Use of Technology to Address Farmers Concerns

What is the issue?

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- Indian farmers face the problems of risk and profitability.
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- Modern technological tools can mitigate the issues faced by the farmers.
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What are the risks faced by the farmers?

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- The risk-bearing capacity of the farmer has been declining for a long time.
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- Their financial ability is so low that failure of a single crop can throw him into distress and push him to suicide.
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- Natural calamities results in complete crop failure and has no traces for claiming an insurance.
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- Lack of access to irrigation is most prevalent in every parts of the nation
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What are the fiscal concerns of the farmers?

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- During planting, the farmer has no clue about the price he is likely to get for his crop which leads to price risk.
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- There is also lack of operational profits from the crop, Profitability depends on input quantities and their prices and output yield and its price.
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- Timely credit is a critical item as it is physically not possible for bank staff to cover all farmers in time for the agricultural season.
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How these concerns can be mitigated by use of technology?

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- **Irrigation technologies -** Flood irrigation must be replaced with precise application systems like drip and hose reel for 50-70 per cent water-saving.
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- **Use of data analytics -**Robust insurance programme can be assured by availability farm-level data captured through satellites, sensors and other modern tools.
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- Using predictive analytics a price prediction model can be developed which gives the farmer, at planting time, an idea of the likely price it will help him take an informed decision on crop choice.
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- **Digital markets -**Linking farmers directly to digital markets will eliminate middlemen and push farmers up the value chain for price discovery.
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- Complete digitisation for credit availability can be achieved using JAM accounts and digitised land records.
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- **Biotechnology solutions**- Replacing transplanted paddy with modified seeds of water-use efficiency gene can save water up to 30 per cent.
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- Similarly nitrogen-use efficiency gene and phosphorus-use efficiency gene reduce consumption of fertilisers significantly.
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- **Seamless Communication -**The Government should create a unified, reliable data base of farmers with complete details of every cultivatable area.
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- Farm-level diagnosis of pests and diseases, advice on nutrition and so on should be available on the mobile phone.
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Source: Business Line

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