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① Investment in research on agricultural sector delivers higher returns than any other form of support to farmers in the country?

Introduction -

Govt should invest more in agricultural R&D for ensuring food security & environmental sustainability as climate change & (T) population ^{factors} pushes for modernized agriculture

R&D in agriculture till now in India

① according to data, India's R&D expenditure in agriculture is [0.6-0.7%]
where USA - 2.8%, CHN - 2.1%, ISR - 4.2%,
S.Korea - 4.8%.

② with 27500 scientist & 1 lakh+ supporting staff in agricultural research makes it probably the largest research sm in world

③ India's agricultural crop to

R&D is merely 0.31% where CHN has 0.62%. So, were still below in all factors.

(4) So, far Indian govt has laid out well network of research institute on agriculture but lack of financial support.

Why investment in research on agricultural sector?

→ The returns on [agri sector] yields better than others
(e.g) $\text{C} \bullet 11.2$, fertilizer - (0.88), education (0.97).

→ Due to rising population, India should feed 1.63 Billion mouth by 2050, therefore it needs modernization in agriculture while cultivable lands are shrinking due to urbanization.

→ R&D has the capability to meet the (17) SDG's goals target by 2030.

→ In line with current PM's vision of doubling farmers income by 2022, R&D will be a potential step to meet this requirement.

→ Fortunately, Indian agriculture
filled with plenty of skilled human resources
so, it's a right time to (P) our spending
on [Agri R&D]

Factors pushing for immediate R&D :-

① climate change - Use

of biotechnology can reduce vulnerability
of crops to environmental change & fertilizers
overdependence

② Farmer distress - could

reduce supply-side constraints from farmers
thereby offering long-term solutions for Indian Agri.

③ Food security - investment

in R&D would help create more seeds
& productivity, due to rising population in turn
ensuring India's food security.

④ Efficient water management -

Area-specific R&D on irrigation technologies can play
an important role in raising farmer's income

[Conclusion]

- As
half of the Indian population depend on agriculture,
investment in R&D on agriculture is need at the moment.