

Reviewer's Comments

Title of the Manuscript: Impact of Rainfall and Temperature on the Yield of Major Crops in Gujarat State of India: A Panel Data Analysis (1980-2011)

Manuscript Number: **Ms_CJAST_37071**

Comments to the author:

In general, I think the manuscript presents a very nice analysis with many interesting results. I only find some minor remarks, I therefore suggest its publication after some remarks are taken into account.

Here follows a list of them

Page 1: in the abstract from the second sentence to tenth lines are the same in section of material and methods (from line 9 to 38). In this section should give a basic explanation of the methods but not to repeat the methods. You also wrote the analysis revealed but I think it is the results.

Page 1: I think the introduction is not enough. Please add more.

Page 2: for the equation you did not define β , γ , ε . Study are **not were**

Any explanation on the equation two. Please explain and give the source (author).

Please correct your degree Celsius ($^{\circ}\text{C}$). You are using zero 0 but it is O as exponential.

Line 43: ...D and T are Place (districts in this case) and Time fixed effects **respectively**.

Line 65: you wrote CV=142% this not in the results. CV??

Line 68: this is not a sentence. Please correct.

Page3: line 85: importance of irrigation for **in** these crops...

Page 4: line 121: the effect on yield due to rise **in** by 1°C in...

Page 5: line 126: Mishra *et al* [9], **in a study** have found the same.

Line 129: Elevated **CO2** CO_2 levels in the....

Please, leave space between table and table's name.

Table 3 is not well done. Please modify e.g. move to right.

Line141: results are also supported by other studies (please indicate some author).

Line 149: ...in 100 per cent loss of maize **output** yield [19].

Page 5: Please, I suggest to move to introduction

From line 187 to 193: Aggarwal [28] reported if farmers plant earlier than usual, climate induced damages to wheat can be reduced by 60-75 percent. Biotechnology has an important role here. Studies suggest that drought tolerant varieties can reduce production risk by 30-50 percent [29]. Input management is another area to look upon. Patel *et al.*[30] showed that by applying supplementary irrigation at tasseling and silking stage to kharif maize, nearly 27-32 percent increase in yield can be achieved over no irrigation. Further, the authors suggested shifting crop to rabi season under climate change scenario as high yields could be achieved than kharif season.