Supplementary Material

Optimal cropping pattern based on short-term streamflow forecasts to improve agricultural economic benefits and crop productivity under uncertainty conditions

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| E:\Gaurav\OneDrive - Indian Institute of Technology Guwahati\survey recordings\20210704_120338.jpg5-6 feet height(a) | E:\Gaurav\OneDrive - Indian Institute of Technology Guwahati\survey recordings\20210704_112757.jpgFlood water rising in sandbars(b) |

Figure S1. Pattern of vegetable grown during the onset of monsoon period in a sandbar within the Brahmaputra River to avoid damage due to flood (a) Before flooding condition (Farm 1); (b) during nominal flooding (Farm 2). The maximum depth of water measured was 0.4-0.5m. (*Location*: 26°14’37” N, 91°46’37” E, *Date*: 4th July 2021: 12.33 pm. *Picture courtesy*: The Author)

Table S1. Flood tolerant varieties of crops

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| **Crop** | **Flood tolerant crop varieties** |
| Rice | CR Dhan 502, CR Dhan 505, Durga, Gayatri, Sarla, Hemavathi, Jaladhi 1, Jaladhi 2, JalaMani, , Jalnidhi, Neerja, Pooja, Prateeksha, Sambha Mahsuri, Sub-1Swarna Sub-1, Varshadhan  |
| Maize | HM-5, Seed Tech-2324, HM-10, HTL lines, PMH-2, B73, SUS lines,\*Z. luxurians, and \*Z. mays ssp. huehuetenangensis \*Z. nicaraguensis |
| Barley | \*H. marinum and \*H. spontaneum |
| Wheat | \*Triticum macha L. or T. dicoccum cv., T. spelta |
| Rapeseed | \*B. juncea and \*B. carinata, \*GH01, \*Zhongshuang 9,  |
| Jute | Bidhan Pat-1, JRC 321, JRC 532, JRC-517, JRC 7447, JRO 878,  JRO 7835  |
| Pulses | Pigeon pea (Asha (ICPL 87119) |

(*Source: Ministry of Agriculture and Farmers Welfare, Government of India)* <https://pib.gov.in/newsite/PrintRelease.aspx?relid=123999>

*\*other flood tolerant varieties (Verhoeven et al., 2010)*