

Research recommendations

Scientific recommendations

Year	Topic	Recommendation text
	To use non-linear models Double Fourier series and Artificial Neural Networks to predict the monthly rainfall	“To predict the monthly rainfall with greater accuracy from June to September in middle Gujarat it is recommended to use Artificial Neural Networks with four inputs namely, Maximum air temperature of May, monthly mean Relative .humidity, monthly rainfall and monthly wind speed of previous year , ten number of hidden neurons, training function :Leven berg-Marquardt Back Propagation, Adaption Learning function: Gradient Descant with Bias Learning , Performance function: Mean Square Error , Transfer Function: TANSIG.”
	Methane emission	Early and mid-early maturing varieties showed lower methane emission as compared to late and mid late varieties. Irrespective of varietal traits, higher methane emission was observed during reproductive phase. Methane emission pattern was found to have positive correlation with morpho-physiological traits of the crop and root zone soil properties. Methane emission was found significantly correlated with root length, shoot length, root and shoot biomass and number of aerenchyma.

Recommendations for Farmers

Year	Topic	Recommendation text
	To use non-linear models Double Fourier series and Artificial Neural Networks to predict the monthly rainfall	It is recommended to adopt Double Fourier Series for two inputs & one output as well as one hidden layer Artificial Neural Network for Seasonal Monthly rainfall prediction from June to September using with Ten number of hidden neurons, training function: Levenberg-Marquardt Back Propagation.