



Your Farm, Your Forecast: How IMD's New SANKALP App Is Putting Weather Science in Every Farmer's Pocket

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INTRODUCTION

Every farmer makes a small bet every single day. Should the field be ploughed today or tomorrow? Is it safe to spray or will rain wash the chemical away within hours? For decades, the only weather guidance most Indian farmers had was a district-level bulletin, a forecast meant to cover an entire district, sometimes spread across a thousand square kilometres or more. A farmer in one corner of the district and a farmer fifty kilometres away received the exact same advice, even though their soil, their rainfall and their crop stage could be completely different. That gap between broad science and a farmer's specific patch of land has long been one of the quiet weaknesses of Indian agriculture. On 15 January 2026, the India Meteorological Department (IMD) took a sharp step to close that gap. Marking its 151st Foundation Day, IMD launched two new digital tools, KALP and SANKALP, designed to bring forecasts down from the district to the village, the block and even the individual field (India Meteorological Department [IMD], 2026). This article explains, what these new platforms do, why they matter and how they fit into India's larger push to make farming smarter and more weather ready.

From District Guesswork to Village-Level Precision

To understand why KALP and SANKALP matter, it helps to look at how things worked before. Under the Gramin Krishi Mausam Sewa (GKMS) scheme, IMD has long worked with the Indian Council of Agricultural Research (ICAR) and state agricultural universities to issue five-day forecasts and crop advisories twice a week, every Tuesday and Friday (IMD, 2020). These bulletins travel through Agromet Field Units and District Agromet Units before reaching farmers by SMS, mobile apps, radio and even WhatsApp groups (Agriculture Post, 2022). It is a vast and largely successful network; more than 43 million farmers had registered for SMS-based advisories under this system (IMD Weather, 2021). Yet the forecast itself was still built around the district or, at best, the block, as the basic unit. A district can include hilly tracts, river plains and dry uplands all at once, so one advisory could never truly suit every farm within it.

KALP changes the starting point. Its full name, Krishi Advisory based on Location-specific Weather Prediction, describes its purpose well. Instead of issuing one advisory for an entire district, KALP generates forecasts and crop advice for a specific village or field (IMD, 2026). A farmer using KALP is not told what is likely to happen "somewhere in the district" this week; they are told what is likely to happen on their own land. This single shift, from district to field, is what makes the tool genuinely new rather than just another app.

SANKALP: A Digital Weather Companion for the Farm

If KALP is about location, SANKALP is about turning that location-specific data into something a farmer can act on immediately. SANKALP stands for Systematic Agrometeorological Analytics, Knowledge and Advisory Enabling Platform and IMD describes it as a "Digital Weather Companion" for

farmers (IMD, 2026). The platform takes raw numbers, rainfall, temperature, humidity and blends them with historical weather records and short-range forecasts. The result is a single, simplified advisory: sow now, hold off on irrigation or watch for pest pressure because conditions are turning favourable for an outbreak. According to IMD, SANKALP's core strength is its block-level accuracy, built by combining real-time observations with both past weather patterns and future predictions (IMD, 2026).

Why does block-level accuracy matter so much? Because farming decisions are time-sensitive in a way few other decisions are. A wrongly timed fertiliser application can be washed away by an unexpected shower. A delayed harvest ahead of a heat spell can mean lower grain quality. When the advisory matches the farmer's actual plot rather than a distant administrative boundary, the chance of making the right call rises sharply.

Table 1: How KALP and SANKALP differ from the earlier district-level bulletin system.

Feature	Old District Bulletin	KALP / SANKALP
Geographic scale	Whole district (often 1,000+ sq km)	Village, field or block level
Data used	District-level rainfall and temperature averages	Real-time data, past weather records and forecasts combined
Advisory type	General, crop-group-wise tips	Farm-level, location-specific action points
Launch	Long running (since early 2000s)	15 January 2026, on IMD's 151st Foundation Day

Part of a Bigger Digital Push

KALP and SANKALP did not appear in isolation. They are the newest links in a chain of digital tools IMD has built over the years to reach farmers in their own language and on their own phones. The Meghdoot app already delivers weather-based advisories in English and thirteen regional languages, while Kisan Suvidha, run by the Ministry of Agriculture and Farmers Welfare, offers a similar service (IMD Weather, 2021). The Damini app warns of lightning thirty-five to forty-five minutes in advance, a feature that has likely saved many

lives in the open fields (The News Himachal, 2020). On the same Foundation Day that KALP and SANKALP were launched, IMD also commissioned a new Agro-Automatic Weather Station and evaporimeter at its New Delhi headquarters, strengthening the ground-level data that feeds all these tools (IMD, 2026).

This entire effort sits under a larger umbrella called Mission Mausam, the Ministry of Earth Sciences' plan to make India a weather-ready and climate-smart nation. The mission includes new radar networks, the Bharat Forecasting System and impact-based forecasting that links a weather event directly to

its likely effect on crops, rather than just predicting the weather in isolation (Ministry of Earth Sciences [MoES], 2026). Seen against this backdrop, KALP and SANKALP are not stand-alone gadgets; they are the farmer-facing edge of a much larger national weather modernisation drive.

What This Means for a Farmer's Daily Decisions

Picture a smallholder in Bulandshahr district, Uttar Pradesh, deciding whether to irrigate a wheat field this week. Under the old system, the advisory might simply say that the district is expected to receive light rain. Under KALP, the same farmer could instead receive a message tailored to their own block, telling them that their specific area is likely to see just enough rain to skip one irrigation cycle, saving both water and electricity. IMD officers have already begun demonstrating this shift directly to farmers; an awareness programme on 19 January 2026 at Nakepur village in Bulandshahr district introduced exactly this kind of localized guidance to the farming community (IMD, 2026).

The benefits extend beyond a single irrigation decision. Sowing dates, pesticide timing, harvest scheduling and even decisions about livestock shelter during sudden storms can all improve when the underlying forecast actually matches the farmer's location. For a small or marginal farmer, where a single bad decision can mean the difference between profit and loss for an entire season, this added precision is not a luxury. It is protection.

Challenges That Remain

No new technology arrives without hurdles and KALP and SANKALP are no exception. Smartphone access and digital literacy still vary widely across rural India, so awareness programmes, village-level demonstrations and vernacular communication remain essential (IMD, 2026). There is also the deeper scientific challenge of generating reliable forecasts at such a fine scale; village-level prediction

demands far denser observation networks and far more localized modelling than district-level forecasting ever did. IMD's continued investment in Agro-Automatic Weather Stations and its network of Agromet Field Units suggests this challenge is being taken seriously but bridging the gap between a launch event and dependable, everyday accuracy in every village will take sustained effort over the coming seasons.

CONCLUSION

Weather has always been the one variable a farmer cannot control, only prepare for. With KALP and SANKALP, IMD has narrowed the space between not knowing and knowing precisely, moving farm advisories from the scale of a district to the scale of a single field. It is a quiet but meaningful change: the same monsoon, the same heat wave, the same passing shower, now explained to a farmer in terms of their own land rather than an entire administrative region. As these platforms mature and reach more villages, they carry the potential to do something simple but powerful, turning weather science from a distant forecast on the radio into a daily companion in every farmer's pocket.

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