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Select Theme	: Sustainable and equitable farming systems
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Keyword 1	: Yield gaps
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Title of Entry	: Trade-off among Different Cropping Patterns in the Coastal Bangladesh: A Case Study on Polder 30
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: The cropping intensity and productivity of the coastal zone of Bangladesh are much lower than that of the country as a whole. Most of the farmers produce single rice in the monsoon. Most lands remain fallow during the dry season because soil and water salinity. Recently, the farmers have started cultivating high yielding varieties (HYV) of rice with traditional rice during the rainy season and sesame, maize, and sunflower in the dry season. The study was conducted in polder 30 located at southwest part of Bangladesh to analyze the tradeoff between the main cropping patterns through measuring productivity, profitability, yield gaps

along with the biophysical factors like use of fertilizer and pesticides. In this study, 180 farmers from polder 30 have been selected using random sampling technique. The farmers of polder 30 practiced six cropping patterns. It is evident that yield of traditional and HYV rice was about 2402 and 4247 kg/ha, respectively. Similarly, yield of sunflower (1210 kg/ha) was much higher than sesame (123 kg/ha).The results has highlighted that the market price of traditional rice (Tk. 28 per kg) was higher than HYV rice (Tk. 23 per kg) whereas the average market price of sesame and sunflower was same. Yet, the net income of HYV rice and sunflower was higher than traditional rice and sesame, mainly because of the higher yield of HYV rice and sunflower. The analysis of tradeoff among different cropping patterns has highlighted that HYV rice-sunflower cropping pattern (improved cropping pattern) was more suitable than other cropping patterns in terms of productivity and profitability indicators. It is possible to achieve the growing food demand by adopting this new improved cropping pattern. So, the farmers are being interested to produce HYV rice and sunflower, but they cannot allocate more lands for its production because of land topography, hydrology, needs more fertilizer, irrigation, and labor than traditional cropping. By optimizing the management practices of the new system, there are opportunity to reduce the environmental footprints and addressing the food security of the region. . Key words: Trade-off, yield gap, cropping pattern, polder, coastal zone.

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