



Tropentag, September 14-16, 2010, Zurich

“World Food System —  
A Contribution from Europe”

## Contribution of Improved Rain-fed Wheat Productivity towards Food Security in Pakistan

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### Abstract

The population of Pakistan (170 million) has increased more than 3 times since 1960 and it is estimated to be doubled by the year 2025, which is posing a serious threat to the country's food security. Food supply increase is severely limited by an only modest expansion of the cultivated area and scarce water resources required to increase cropped area. In present scenario, it is inevitable to improve crop, land and water productivity and conserve precious natural resources. Less intensive and less resource degraded rain-fed agriculture presents a better option to narrow the gap in the agricultural food items demand and supply. Keeping in view the importance of crop productivity increase in rain-fed agriculture to meet the ever increasing demand of Pakistan population, the present study is designed for rain-fed Punjab study area. Wheat being the staple diet in Pakistan is selected as crop for productivity analysis. The study investigates the effect of operational land holding, cropping intensity, crop diversity, off-farm income, visit to agricultural research and extension institutes, market information, family labour force and farmers' age and education on wheat yield.

Districts, Rawalpindi and Chakwal, were selected from rain-fed Punjab for primary data collection. Comprehensive farm level data were collected among 210 farmers during 2009–10 through personal interviewing, using a well-defined structured questionnaire. A Cobb Douglas production function is being applied to investigate the factors affecting wheat productivity and their respective strength. For that purpose the SPSS software package is used. First descriptive results of the survey reveal that the age, farming experience and education of the respondent farmers are 52.91, 30.03 and 7.5 years respectively. Land owned in the study area is 6.73 ha while operational holding is 5.16. Overall almost 90 percent area is rain-fed. The cropping intensity of the study area is 119.85 while crop diversity is 3.06. Overall wheat is cultivated on more than the half (52.5%) of the cultivated area. The wheat yield of the study area is 1 704 kg per ha which is below national average.

**Keywords:** Food security, Pakistan, productivity, Punjab, rain-fed, wheat