4(e). Weather thumb rules and their validity

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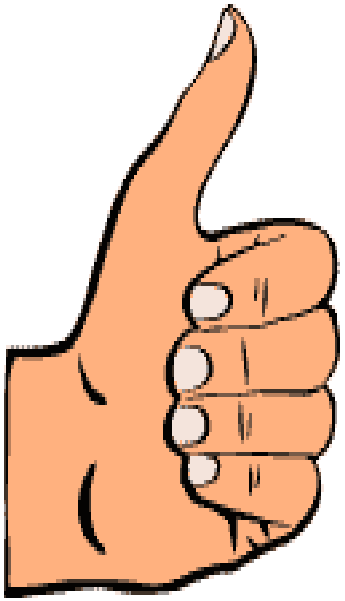

- Cause and effect are combined scientifically
- Quantified nearer to the actual for the benefit of mass and easy adoption

A.Rainfall

Rainfall amount(mm)	Agro advisory suggested
5to 10(enough soil moisture to support crop)	Plant protection
10 to 12(enough soil moisture for farm operation)	Hand weeding and hoeing
12 -15(enough soil moisture for fertilizer to get dissolved and to be taken by the crop)	Fertilizer application
25 to 30 (enough soil moisture for germination, harvesting)	Sowing ,postponement of irrigation, harvesting of tuber crops and ground nut
>30	Adoption of soil and water conservation technologies

B.Temperature

Temperature(°C)	Agro advisory suggested
Day temperature >32 and continued for a week	Initiation of sucking pest infestation and hence planning for plant protection
Night temperature <20 and continued for a week	Germination of disease spore and hence planning for plant protection
Day temperature more than 34 and continues	Provide irrigation immediately to protect the crop from early maturity and stresses

C. Wind speed(KMPH)

Wind speed	Agro advisory suggested
<5	Plant protection, hand weeding and hoeing
10 to 15	Winnowing of produce
15 to20 + rainfall >25mm	Propping of sugar cane of more than eight months old and banana of more than five months old
Wind speed >20	Propping of sugar cane of more than eight months old and banana of more than five months old
Wind speed of >20+Minimum temperature<20° C + evening RH >60 %	Epidemic spread of disease and hence for plant protection planning

D.Relative Humidity (%)

Relative humidity	Agro advisory suggested
Evening RH more than 60 and continued for a week with minimum temperature <20 ° C	Disease initiation and planning for plant protection
Evening RH more than 60 and continued for a week with minimum temperature <20 ° C + wind speed of >15kmph	Epidemic spread of disease

Pest and disease forecast –(Long range)

Weather parameter threshold level	Forecast on pest and disease
Mean air temperature if it is >32°C during December, January and February	Corn flee beetle infestation would be more
If the mean temperature during January is more than the normal	Tobacco will be heavily affected with blue fungi in America

Pest and disease forecast (Medium range)

Weather parameter threshold level	Forecast on pest and disease
During mid January if mean temperature is 9-13°C +Relative humidity of 70 % + 4 octa clouds in North India	Yellow wheat rust will come
During end of January or beginning week of February in Punjab,(India) if mean temperature is around 15 to 20°C +RH of 70% + intermittent cloudiness	Purple rust would come in wheat crop
During end of January or beginning week of February, if the mean air temperature is around 16 to 27° C+RH of 70 % + Dew deposit	Black wheat rust disease would come to wheat crop
Developed weather equation to know the date of appearance of earhead bug in rice at Japan	Date of appearance of the insect = 23.3-0.537 mean temperature of March month +0.456 date of first flowering in cherry plant