



Bankers Institute of Rural Development Lucknow

Emerging Financing and Business Diversification Opportunities for Co-operative Banks and RRBs opportunities – in the light of Priority Sector Lending Guidelines

Sanjeev Raman
Deputy General Manager

Objectives / Philosophy of PSL

1. Credit linking the *deserving but deprived* segments of the economy.
2. To ensure flow of credit to certain **productive sectors** of the economy / unserved persons who may not get timely and adequate credit in the absence of this special dispensation.
3. Not a Corporate Social Responsibility but a normal business operation for banks .
4. Lend directly to beneficiaries instead of routing these loans through intermediaries.

Evolution of PSL guidelines

Year	Event
July 1968	National Credit Council Meeting – Banks to increase priority sector financing viz. Agriculture / SSI
1972	Based on the report of Informal Study Group of 1971 on Statistics <ul style="list-style-type: none"> Description of priority sectors and categories formalised No targets fixed
Nov. 1974	Target of 33 .33% of total advances to PS to be achieved by March, 1979
Mar. 1980	Meeting of Fin. Min. with CEOs of banks, & Working group (Dr. K S Krishnaswamy) <ul style="list-style-type: none"> Target of 40% to be achieved by March 1985 and sub-targets given
SEVERAL Changes in scope and targets/Sub-targets over the years	
2007	Guidelines revised based on IWG (Shri C S Murthy) recommendations
July 2012	M V Nair Committee set up in August 2011 to re-examine the existing classification and suggest revised guidelines which were issued in 2012
April 2015	Internal WG set up in 2014 to re-examine the guidelines Guidelines revised on April 23, 2015
<u>September</u>	<u>Comprehensive Review. Guidelines revised on September 4, 2020</u>

Salient changes to guidelines in September 2020

1. Targets for lending to small and marginal farmers increased
2. Targets for lending to Weaker Sections increased
3. Regional disparities in flow of PSL: WEIGHTS assigned to incremental PSL in 'identified districts' where PSL is comparatively lower/ higher
4. Fresh categories:
 - i. Bank finance to start-ups (up to ₹50 crore)
 - ii. Loans to farmers for installation of solar power plants for solarisation of grid connected agriculture pumps
 - iii. Loans for setting up Compressed Bio Gas (CBG) plants
5. Loan limits for renewable energy have been increased.
6. Higher credit limit 5 Crores—for FPOs undertaking farming with assured marketing of their produce at a pre-determined price.
7. Credit limit for health infrastructure (including those under 'Ayushman Bharat') has been doubled.
8. Educational Loans up to Rs. 20 lakhs eligible for PSL classification
9. Harmonise PSL instructions issued to SCBs, SFBs, RRBs, UCBs & LABs

Recent changes to guidelines in 2021

- 1 Loans against pledge/hypothecation of agricultural produce (including warehouse receipts) have been increased.

Categories	Domestic Commercial Banks (excl. RRBs, SFBs) & Foreign Banks with 20 & more branches	Foreign banks with less than 20 branches
Total	% of ANBC or CEOBE, whichever is higher. or foreign banks - w.e.f March	40% of ANBC or CEOBE, whichever is higher: wef Mar 20
Priority Sector	18% of ANBC or CEOBE, whichever is higher. or foreign banks - w.e.f March '18	40% of ANBC or CEOBE, whichever is higher: wef Mar 20
Agriculture	<p>CEOBE=Credit equivalent amount of Off-Balance Sheet exposure</p> <p>18% of ANBC or CEOBE for total agriculture and Marginal farmers, within 18% target for agriculture</p> <p>10%* of ANBC for Small and Marginal farmers, within 18% target for agriculture</p>	<p>• up to 32% can be in the form of lending to Exports &</p> <p>• not less than 8% can be to any other priority sector</p> <p>Not applicable</p>
Micro Enterprises	<p>7.5% of ANBC</p> <p>No target for MSME as a whole</p> <p>%* of ANBC or CEOBE, whichever is higher</p>	<p>Not applicable</p> <p>Not applicable</p>
Advances to Weaker Sections	Revised targets – Phase wise Implementation	entation
Financial Year	SMF target *	Weaker Sections target *
2020-21	8%	10%
2021-22	9%	11%
<u>2022-23</u>	9.5%	11.5%

Categories	RRBs	SFBs	UCBs								
Total Priority Sector	<p>75% of ANBC or CEOBE, whichever is higher.</p> <ul style="list-style-type: none">However, lending to Medium Enterprises, Social Infrastructure and Renewable Energy shall be reckoned for PSL achievement only up to 15% of ANBC.Exports not a priority sector. therefore 7 sectors only.	<p>75% of ANBC or CEOBE, whichever is higher.</p> <div><p>CEOBE =Credit equivalent amount of Off-Balance Sheet exposure</p></div>	<p>75% of ANBC or CEOBE, whichever is higher.</p> <p>(Phase wise increase)</p> <table><tr><td>Mar '21</td><td>45%</td></tr><tr><td>Mar '22</td><td>50%</td></tr><tr><td>Mar '23</td><td>60%</td></tr><tr><td>Mar '24</td><td>75%</td></tr></table>	Mar '21	45%	Mar '22	50%	Mar '23	60%	Mar '24	75%
Mar '21	45%										
Mar '22	50%										
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Mar '24	75%										
Agriculture	<ul style="list-style-type: none">18% of ANBC or CEOBE for total agriculture10%* of ANBC for Small and Marginal farmers, within 18% target		No target								
Micro Enterprises	<ul style="list-style-type: none">7.5% of ANBC or CEOBENo target for MSME as a whole										
Weaker Sections	15% of ANBC or CEOBE whichever is higher.	12%* of ANBC or CEOBE whichever is higher.									

***Phase wise implementation of SMF & weaker section targets by 2023-2024**

Adjustments for weights in PSL Achievement...1

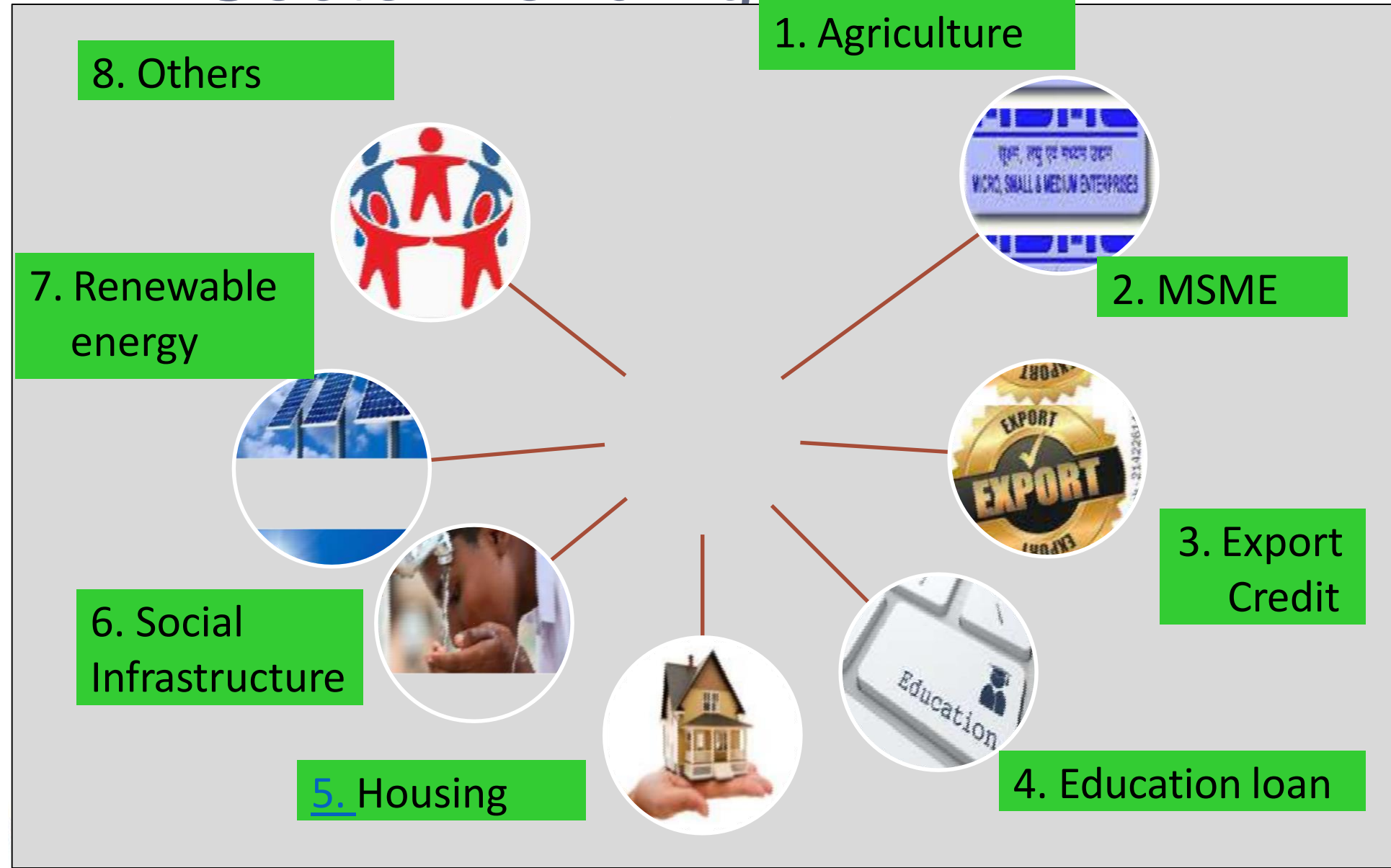
To address regional disparities in the flow of PSL at district level:

- Districts RANKED on the basis of per capita credit flow to PS
- An incentive framework for districts with comparatively lower flow of credit &
- A dis-incentive framework for districts with comparatively higher flow of PSL
- Accordingly, from FY 2021-22 onwards-for **incremental priority sector credit**:
 - **a higher weight (125%)** in the identified districts where the credit flow is comparatively lower (**per capita PSL less than ₹6000**)
 - **a lower weight (90%)** in the identified districts where the credit flow is comparatively higher (**per capita PSL greater than ₹25,000**).
 - **All other districts --existing weightage of 100%.**
- The list of both categories of districts will be valid for a period up to FY 2023-24 and will be reviewed thereafter.

Adjustments for weights in PSL Achievement...2

- The banks should continue to report the actual outstanding amount in QPSA returns as hitherto.
- Adjustments for weights to incremental PSL credit will be **done by RBI**, based on reporting of district wise credit flow to FIDD, CO through the **ADEPT database**.
- **RRBs, UCBs, LABs and foreign banks (including WoS) would be exempted from adjustments of weights** in PSL achievement due to their currently limited area of operation/catering to a niche segment.

Categories of Priority Sector Lending



1. AGRICULTURE

AGRICULTURE

The lending to agriculture sector INCLUDES:

i. Farm Credit

(which will include short-term crop loans and medium/long-term credit to farmers)

ii. Agriculture Infrastructure

iii. Ancillary Activities

Farm Credit....1

Loans to

- individual farmers (including groups of individual farmers like SHGs/ JLGs) , and
- Proprietorship firms of farmers

directly engaged in Agriculture and Allied Activities (dairy, fishery, animal husbandry, poultry, bee-keeping and sericulture)

This will include:

Farm Credit

(Individual) 2

- i. Crop loans to farmers (will include traditional / non-traditional plantations, horticulture and allied activities)
- ii. Medium & Long term loans to farmers for agriculture & allied activities (purchase of agricultural implements and machinery, loans for irrigation and other developmental activities undertaken in the farm and development loans for allied activities)
 - iii. Loans for pre-harvest and post-harvest activities viz., spraying, weeding, harvesting, sorting, grading and transporting of their own farm produce.
- iv. Loans under the Kisan Credit Card Scheme
- v. Loans to distressed farmers indebted to non-institutional lenders

Farm Credit

(Individual) 3

- vi. Loans to small and marginal farmers for purchase of land for agricultural purposes.
- vii. Loans against pledge/hypothecation of agricultural produce (including warehouse receipt) for a max. period of 12 months subject to a **limit up to ₹75 lakh.**

NEW ADDITIONS

- viii. Loans to farmers for installation of stand-alone Solar Agriculture Pumps and for solarisation of grid connected Agriculture Pumps.**
- ix. Loans to farmers for installation of solar power plants on barren/fallow land or in stilt fashion on agriculture land owned by farmer.**

Farm Credit

(Corporate).... 4

Loans to

- corporate farmers,
- FPOs,
- companies of individual farmers,
- partnership firms and cooperatives of farmers

directly engaged in Agriculture and Allied Activities

(dairy, fishery, animal husbandry, poultry, bee-keeping and sericulture) upto specified limits:

Farm Credit

(Corporate).....5

- a) Loans upto a limit of ₹2 crore per borrower for the following:
 - i. Crop loans to farmers which will include (traditional / non-traditional plantations, horticulture and loans for allied activities)
 - ii. Medium & Long-term loans for agriculture & allied activities (purchase of agricultural implements and machinery,
 - iii. Loans for Pre-harvest and post-harvest activities viz., spraying, weeding, harvesting, sorting, grading and transporting of their own farm produce.
- b) Loans upto Rs.75 lakh against pledge / hypothecation of agricultural produce (including warehouse receipts) for a period not > 12 months
- c) Loans up to ₹5 crore per borrowing entity to FPOs/FPCs undertaking farming with assured marketing of their produce at a pre-determined price.
- d) UCBs are not permitted to lend to co-operatives of farmers.

Agriculture Infrastructure

Loans for agriculture infrastructure subject to an aggregate sanctioned limit of ₹100 crore/ borrower from the banking system.

- i. Loans for construction of storage facilities (warehouses, market yards, godowns & silos) including cold storage units / cold storage chains designed to store agriculture produce/products
- ii. Soil conservation and watershed development
- iii.iii Plant tissue culture and agro-biotechnology, seed production, production of bio-pesticides, bio-fertilizer and vermi composting.
- iv. Loans for construction of oil extraction/ processing units for production of bio-fuels, their storage and distribution infrastructure along with loans to entrepreneurs for setting up Compressed Bio Gas (CBG) plants

Ancillary activities 1

1. Loans upto Rs.5 crore to cooperative societies of farmers for disposing of the produce of members (Not for UCBs)
2. Loans for Food & Agro-processing upto an aggregate sanction
• limit of Rs.100 crore per borrower from the banking system.
3. Loans up to ₹50 crore to Start-ups, as per definition of Ministry of Commerce and Industry, Govt. of India that are engaged in agriculture and allied services.
4. Loans for setting up of Agri-clinics and Agri-business centres
5. Loans to Custom Service Units managed by individuals, institutions/organizations who maintain a fleet of tractors, bulldozers, well-boring equipment, threshers etc., and undertake farm work on contract basis.

Ancillary

activities... 2

5. Bank loans to PACS, Farmers' Service Societies (FSS) and Large-sized Adivasi Multi-Purpose Societies (LAMPS) for on-lending to agriculture.
6. Loans sanctioned by banks to MFIs for on-lending to agriculture sector as per specified conditions.
7. Loans sanctioned by banks to registered NBFCs (other than MFIs) as per conditions specified.
8. Outstanding deposits under RIDF and other eligible funds with NABARD on account of priority sector shortfall.

2. MICRO, SMALL & MEDIUM ENTERPRISES

Revised Definition of MSMEs- w.e.f. July 1, 2020

Gazette Notifications dated June 1, and June 26, 2020

COMPOSITE CRITERIA----- A.T.@ 5 times INV

Existing MSME Classification			
Criteria : Investment in Plant & Machinery or Equipment			
Classification	Micro	Small	Medium
Mfg. Enterprises	Investment < Rs. 25 lac	Investment < Rs. 5 cr.	Investment < Rs. 10 cr.
Services Enterprise	Investment < Rs. 10 lac	Investment < Rs. 2 cr.	Investment < Rs. 5 cr.

Revised MSME Classification			
Composite Criteria : Investment And Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing & Services	Investment < Rs. 1 cr. and Turnover < Rs.5 cr.	Investment < Rs. 10 cr. and Turnover < Rs.50 cr.	Investment < Rs.50 cr. and Turnover < Rs 250 cr.

Loans to MSME as Priority sector

- All bank loans to MSMEs qualify for classification under priority sector lending.
- Loans up to ₹50 crore to Start-ups, as per definition of Ministry of Commerce and Industry, Govt. of India that confirm to the definition of MSME
- all loans sanctioned to units in the KVI sector will be eligible for classification under the sub-target of 7.5% prescribed for Micro enterprises under priority sector.
- 'With Recourse' Factoring transactions by banks wherever the 'assignor' is a MSME would be eligible for classification under MSME category. (X-RRBs)
- Factoring transactions pertaining to MSMEs taking place through the TReDS eligible for PSL classification. (not applicable to RRBs)

3. EXPORT CREDIT

Export credit under agriculture and MSME sectors can be classified as PSL in the respective categories viz. agriculture and MSME.

Export Credit (other than in agriculture and MSME) will be allowed to be classified as priority sector as per the following table

Domestic banks / WoS of Foreign banks/ SFBs/ UCBs	Foreign Banks with 20 branches and above	Foreign Banks with < 20 branches
Incremental export credit over corresponding date of the preceding year, up to 2 per cent of ANBC or CEOBE whichever is higher, subject to a sanctioned limit of up to ₹ 40 crore per borrower. Turnover Limit 100 Cr	Incremental export credit over corresponding date of the preceding year, up to 2 percent of ANBC or CEOBE whichever is higher	Export credit up to 32 per cent of ANBC or CEOBE whichever is higher.

4. EDUCATION

Loans to individuals for educational purposes, including vocational courses, not exceeding ₹ 20 lakh will be considered as eligible for priority sector classification.

Loans currently classified as priority sector will continue till maturity.

5. HOUSING....1

- i. Loans to individuals upto Rs. 35 lakh in metropolitan centres for purchase / construction of a dwelling unit per family is considered as eligible for priority sector.
(overall cost of the unit not to exceed Rs. 45 lakh)
- ii. Loans to individuals upto Rs. 25 lakh in other centres (other than metropolitan) for purchase / construction of a dwelling unit per family is considered as eligible for priority sector.
(overall cost of the unit not to exceed Rs. 30 lakh)
- iii. Housing loans to banks' own employees will not be eligible for classification under the priority sector.
- iv. Since Housing loans which are backed by long term bonds are exempted from ANBC, banks should not classify such loans under priority sector.

6. SOCIAL INFRASTRUCTURE

- i. Bank loans up to a limit of **₹5 crore per borrower** for setting up schools, drinking water facilities and sanitation facilities including construction/ refurbishment of household toilets and water improvements at household level, etc.
- ii. Loans up to a limit of ₹10 crore per borrower for building health care facilities including under 'Ayushman Bharat' in Tier II to Tier VI centres.

Tier 2-	50,000 to 99,999
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Tier 6-	Less than 5000
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- iii. Bank loans to MFIs extended for on-lending to individuals and also to members of SHGs/JLGs for water and sanitation facilities subject to the certain criteria.

7. RENEWABLE ENERGY

- Bank loans upto a **limit of ~~Rs.15 crore~~ Rs. 30 Crores** to borrowers for purpose like solar based power generators, biomass based power generators, wind mills, micro-hydel plants and for non-conventional energy based public utilities viz., street lighting systems and remote village electrification.
- For individual households, the loan limit will be **Rs.10 lakh per borrower.**

8. OTHERS

1. Loans not exceeding ~~Rs.50,000/-~~ Rs. 1 lakh per borrower provided directly by banks to individuals and indiv. members of SHG / JLG (borrower's household annual income not to exceed Rs.1,00,000/ in rural areas and Rs.1,60,000/ in non-rural areas).
2. loans not exceeding ₹2.00 lakh provided directly by banks to SHG/JLG for activities other than agriculture or MSME, viz., loans for meeting social needs, construction or repair of house, construction of toilets or any viable common activity started by the SHGs.
3. Loans to distressed persons (other than farmers-already included) not > Rs.1,00,000/- per borrower to prepay their debt to non-institutional lenders.
4. Loans sanctioned to State Sponsored Organizations for SCs / STs for the specific purpose of purchase and supply of inputs to and/or the marketing of the outputs of the beneficiaries of these organizations.
5. Loans up to ₹50 crore to Start-ups, as per definition of Ministry of Commerce and Industry, Govt. of India that are engaged in activities other than Agriculture or MSME.

Weaker Sections

Priority sector loans to the following borrowers will be considered under Weaker Sections category

Weaker Sections Category

- i. Small and Marginal Farmers
- ii. Artisans, village and cottage industries where individual credit limits do not exceed ₹1 lakh
- i. Beneficiaries under Government Sponsored Schemes such as NRLM, NULM and SRMS
- iv. Scheduled Castes and Scheduled Tribes
- v. Beneficiaries of DRI scheme
- vi. Self Help Groups
- vii. Distressed farmers indebted to non-institutional lenders

Weaker Sections Category

- viii. Distressed persons other than farmers, with loan amount not exceeding ₹1 lakh per borrower to prepay their debt to non-institutional lenders
- ix. Individual women beneficiaries up to ₹1 lakh per borrower
- x. Persons with disabilities
- xi. Overdrafts under PMJDY accounts, as per limits and conditions prescribed by Department of Financial Services, Ministry of Finance
- xii. Minority communities as may be notified by Government of India from time to time.

PSL

Cs

Priority Sector Lending Certificate (PSLC) –Rationale and Objectives

Rationale:

- ✓ Comparative advantage of banks in sectoral lending
- ✓ Focus on Lending to priority sectors by the banking system as a whole , regardless of which bank does it.

Objectives:

- ✓ To enable banks to achieve the PSL targets by purchase of these instruments in the event of shortfall
- ✓ Incentivise the overachievers.
- ✓ Enhancing lending to the categories under priority sector.

Priority Sector Lending Certificate (PSLC)

TRADABLE CERTIFICATES ISSUED WITH PS LOANS AS UNDERLYING

SALIENT FEATURES.....1



Traded through the CBS portal (e-Kuber) of RBI.



No transfer of credit risk on the underlying as no transfer of tangible assets or cash flow.



All PSLCs expire by March 31st, irrespective of the date it was first sold.



The PSLCs have a standard lot size of ₹ 25 Lakhs and multiples thereof.



Eligible participants are SCBs (including RRBs and SFBs), UCBs & Local Area Banks.

TYPES OF PSLCs



**PSLC –
Agriculture
(PSLC-A)**



**PSLC – Small
and Marginal
Farmers
(PSLC-SM)**



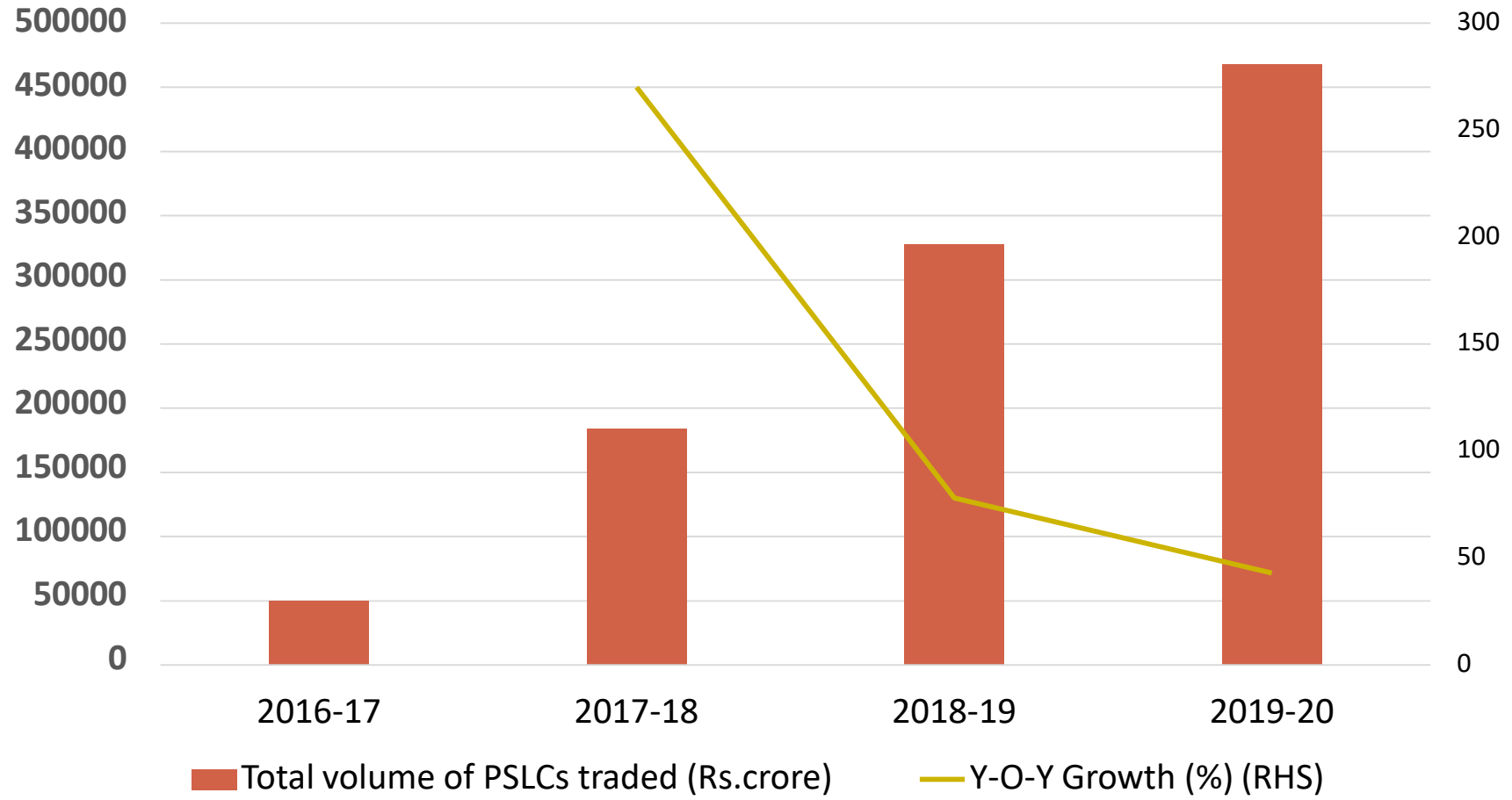
**PSLC –
Micro
Enterprises
(PSLC-ME)**



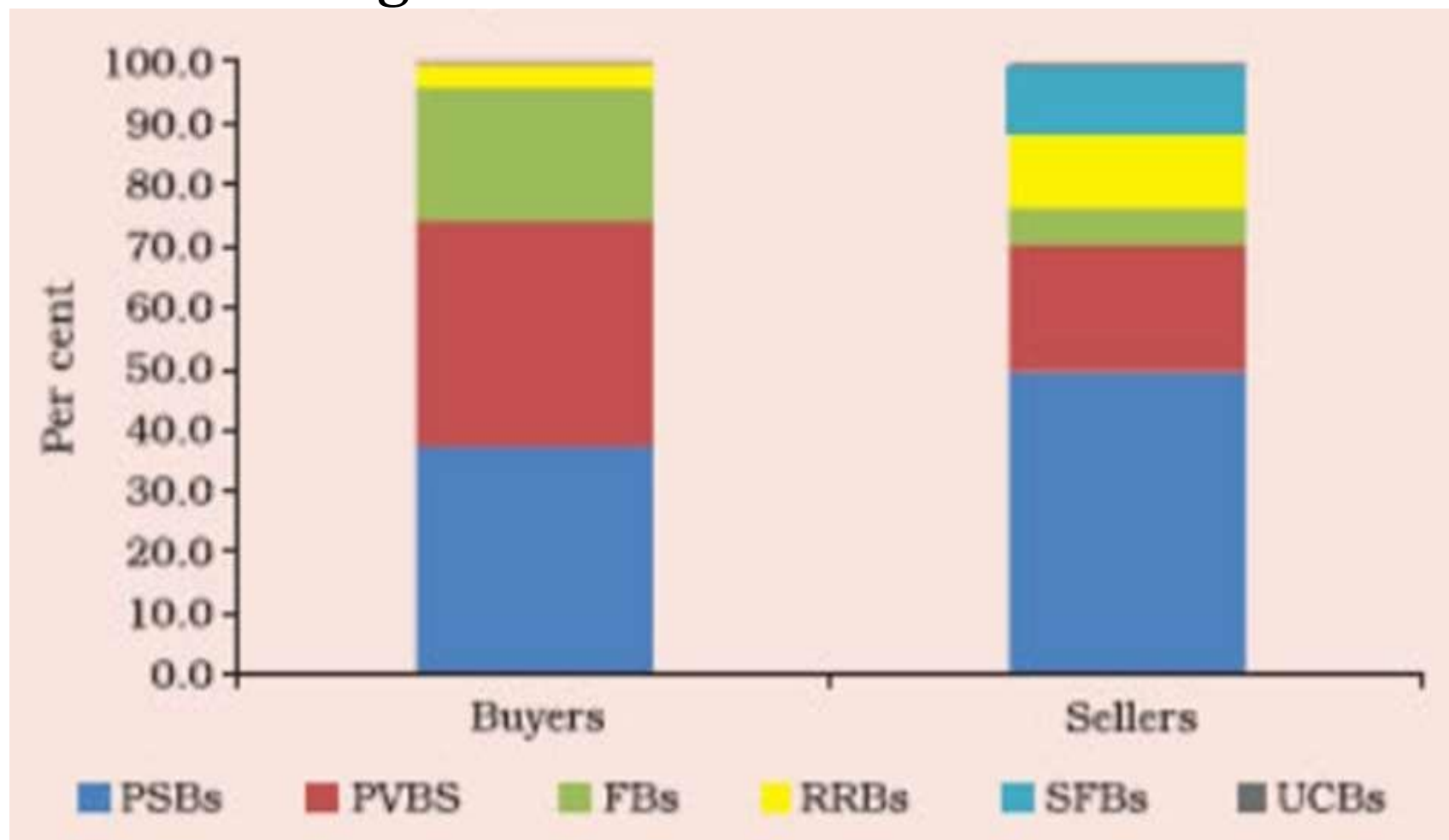
**PSLC –
General
(PSLC-G)**



Growth in PSLC Trading



Major Buyers and Sellers in PSLCs Trading



Source: Report on Trend and Progress of Banking in India- December 2018

Agriculture in India...

- the largest private enterprise
- ensures food security,
- contributes over 12% towards exports
- engages 48.9% of the workforce
- stimulates demand in other sectors
- “plays a major role in poverty reduction
 - GDP growth in agriculture is **four times** more effective in benefiting the poorest than non-agricultural growth.
- key to backward and forward linkage

AGRICULTURE - PSL

The lending to agriculture sector INCLUDES:

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(which will include short-term crop loans and medium/long-term credit to farmers)

ii. Agriculture Infrastructure

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Agriculture Infrastructure

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- i. Loans for construction of storage facilities (warehouses, market yards, godowns & silos) including cold storage units / cold storage chains designed to store agriculture produce/products
- ii. Soil conservation and watershed development
- iii.iii Plant tissue culture and agro-biotechnology, seed production, production of bio-pesticides, bio-fertilizer and vermi composting.
- iv. Loans for construction of oil extraction/ processing units for production of bio-fuels, their storage and distribution infrastructure along with loans to entrepreneurs for setting up Compressed Bio Gas (CBG) plants

Investment Credit : Most fruit crops, plantation crops, vegetables, SPICES and floriculture under poly house, MACs

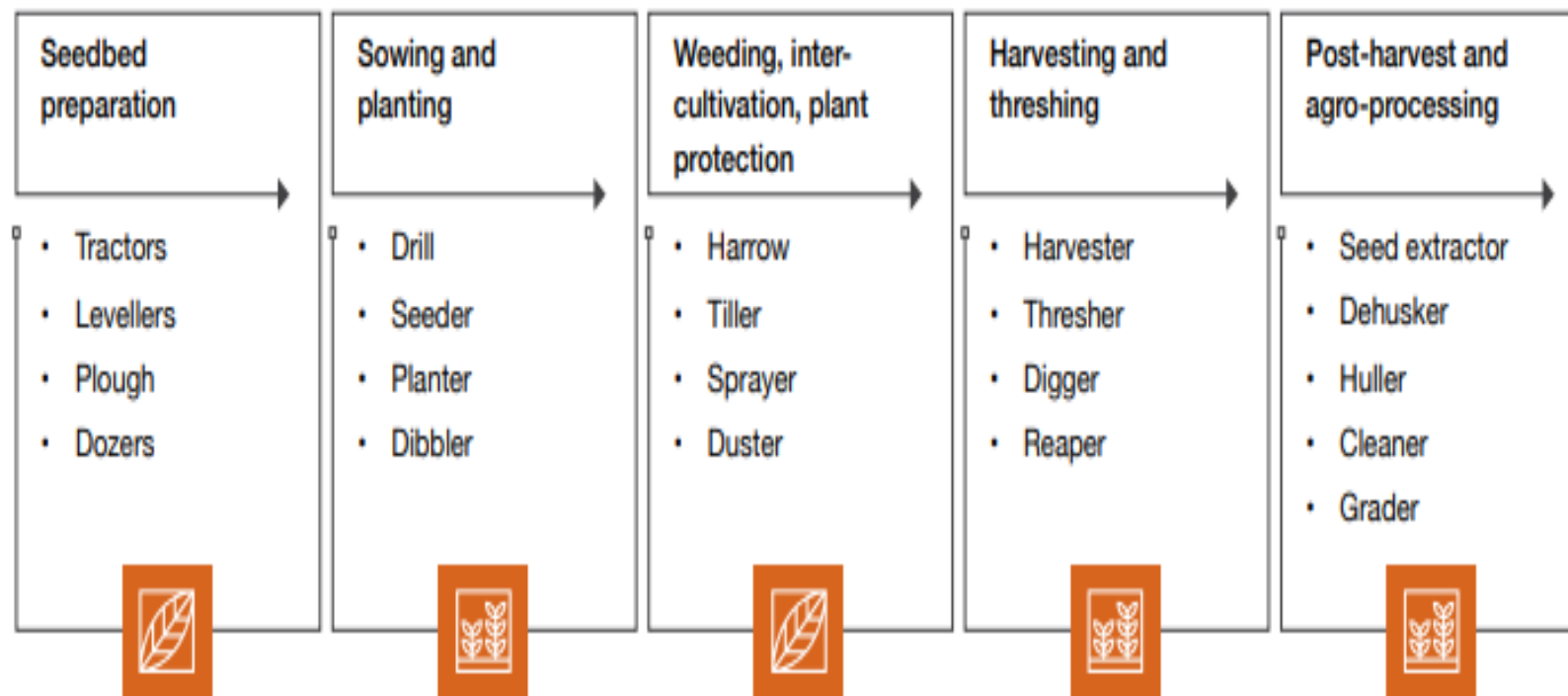
Minor/micro Irrigation



Tube well
Pond
Sprinkler
Fogger
Drip

Tractor
Combined Harvester
Laser Land Leveller
Custom Hiring Centres
Hi-tech

Agriculture value chain and types of equipment required



Land levelling
Preparation
Water Management
Watershed works

One District One Product

Haryana – Jind – Poultry Meat Based Products

J & K – Bandipora – Processed poultry

Karnataka – Bengaluru Rural – Poultry product

Punjab – Barnala – Chicken / Poultry products

Tamil Nadu – Namakkal - Poultry Feed & products

& Tiruppur - Poultry Feed

Dairy
Poultry
Goatery
Piggery

Financing for different activities in dairy farming

- Establishment of dairy farms
 - Small dairy
 - Mini Dairy
 - Commercial Dairy
- Cattle / Buffalo breeding farms/A.I.units
- Calf rearing
- Fodder cultivation

Financing for different activities in dairy farming (contd.,)

❑ Dairy Infrastructure –

- [Milking machines, milk testers](#)
- Milk parlours or [community milking centres](#)
- [Bulk milk coolers](#)
- [Automatic milk collection centres](#)
- [Milk tankers](#)
- [Feed plant](#)
- [Milk processing units](#)
- [Retail outlets](#)
- [Veterinary hospitals/](#) dispensaries/ clinics/ Disease
diagnostic laboratories



Post Harvest Management

Dry Warehouse Infrastructure

- Rural Godown
- Warehouse
- Silos
- Market Yard
- Sorting, Grading, primary processing

Wet Warehouse Infrastructure

- Pack Houses
- Cold Storage (Bulk and Hub)
- Reefer Vehicles
- Ripening Chamber

Bulk – to keep single commodity

Hub -

Agro and Food Processing

Food Processing– Major Processed Foods

Sl. No.	Segment	Major Processed Food Products
1	Grains & Cereals	Flours, Bakery products, Starch & Starch Products, Cereal Flakes, Malted Foods, Fermented Products, Vermicelli, Pasta, Noodles, etc.
2	Consumer Foods	Ready to Eat (RTE) Foods, Snack Food, Extrusion Foods, Alcoholic and Non-Alcoholic Beverages
3	Dairy Products	Pasteurized liquid milk, Whole Milk Powder, Skimmed Milk Powder, Condensed Milk, Ice Cream, Butter, Ghee, Cud, Yoghurt, etc.
4	Fish & Aqua Products	Fresh, Frozen, Dried and Canned fresh water, brackish water and marine fish and aqua products
5	Meat and Poultry	Fresh, Chilled, Frozen and Packed Meat, Value Added Meat Products (sausages, ham, bacon, nuggets, etc.), Eggs and Egg Products, etc.
6	Fruits & Vegetables	Juices, Concentrates, Pulps, Slices, Jams, Jellys, Purees, Frozen and Dehydrated Foods
7	Oils & Fats	Edible Oils, Spice Oils and Oleoresins, Lard, Margarine, etc.
8	Animal Feed	Poultry, Cattle Feed and Pet Foods

Food Processing– Emerging Technologies

Sl. No.	Segment	Emerging Areas / Technologies for New Investments
1	Food Preservation / Storage	Controlled Atmosphere Storages, Frozen Stores, Multi-product Storages, Controlled Ripening Chambers, Silos
2	Food Processing	Aseptic Pulping, Ultra High Temperature (UHT) Processing, Individual Quick Freezing (IQF), Minimal Processing, Food Irradiation, High Pressure Processing, Pulsed Electric Field Processing, High Intensity Pulsed Light Processing, Application of Ozone / Ultrasound / Microwave in Food Processing, Membrane Processing, Ohmic Heating, Application of Nano Technology, Designer Foods (Functional Foods, Nutraceuticals, etc.).
3	Food Packaging	Aseptic Packaging, Intelligent or Smart Packaging, Modified Atmospheric Packaging, Vacuum Packaging, Edible/ Water-Soluble Packaging, Application of Radio Frequency Identification (RFID) System and Nano Technology in Food in Packaging
4	Food Safety & Quality Certification	Food Safety & Standards Authority of India (FSSAI) Certification, Hazard Analysis and Critical Control Points (HACCP) Certification, ISO 22000, ISO 14000, etc.

Hi-tech Agriculture

Overview of Hi-tech Agriculture – Story of a nation

Significance of Hi-tech agriculture in India

Protected Farming

Precision Farming

IOT

Hydroponics,

Aeroponics

Aquaponics

Urban and Peri-Urban Farming,

Hi Tech Farm Mechanisation

Tissue Culture

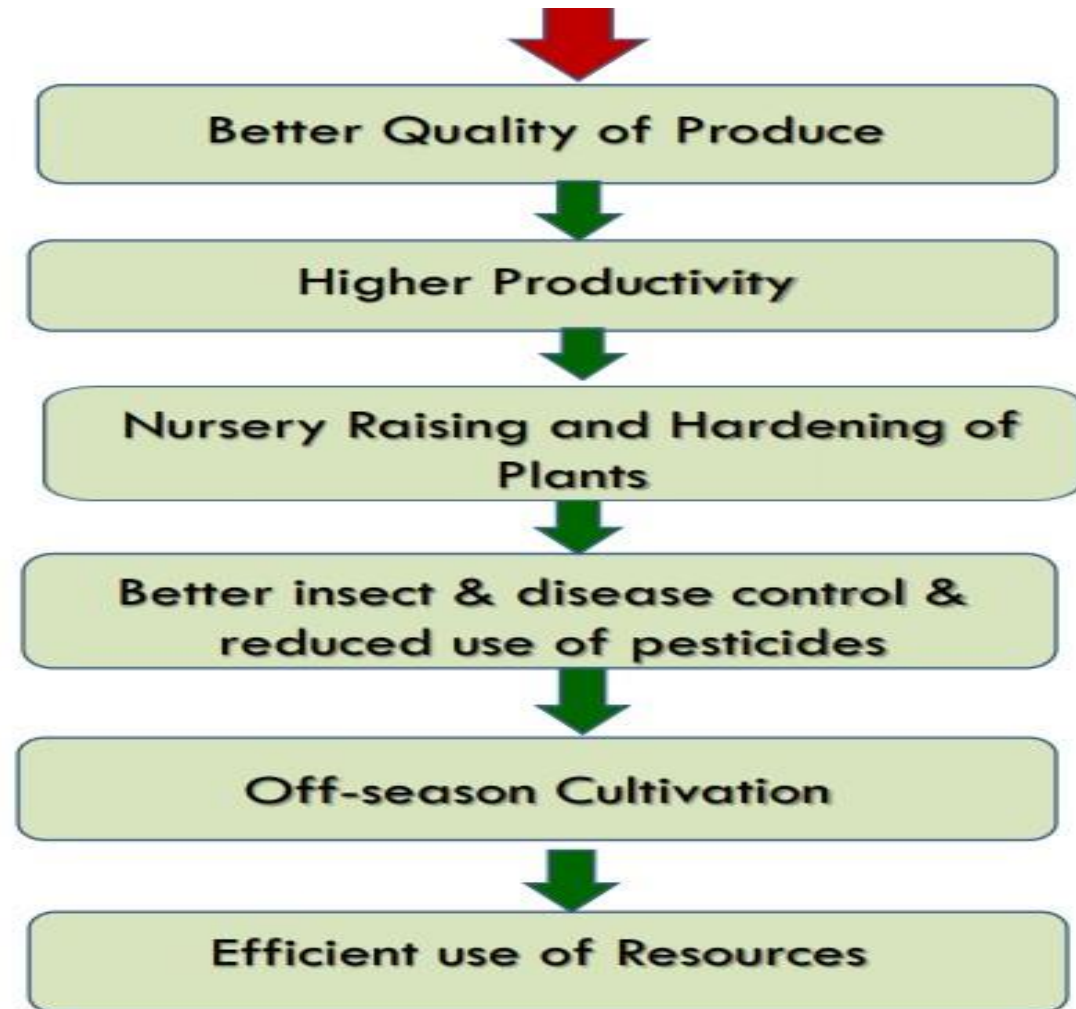
Scope for Bank Finance

Industry 4.0 – Agriculture 4.0

1st End of 18th Century	Water and Steam powered	Mechanised farming , Cotton spinning Jenny
2nd Start of 20th Century	Electrically powered mass production on specialization	Transportation, Farming Machinery (Mechanical and analog)
3rd Start of 1970s	Uses Electronics and IT for automation	HYVs, Resistant varieties , Biotechnology , Satellite Technology , Remote Sensing
4th	Cyber-Physical systems	Bot farms, AI , Smart Farm adapting

Protected cultivation

- A **cropping** technique wherein the micro climate surrounding the plant body is controlled partially or fully as per the requirement.
- Greenhouse
- Plastic Tunnel
- Shadenet House
- Walk in Tunnels
- Plant Protection Nets

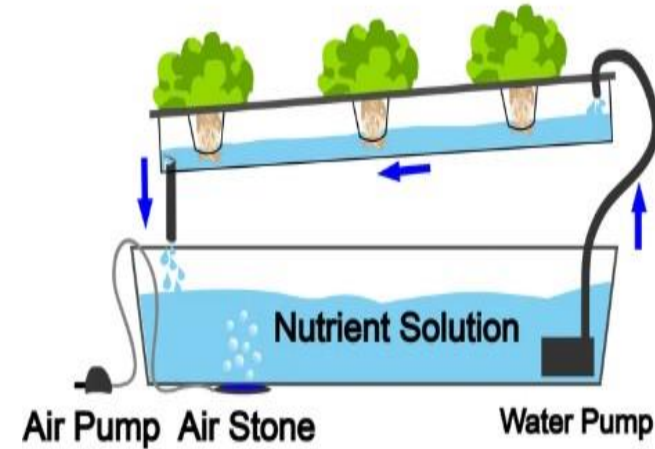


Types of Hydroponics Systems

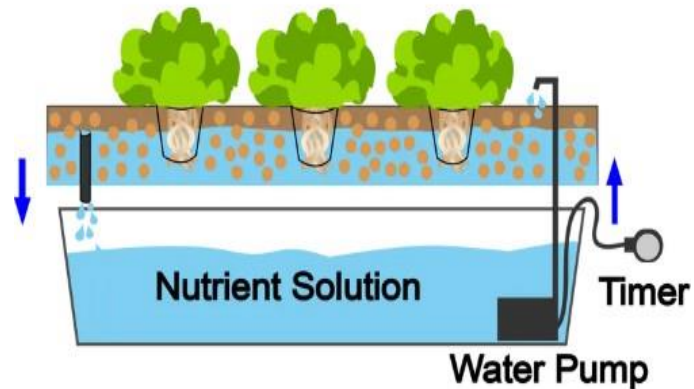
Deep Water Culture (DWC)



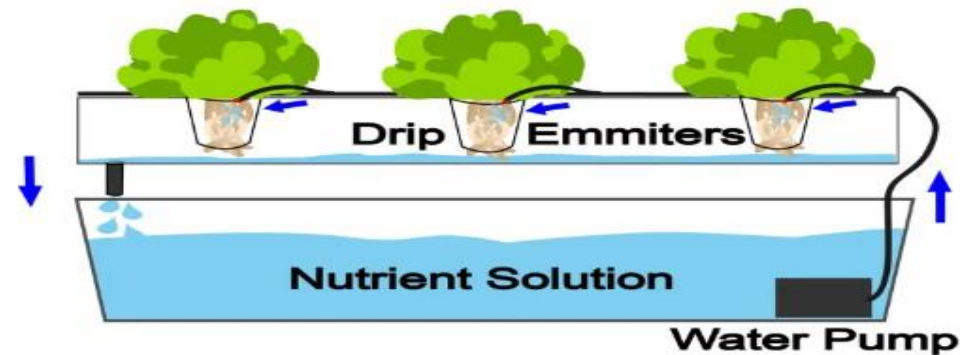
Nutrient Film Technique



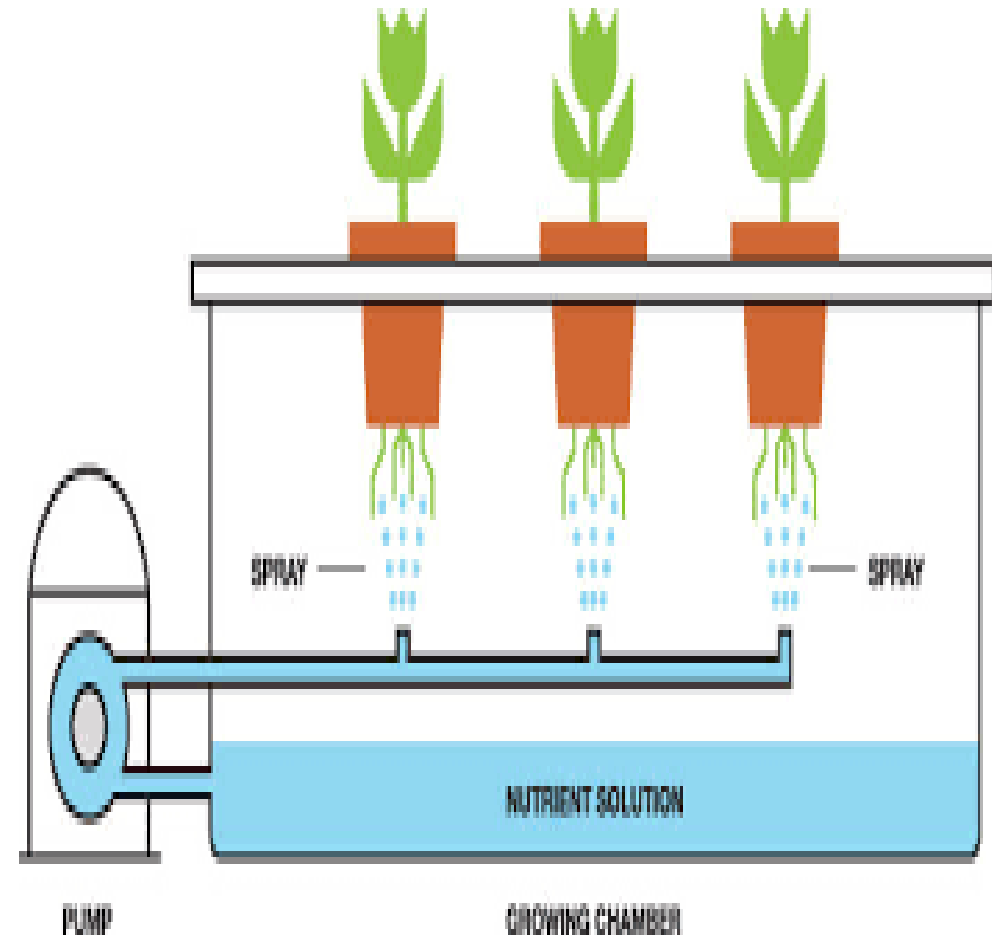
Ebb And Flow



Drip System



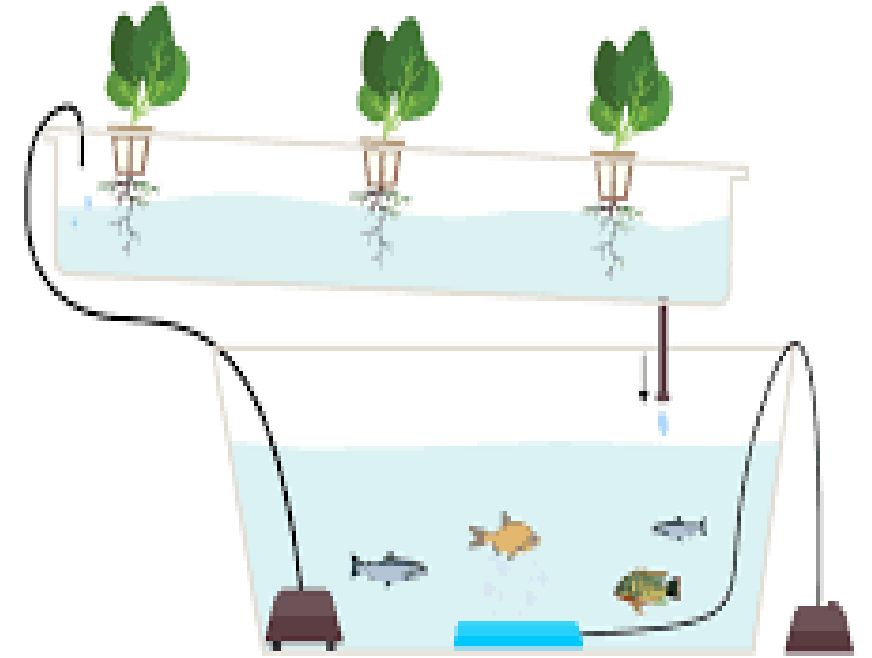
Aeroponics



Aquaponics

A bio-integrated system of

1. Aquaculture sub-system, consisting of fish or other animal aquatic cultures.
2. Hydroponic sub-system, consisting of hydroponically-grown plants.



Water containing fish waste provides plants with nutrients needed for their vigorous growth. In return, the plants take up excess nitrogen, providing purified water which goes back into the tank.

And the others...

- Genetically Modified Crops
- Tissue Culture – multiplication of crops
- Mulching Sheets
- Irrigation at variable rate
- Use of Drones
- Artificial Intelligence -Robots



Agriculture Next Gen

MAP OF TECHNOLOGIES AND MATURITY



VERTICAL FARMING

Vertical farming is the urban farming of fruits, vegetables, and grains, inside a building in a city or urban centre, in which floors are designed to accommodate certain crops.



Spiral Garden system



Pyramidal Farm

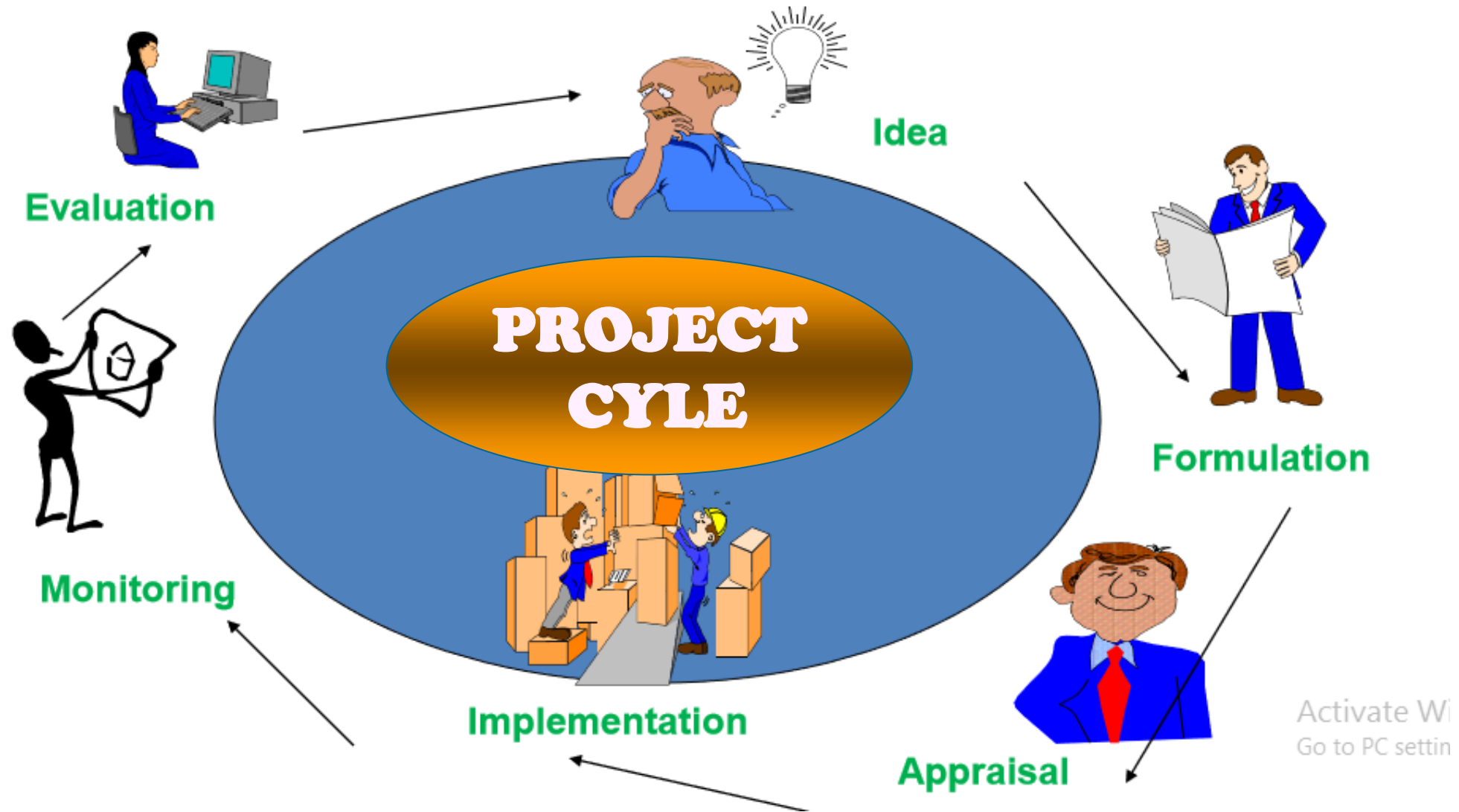
Precision agriculture

- Use of information technology and a wide array of items such as GPS guidance, control systems, sensors, robotics, drones, autonomous vehicles, variable rate technology, GPS-based soil sampling, automated hardware, telematics, and software.
- Everything that makes the practice of farming more accurate and controlled when it comes to the growing of crops and raising livestock.

Cobots

- A **cobot** or **co-robot** (from collaborative robot) is a robot intended to physically interact with humans in a shared workspace.
- This is in contrast with other robots, designed to operate autonomously or with limited guidance
- Collaborative industrial robots are highly complex machines which are able to work hand in hand with human beings. The robots support and relieve the human operator in a conjoint work flow.





Appraisal

Borrower appraisal



➤ **3 C s**

➤ **MANAGERIAL**

➤ **ORGANISATIONAL**



Project appraisal



➤ **TECHNICAL**

➤ **COMMERCIAL**

➤ **FINANCIAL**

➤ **ECONOMIC**

Borrower Appraisal

3 C's – Character, Capital & Capacity

Character

- Honesty/Integrity
- Intention
- Drive/Energy
- Patience
- Behaviour
- Risk Taking Ability
- Competence, Intelligence
- Self Confidence

Capital

- Margin Money
- Manage Crisis
- Mitigate Part Of Liability
(Out Of Own Sources)

Capacity

- Competency (technical)
- Qualification
- Knowledge
- Experience
- Exposure
- Expertise

Managerial Aspects



- Man behind the venture-his managerial skills
- Ability to hire qualified persons
- Training
- Attitude towards the venture

Organizational Aspects

- Ability of the branch to service the unit
- Ability of the promoter to keep a record of its progress & accounting
- Support available from other depts., commodity boards/ universities / consultants

- **for Large Projects**
 - Organizational set up
 - BoD - Composition
 - Decision making hierarchy
 - Previous Bankers
 - Persons responsible for implementation
 - Monitoring mechanism- system of obtaining progress report

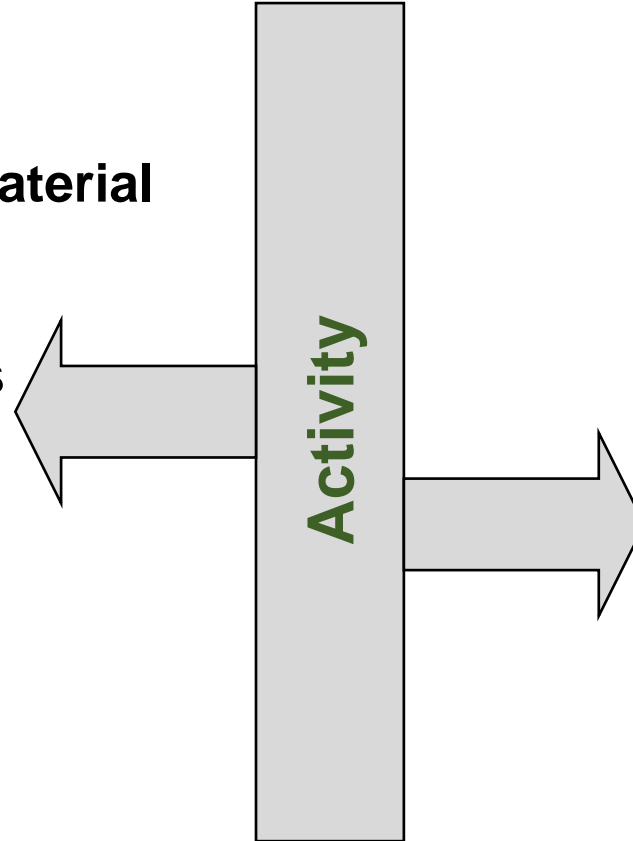
Technical Appraisal

- Suitability of the Area : Agro-climatic conditions (Temperature, Humidity, Rain fall), Soil: pH, Depth, Topography/ Slope
- Availability of Water
- Availability of Inputs (Planting Material, Fertilizers, P P chemicals, labour, Extension service, Electricity)
- Spacing & Layout
- Building and civil works- suitability/layout, necessity, reasonableness of cost Variety- HYV -Package of practices
- Plant & Machinery- Utilities- Technology-

Commercial Appraisal

Backward Linkages

- Availability of quality raw material
- Inputs
- Procurement of equipments
- Roads, Culverts
- Workmen quarters
- Irrigation water
- Technical guidance



Forward Linkages

- Storage
- Processing
- Marketing
- Transportation
- Factory

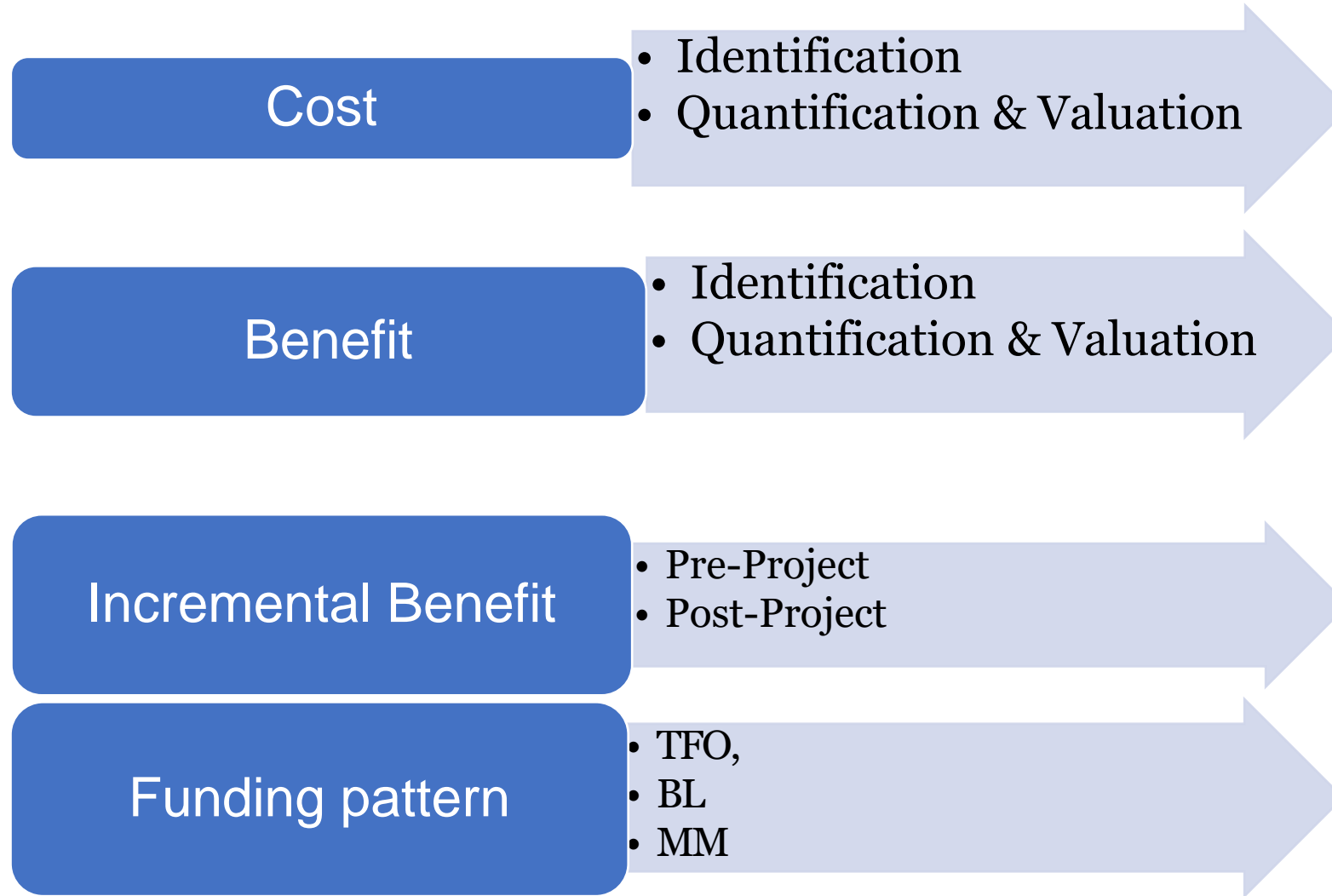
Scale of operation- Is it optimal?

- Demand (Sales promotion, brand name, advt,)
- Location of Demand
- Cost on transportation, packing etc.
- Remunerative price

Economic Appraisal

- Social Acceptance/ desirability
- Pollution control
- Beneficiaries : Whether all the sections of the society covered ?
- Labour resistance
- Export ? - foreign exchange earner ?
- Contribution to GDP?
- National Priority?
- Thrust area
- Social costs & Benefits (Taxes/Subsidies)

Financial Appraisal



Detailed Project Report –Contents



Name of the Activity & Area of implementation



Borrower / Beneficiary Profile



Managerial and Organizational profile



Activity profile (Technical / commercial)



Financial details / cash flow / funding arrangements / security/ repayment



Legal documents/invoices and other supporting documents



Any other relevant points

Basic Statements in Financial Analysis

(Annex to Process Note)

A. Project Cost Estimate

B. Funding Arrangements

C. Income and Expenditure Statement

D. Cash Flow Statement for

Calculation of [Payback period] ; [ROI] ; [BCR, NPV, IRR]

E Debt Service Coverage Ratio

F. Repayment Schedule

G. Break Even Analysis

H. Projected Balance Sheet

**I. Financial Ratios for assessing the organisation capacity
(Fixed Assets Coverage Ratio (FACR) and Interest Coverage Ratio)**

J. Working capital assessment

ACABC

AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABC)

INDICATIVE LIST OF AGRI VENTURES UNDER ACABC SCHEME

- Extension consultancy services
- Soil and water quality cum inputs testing laboratories
- Crop protection services, including pest surveillance, diagnostic and control services
- Micro-propagation including plant tissue culture labs and hardening units;

AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABC)

INDICATIVE LIST OF AGRI VENTURES UNDER ACABC SCHEME – Contd..

- Production, maintenance and custom hiring of agricultural implements and machinery including micro irrigation systems;
- Seed production and processing units;
- Vermiculture units;
- Prod of bio-fertilizers, biopesticides & other bio-control agents;

**AGRI-CLINICS AND AGRI-BUSINESS
CENTRES (ACABC)
INDICATIVE LIST OF AGRI VENTURES
UNDER ACABC SCHEME –Contd..**

- Apiaries (bee-keeping) and honey & bee products' processing units;
- Agricultural insurance services;
- Agri tourism

**AGRI-CLINICS AND AGRI-BUSINESS
CENTRES (ACABC)
INDICATIVE LIST OF AGRI VENTURES
UNDER ACABC SCHEME –Contd..**

- Agri journalism – film production, farm publications and exhibitions;
- Poultry and fishery hatcheries;
- Livestock health cover, veterinary dispensaries & services including frozen semen banks and liquid nitrogen supply and artificial insemination;

AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABC)

INDICATIVE LIST OF AGRI VENTURES UNDER ACABC SCHEME – **contd.**

- Information technology kiosks;
- Feed production, marketing and testing units;
- Value addition centres;

AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABC)

INDICATIVE LIST OF AGRI VENTURES UNDER ACABC SCHEME – Contd..

- ❖ Metallic and non-metallic storage structures.
- ❖ Horticulture clinic, nursery, landscaping, floriculture
- ❖ Sericulture;

AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABC)

INDICATIVE LIST OF AGRI VENTURES UNDER ACABC SCHEME – Contd..

- ❖ Vegetable production and marketing;
- ❖ Retail marketing outlets for processed agri-products;
- ❖ Production and marketing of farm inputs & outputs;

AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABC)

INDICATIVE LIST OF AGRI VENTURES UNDER ACABC SCHEME – Contd..

- ❖ Contract farming;
- ❖ Crop production and demonstration;
- ❖ Mushroom production;

Project Financing Concept



SHG
JLG
FPO

Investment Credit - Guidance



- KVK
- Departments
- Private extension services
- DDM NABARD, PLP, SFP
- SoF
- SLTC Investment Credit
- Progressive Farmers, Good clients
- ICAR

Thank You

Bankers Institute of Rural Development Lucknow

