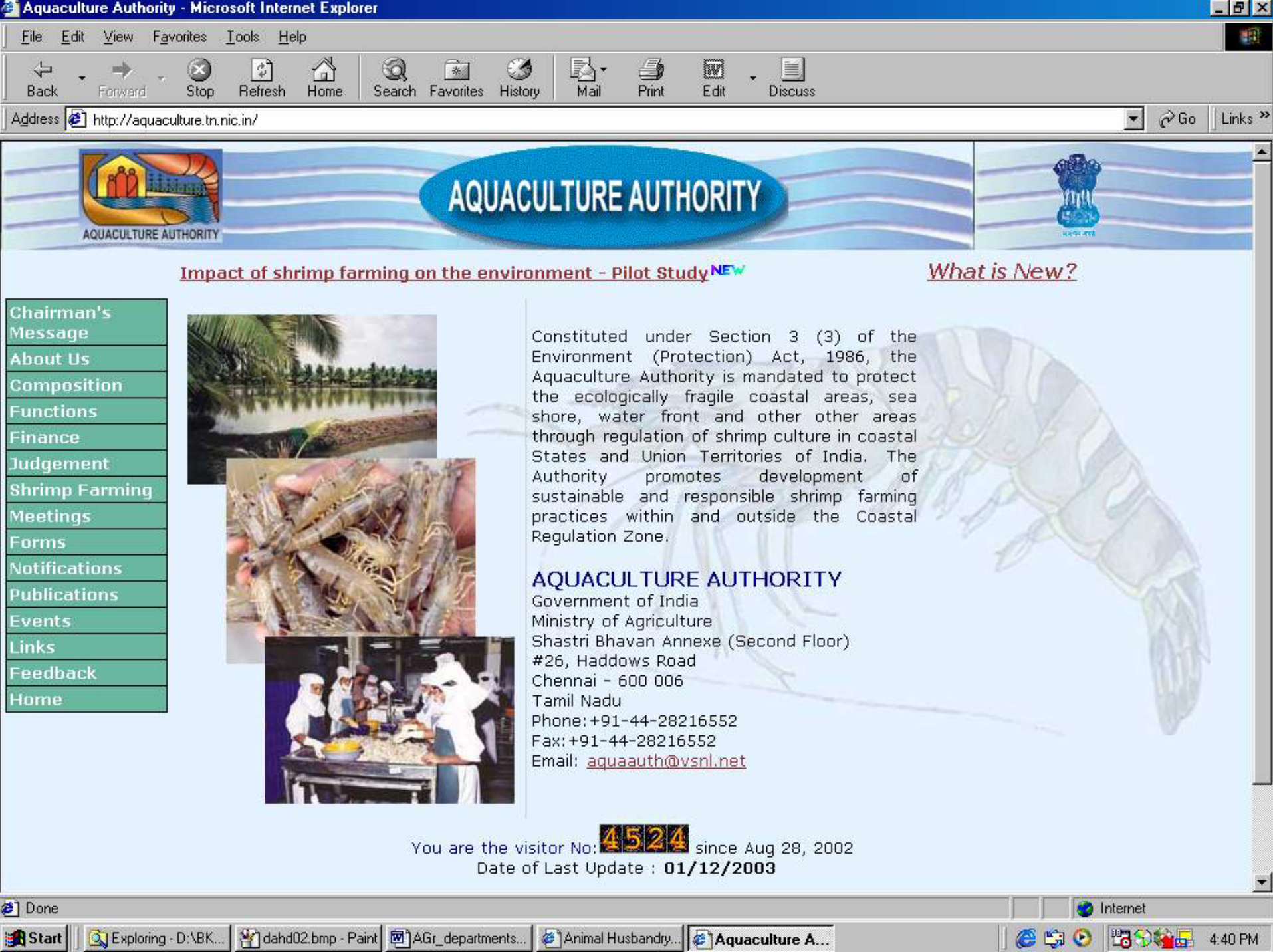
AGRICLINICS & AGRIBUSINESS CENTRES

The Ministry of Agriculture, Government of India, in association with NABARD has launched a unique programme to take better methods of farming to each and every farmer across the country.

This programme aims to tap the expertise available in the large pool of Agriculture Graduates. Irrespective of whether you are a fresh graduate or not, or whether you are currently employed or not, you can set up your own AgriClinic or AgriBusiness Centre and offer professional extension services to innumerable farmers.

Committed to this programme, the Government is now also providing start-up training to graduates in Agriculture, or any subject allied to Agriculture like Horticulture, Sericulture, Veterinary Sciences, Forestry, Dairy, Poultry Farming, and





AQUACULTURE AUTHORITY

[Impact of shrimp farming on the environment - Pilot Study](#) ^{NEW}[What is New?](#)

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Constituted under Section 3 (3) of the Environment (Protection) Act, 1986, the Aquaculture Authority is mandated to protect the ecologically fragile coastal areas, sea shore, water front and other other areas through regulation of shrimp culture in coastal States and Union Territories of India. The Authority promotes development of sustainable and responsible shrimp farming practices within and outside the Coastal Regulation Zone.

AQUACULTURE AUTHORITY

Government of India
Ministry of Agriculture
Shastri Bhavan Annexe (Second Floor)
#26, Haddows Road
Chennai - 600 006
Tamil Nadu
Phone: +91-44-28216552
Fax: +91-44-28216552
Email: aquaauth@vsnl.net

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Date of Last Update : **01/12/2003**



Central Insecticides Board & Registration Committee

Directorate of Plant Protection, Quarantine & Storage
Department of Agriculture & Cooperation

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Plant Protection Inform

[About Us](#) [Insecticides Act, 1968](#) [Insecticides Rules, 1971](#) [Forms](#) [Registration Procedure](#) [Insecticides in Schedule](#) [Guidelines](#) [E-Mail Addresses](#)

To facilitate the registration of safe, efficacious and quality pesticides for domestic use and export.

To disseminate information to State Governments and other concerned departments/agencies for effective implementation of Insecticides Acts and Rules framed there under.

[Application Status](#) [Product Directory](#) [Registered Products](#) [Cropwise Directory](#) [Related Statistics](#) [Insecticides Banned](#) [Related Links](#)

Best viewed in IE 4.0 and above with display settings as 800 x 600 pixels and small fonts

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Friday, March 26, 2004

Your Presence :



Suggestions are solicited at



"Kisan Call Centre - Dial: 1551 for Toll free"

Ministry of Agriculture

COCONUT DEVELOPMENT BOARD



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[Message of Shri. Rainath Singh](#)
Minister of Agriculture

Coconut Development Board (CDB) is a statutory body established under the [Ministry of Agriculture](#), Government of India for the integrated development of coconut cultivation and industry in the country with focus on productivity increase and product diversification.

CDB (HQ), Kera Bhavan

Search For :

 enk_cdrkochi@sancharnet.in

MAIL

Phone:

91-484-2376265, 2377266, 2377267

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The National Dairy Development Board's creation is rooted in the conviction that our nation's socio-economic progress lies largely on the development of rural India.

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Internet
based
Dairy
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System



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National Horticulture Board

Heralding Golden Revolution

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नई दिल्ली-110 001
MINISTER FOR AGRICULTURE
GOVERNMENT OF INDIA
KRISHI BHAWAN
NEW DELHI-110 001

MESSAGE

The horticulture sector, with its vast choice of crops like fruits, vegetables, spices, medicinal plants, flowers, plantation crops like cashew, coconut, cocoa etc provides better vistas to the farmers for crop diversification and getting increased income from their land. The horticulture enterprises are technology driven and intellectually satisfying which can attract the youth to take up horti-business ventures. With the advancement in technology in a highly competitive environment, Information Technology will play a crucial role for the stakeholders. Our efforts, therefore, are to equip the farmers and the entrepreneurs with all possible information needed by them for maximising their benefits through horticulture. This site of National Horticulture Board (NHB) has been

Application Forms for
SCHEMES

Tender Notice

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Kisan Diwas

NHB
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**NHB's
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Financial Express \(10-03-2004\)](#)

[India, Pak Discuss Crop Research --Deccan Herald \(10-03-2004\)](#)

[ICAR Chief moots definite roadmap for food security --
Business Line \(7-8-2003\)](#)

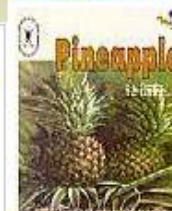
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["Angora rabbit wool and cashmere production and utilization for value added product.", 4 Apr 2004 at Kullu.](#)

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Books



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All India Level Price Range (Rs./Quintal) on 26/3/2004

NR: Not Reported
Variety wise details [CLICK HERE](#)

Markets Reported : 47

Commodity	Max	Min	MSP
Cereals			
Bajra	415	340	485
Barley	515	457	500
Jowar	600	400	485
Maize	600	450	485
Paddy	730	480	Common:530 Fine:560
Ragi	600	540	
Rice	1475	680	
T.V. Cumbu	486	422	
Wheat	825	531	620
Drugs & Narcotics			
Areca nut (Betelnut/Supari)	6900	1800	
Betal Leaves	2300	2100	
Fibre Crops			
Cotton	2820	2100	F414/H777:16 H4:1875
Forest Products			
Tamarind Fruit	2700	2300	
Tamarind Seed	800	340	
Wood	100	80	
Fruits			
Apple	3500	700	
Banana	1000	350	
Chikoos(Sapota)	900	800	
Grapes	2500	1200	



Agmarknet
A Step Towards Globalisation of Indian Agriculture

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Important Commodities: Arrivals & Price Ranges for 25/3/2004

State	Arrivals	Max Price	Min Price
Gujarat	9	3135.68	1875
Haryana	1	972	1643
Kerala	1	1	2700
Madhya Pradesh	5	14.82	1769
Maharashtra	5	38.1	3800
Punjab	4	213.2	1791
Rajasthan	21	10204.3	1825
Uttar Pradesh	5	213	2050
West Bengal	2	100	2000

Soyabean

Markets: Total Arrivals: Max Price: Min Price:

Future Prices from National Multi-commodity Exchange of India Ltd.
OIL-APR2004@400.20 CASTOR OIL-JUN2004@400.90

Marketing News
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National Disaster Management

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NATIONAL AGRICULTURAL COOPERATIVE MARKETING FEDERATION OF INDIA LIMITED

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INTRODUCTION

National Agricultural Cooperative Marketing Federation of India Ltd., popularly known as NAFED, was established on the occasion of Gandhi Jayanti on 2nd October 1958.

It is an apex cooperative marketing body playing a key role in the cooperative movement. NAFED has a unique place in the agriculture sector of India being a 'farmer friendly' organization dealing in a wide range of agricultural commodities like Foodgrains, Pulses, Oilseeds, Spices, Horticulture produce, Cotton, Tea, Jute & Jute Goods, Poultry products, Chemical & Bio-fertilizers.

NAFED functions through its Headquarters at New Delhi and four Regional Offices located at Delhi, Chennai, Calcutta and Mumbai which are supported by 24 Branch Offices, 8 Sub-Offices and 18 Industrial Units/Agro Service Centres/Godowns/Shops spread all over India.

National Multi Commodity Exchange of India Ltd. - Future Prices Trend



राष्ट्रीय सहकारी विकास निगम NATIONAL COOPERATIVE DEVELOPMENT CORPORATION



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- Message of Managing Director
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- Finance and Financing
- Promotional and Developmental Role
- Activities and programmes
- Assistance for Computerization
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HAUZKHAS, NEW DELHI - 110016, INDIA.
FAX: (011) 26962370/26516032
PHONE NOS. 26532245 / 26962385

E-mail : mailto:cdmis@stpn.soft.net.in

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Smt. Vasundhara Raje
(Chief Minister, Rajasthan)

The Rajasthan State Agricultural Marketing Board has devoted itself whole heartily to the development of Agricultural Marketing since its inception in 1974. The activities of the Marketing Board are now not limited to construction of market yards-godowns and village link roads, but cover the entire gamut of Post harvest management and Agricultural Marketing developmental activities in the wake of the liberalization of the economic policy of the country.

The Rajasthan State Agricultural Marketing Board has taken up the task to

Thanks

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