

# The negative impact of subsidies on the adoption of drip irrigation in India and ways forward

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# BACKGROUND

- MI technologies- Drip (and Sprinkler) - increasingly propagated as technological solutions for water conservation.
- Despite numerous advantages, the technology has failed to capture the kind of market that would have been expected- many reasons – high cost, technological, financial, water quantity and quality etc
- In India, the government has been using the capital cost subsidy as the primary vehicle for promoting uptake of drip technology
- Dual logic – reduce upfront cost; improve financial viability of investment

# THE PAPER- OBJECTIVES AND SCOPE

- Assesses the efficacy of current system of subsidy delivery in promoting uptake of drip technology
- Suggest possible modifications in model of subsidy delivery that could help accelerate the pace of adoption.
- Focusses on Madhya Pradesh – conclusions valid for other regions as well

## THE SUBSIDY REGIME

- Government subsidises 70 to 80 per cent of the capital cost.
- All categories of farmers are eligible to avail subsidy
- Assistance limited to maximum of five hectare per beneficiary

# BASIS FOR SUBSIDY ELIGIBILITY AND CALCULATION

- Potential supplier participants in the subsidy program must obtain BIS certification
- The Government of India has also established detailed specifications/ configuration for what is defined as typical drip systems to ensure that the equipment from BIS certified companies creates a package for farmers which can be turned into a fully functional drip system
- Important to note that subsidy applies only when the specified configured set of components is purchased. Not available for differently configured or individual components of the system
- The NMMI estimates drip system costs for particular farming system requirements. The per cent level of subsidy remains same irrespective of whether the prices of a specific certified manufacturer are higher, or lower, than those indicated

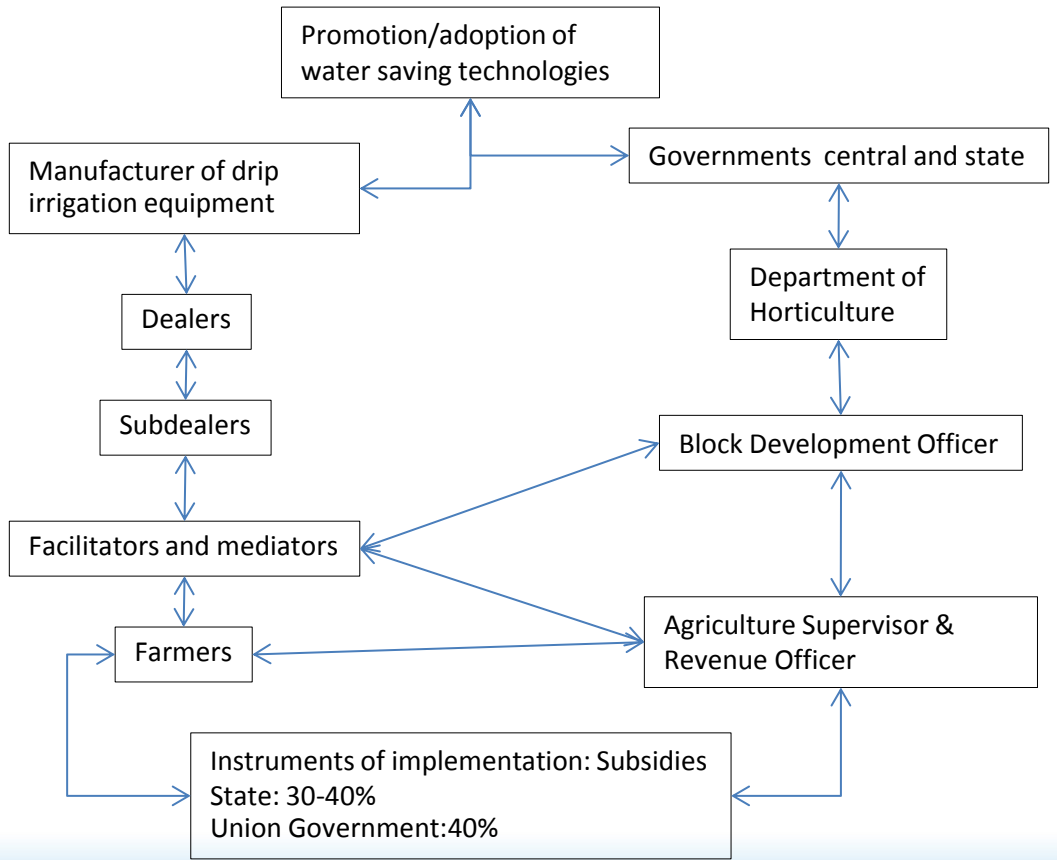
# INDICATIVE COSTS OF DRIP IRRIGATION SYSTEMS FOR SUBSIDY CALCULATION BASED ON FARM SIZE AND LATERAL SPACING (COSTS IN RS) (2010)

Lateral spacing (mxm)	Spacing	Farm Size						
		0.2 ha	0.4 ha	1.0 ha	2.0 ha	3.0 ha	4.0 ha	5.0 ha
12x12	Wide	8057	13785	18820	29928	46467	57809	73611
8x8	Wide	8673	15088	22028	36217	56087	70893	89964
4x4	Wide	11177	18621	31793	55725	86926	113812	135459
2x2	Wide	18319	31616	63598	123441	179332	249134	305797
1.2x0.6	Close	24063	43818	97598	185565	280886	378946	474070

# INSTITUTIONAL ARRANGEMENTS AND PROCEDURES FOR SUBSIDY DISBURSAL

The Government agency has put in place an elaborate “transparent” time bound procedure for processing subsidy disbursal :

- requires farmers to fill out 14 to 18 forms,
- attach multiple documents and documentary evidence,
- obtain ‘no objection’ statements and clearances from multiple agencies,
- move paperwork between a variety of agencies and government departments on a particular timeline.
- this interaction with the government must take place concurrent with liaison with dealers to obtain required clearances



# IMPLICATIONS OF INSTITUTIONAL ARRANGEMENT

Procedure complicated enough to dissuade even an enthusiastic farmer.

## Indigenous Solution

- an industry of agents (facilitators) have emerged to move farmer appln.
- Agents act on behalf of manufacturers/ dealers and facilitate the entire subsidy process, including obtaining various approvals, for farmers.
- Rather than seeking out agents, farmers are sought out by agents
- Overall it appears that the farmer has become a passive participant in the subsidy process, with the agent pushing adoption and making the decisions about product choice and supplier
- Less than active participation also in the subsidy acquisition system, also leads to less than enthusiastic use of the products once supplied



# AVAILABILITY OF SUBSIDY AND UPTAKE OF DRIP

- Almost all the drip equipment sales (>95%) are subsidy driven.
- Premised- subsidy withdrawal may lead to sales nosedive
- Reasoning being advanced to justify, continue and raise % subsidy.
- This argument being advanced to persuade governments increase kitty
- To support this argument all intermediaries show long pending demand
- Given the substantial government subsidy it is but natural to expect that not many willing farmers would invest in drip without subsidy.

# ADVERSE IMPACT OF SUBSIDY REGIME

Linkage between uptake of drip systems to availability of subsidy has killed

- Inertia of developing aggressive marketing strategies on the part of the manufacturers to push and promote sales of unsubsidized systems, and
- Attempts at bringing down the manufactured cost of drip through alternative/innovative product designs or technological innovations.
- Efforts of manufacturers, dealers and other stakeholders directed on making most of the available government subsidy.
- Has made the manufacturers subservient to government favors and led to loss of their enterprise spirit impeding the growth of market for drip
- Insistence on carrying BIS mark as a seal of guarantee, and a pre- condition for qualifying to become supplier under government subsidy scheme, has led to adoption of unfair business practices

# WHO GAINS FROM CURRENT SUBSIDY REGIME

- Suggest a strong nexus between manufacturers and implementing agencies of the government
- The subsidy, meant for the farmers, is actually going to the manufacturers who claim it in the name of the farmers.
- Since subsidy is provided as a per cent of the price and not capped, implies higher the quoted price, up to the normative prices fixed by the government, the higher is the amount of subsidy.
- It is therefore in the interest of the manufacturer not to lower but to jack up the prices of drip sets in the name of higher manufacturing cost and claim higher amount of subsidy without any commensurate benefit of higher subsidy going to the farmers

# SOME QUESTIONS ON SUBSIDY

- Why should eligibility condition for subsidy bind a farmer to a specific configuration? Is the government, by providing subsidies, trying to promote a specific kit of drip system or the concept of drip system in general?
- Why should government fix prices for the systems available under scheme
- Is there a way out of exiting this nexus and use the available government subsidies to achieve the goals that these subsidies are intended to achieve?

# TOWARDS AN ALTERNATIVE SUBSIDY MODEL

- Almost all current drip sales occur under the subsidy system
- An important reasoning advanced is that the capital cost subsidies are necessary and should not only continue but expanded by allocating more money for the program.
- This line of argument is supported by indications from some manufacturers and dealers of unmet demand by farmers
- We premise that there may be unmet demand for drip services, but that it is due more to the operation of the current subsidy system rather than a lack of subsidy funds.
- We postulate that a simple change in the subsidy delivery approach from a one time capital cost subsidy to an interest free loan would create one such alternative -the scenario of market prices and uptake of drip by farmers may change considerably

# LIKELY IMPACT OF SUBSIDY WITHDRAWAL ON PRICES

- Manufacturer of drip systems sold under subsidy scheme cost different components at prices much above the market price
- Prices of drip systems now on the government price list would fall at least 40% towards levels now seen in the open market if subsidies were withdrawn by the government. The fall would likely be even greater.
- This perception is shared by almost all the market players including some of the leading manufacturers and sellers of the drip systems.

# DIRECT DELIVERY OF SUBSIDY

- Replace one- time capital cost subsidy with interest cost subsidy.
- Give interest free loans for the entire cost of a drip system. Capital repayable after 5 years. Loans administered through existing institutions.

The farmer is free to:

- buy from any dealer/manufacturer,
- choose any desired configuration,
- negotiate a price and
- after sales service conditions

The farmer does not need to :

- visit government offices to obtain approvals and clearances
- procure no objection certificates etc before buying the system
- Invest any money upfront
- Utilise the services of Agents
- Raise finances for non subsidy part

The government only plays its facilitative and regulatory role in ensuring that only good quality products are sold in the market and farmers are not cheated by manufacturers.

# DIRECT DELIVERY OF SUBSIDY - ADVANTAGES

With a given amount of funds available for subsidy, the proposed model, in comparison with the existing subsidy delivery system, can

- bring in much larger area under drip irrigation
- lower subsidy outgo per hectare of drip irrigated area
- still incentivise the farmers to invest in drip systems
- be more transparent, less prone to corruption, easy to manage, govern
- less prone to interference and whims and fancies of officials
- lead to more efficient use of available subsidy, without distorting the market for sales of drip systems
- bring back the enterprise spirit and inertia of developing aggressive marketing strategies on the part of the manufacturers



# CONCLUSIONS

- While government intention of subsidizing drip systems for farmers is admirable, the subsidy system has held back drip expansion.
- It has killed incentives to bring down manufacturing costs and market prices through alternative product designs or technological innovations.
- It has made manufacturers subservient to government favours, leading to loss of enterprise spirit, further impeding the growth of drip market.
- It has forced farmers to buy sub-optimal systems, discouraging increased use and farmer innovation.
- An alternative subsidy delivery system that would place loans in the hands of farmers rather than subsidized products in the hands of dealers could accelerate the drip adoption rate.