

EDITORIAL

The Journal of Agrometeorology is progressing as one of the reputed scientific journals in the field of Agricultural Sciences with a rating of 6.6 of 10.0 as judged by the National Academy of Agricultural Sciences, New Delhi. The credit for this significant achievement goes to authors who have contributed number of good research papers and the reviewers who have critically gone through the manuscripts before clearing for publication. The Managing Editor Dr. Vyas Pandey has also put in considerable effort to ensure timely and quality publication of the journal. It is now very important to further improve the quality of journal so that it gets well acclaimed at International level also as one of the best journals in the field of Agricultural and Atmospheric Sciences.

During recent times we are receiving about 120 to 150 articles every year. We find that most of the articles are of routine nature and in no way able to contribute for the growth of science either through methodology or analysis and interpretation of scientific data. Therefore, it is thought that the present editorial is necessary to invigorate greater thinking among authors and reviewers to promote standard of research and improve the quality of articles in a gradual manner. It is only a matter of concern and in no way should be taken as a criticism. Majority of the papers were found to cover the following thrust areas of research:

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| ■ Agroclimatic characterization | ■ Crop weather relationships |
| ■ Simulation modeling | ■ Crop Phenology |
| ■ Weather effects on pests and diseases | ■ Climate change |

AGROCLIMATIC CHARACTERISATION:

Most of the papers are based on analysis of one or more weather parameters recorded at a single location or couple of locations using already well known statistical methods. Compared to earlier years, we have better accessibility to historical weather data, statistical packages, high speed computers and Geographic Information Systems. Mere presentation of outputs derived from the analysis will not serve any purpose unless the implications of the analysis with regard to planning and management of the agricultural production systems more critically looked into. While conducting regional climatic analysis, some authors use date of different time scales for different locations which is not scientifically valid. While reporting, the authors present the values of weather data like temperature, precipitation etc. upto even second or third decimal places and are not aware that the values have to be reported upto decimal place in which the measurements are made. Therefore, the authors should clearly define the objectives with which data are analysed and the implications of the results obtained based on sound scientific hypothesis.

CROP WEATHER RELATIONSHIPS:

Most of the manuscripts dealing with the subject are based on multiple regression analysis giving a statistical relationship between the end value and a number of weather parameters observed during different time periods of growth. In most of these equations, the regression constants will change with changes in length of the data used and do not clearly explain the cause and effect. These studies may not be much relevant to a large extent either to identify the gaps in research or in offering solutions to the problems at field level. Therefore, it is emphasized that the crop weather relationships should be drawn using analytical methods based on

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| ■ Physical or physiological hypothesis | ■ Simple calculations |
| ■ Easy availability of data which can be measured with routine meteorological instruments and | |

The authors should appreciate that mere calculation of correlation coefficient and draw conclusions is not correct as correlation deals with only linear relationship between the two parameters. Some correlations may be spurious, despite being significant. Therefore, the authors are required to exercise great caution while reporting the results.

PHENOLOGY OF CROPS:

Most of the papers dealing with phenology of crops end up in computing the values for growing degree days, photo thermal units, heliothermal units etc. during different phenological stages of crop growth. It is well established by now that these values change even for the same crop and even same variety when the date of sowing differs at the same place or even from place to place in a given region. Some authors try to establish the relationship between growth parameters and the various indices computed during different phenophases of growth. None of the authors try to improve the

methodology for prediction of the occurrence of different phenophases irrespective of the date of sowing and location.

SIMULATION MODELLING:

The word “Model” is used in a very loose sense. A model should be able to predict the outcome of a parameter irrespective of location and should be valid across different locations even in a given region. The model run with a single location data for a single variety of a crop is not relevant. Several of the authors do not try to improve the models developed and tested to suit their own agroclimatic conditions even. Therefore, it is expected that studies on modeling should be based on data from diverse locations. The authors also should explore the possibility of modifying some of the sub-routines of the model to suit the conditions under which the models are to be applied. The authors also should be able to bring out the gaps in our understanding. There were no attempts for regional/ district level crop yield estimation using simulation models.

WEATHER EFFECTS ON PESTS AND DISEASES:

The major focus on this subject should be on identification of weather conditions that contribute to the initiation, development, multiplication and spread of the pests and diseases on field crops in advance so that farmers can be cautioned to practice control measures for minimizing the losses in production. These studies should be based on long term data at a single location or multi-location data across diversified locations in a given region. Several authors are reporting results based on a single location data collected over a period of one or two seasons. Invariably they produce a correlation matrix and a multiple regression equation using a number of parameters of different time periods. The authors have to interpret the results based on scientific hypothesis and statistics need to be used to validate the hypothesis.

CLIMATE CHANGE AND VARIABILITY:

Many of the authors are not clear about the difference between climate change and variability. When the means or normals of weather parameters for two different time periods are compared, the values will not be exactly same and are bound to be different. Therefore, the authors are trying to conclude that there is increase/ decrease of the parameter, which is not correct. The authors have to critically examine whether the change is a continuous phenomenon for a considerable period. There is also need to examine whether such changes are noticed for the first time during the period for which weather records are available. Moreover, these observations are not relevant unless the impact of variability/ change on agricultural production systems is also simultaneously examined. There may be some positive effects of climate change/ variability and many authors invariably report the negative effects without offering any solution for restoring the productivity or to revert such phenomenon.

Some of the authors consider the predictions made by some agency or other based on anticipated changes in carbon dioxide and temperature in the atmosphere ignoring the uncertainties and run a simulation model. Most of these papers look alike with only a change in the location or in the crop and do open any avenue for furthering research.

OUR CONCERN:

It may not be possible to cover all other areas of research on which articles are received in a more comprehensive manner. However, our major concern is to improve the quality of contents and raise the standard of the journal further. Therefore, the authors are required to make sure, that the article for submission should be based on

- Well defined objectives
- Recent data
- Results that can be useful for preparation of guidelines based on long, medium and short range weather forecasts for adoption by the development organizations, extension agencies and farmers.
- Comprehensive data base
- New techniques and methodologies for analysis and interpretation

The authors are also advised to get their manuscripts vetted by a language expert to ensure good quality of presentation and avoid vague/ loose expressions as well as grammatical mistakes.

Suggestions/ comments that can contribute to the growth of journal will be appreciated. Our aim is to ensure that the authors should feel proud of having their articles published in the journal.

Hyderabad

April 02, 2013

B.V.RAMANA RAO

Editor-in-Chief