**Table S1:** Detail of crop husbandry practices of wheat at different experimental sites during different years

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Seedbed preparation**  | **Sowing time** | **Seed rate (**kg ha-1) | **Weed control** | **Irrigation** | **Fertilizer applied (**kg ha-1) | **Harvesting** |
| **Experiment 1** |
| **Faisalabad site (2012-13)** |
| Soaking irrigation + 4 cultivations + 2 plankings\* + direct drilling | November 25, 2012 | 125  | Topik 15WP (Clodinafop-propargyl 300 g a.i. ha-1)at tillering  | 6 irrigations (Tube well + canal source) | N:P:K at 100:90:60 | April 13, 2013 |
| **Experiment 2**  |
| **Faisalabad site (2013-14)** |
| Soaking irrigation + 4 cultivations + 2 plankings + direct drilling | November 27, 2013  | 125  | Topik 15WP (Clodinafop-propargyl 300 g a.i. ha-1)at tillering | 6 irrigations (Tube well + canal source) | N:P:K at 100:90:60  | April 11, 2014 |
| **Sheikhupura site (2013-14)** |
| Soaking irrigation + 4 cultivations + 2 plankings +direct drilling | November 30, 2013  | 125  | Topik 15WP (Clodinafop-propargyl 300 g a.i. ha-1)at tillering | 6 irrigations (Tube well source) | N:P:K at 100:90:60  | April 15, 2014 |
| **Faisalabad site (2014-15)** |
| Soaking irrigation + 4 cultivations + 2 plankings + direct drilling | November 19, 2014 | 125  | Atlantis 3.6 WG(Mesosulfuron +Idosulfuron 4.32 g a.i. ha-1) at tillering stage  | 6 irrigations (Tube well source) | N:P:K at 100:90:60  | April 19, 2015 |

**\*=** Planking is a regional term meaning leveling seedbed after plowing and cultivation; N= Nitrogen; P= Phosphorous; K; Potassium