Supplementary Table S1. County-level existing yield (Yc), attainable yield (Ya), water-limited potential yield (Yw) and yield gap estimated for each county in Kansas

County	Yc (Mg ha^{-1})	Ya (Mg ha^{-1})	Yw (Mg ha^{-1})	Yield gap of Ya	Yield gap of Yw	Yield gap (% of Ya)	Yield gap (% of Yw)
BARBER	7.6	9.4	17.1	1.8	9.5	18.7	55.3
BARTON	7.5	10.0	12.9	2.5	5.4	24.9	41.7
CLOUD	7.4	8.9	24.0	1.5	16.6	16.8	69.3
COFFEY	6.5	7.2	16.0	0.7	9.5	9.6	59.2
DECATUR	9.6	11.0	21.7	1.4	12.1	12.4	55.8
DICKINSON	7.6	9.3	17.0	1.7	9.4	18.4	55.5
ELLSWORTH	6.9	8.9	14.4	1.9	7.5	21.8	51.8
JEWELL	6.9	9.3	14.4	2.3	7.4	25.1	51.6
KINGMAN	6.9	7.9	13.8	1.0	6.8	12.7	49.7
LINCOLN	7.9	10.4	15.1	2.4	7.1	23.6	47.4
MARION	6.4	7.5	14.8	1.1	8.3	14.4	56.5
MCPHERSON	7.2	9.1	13.9	1.9	6.7	21.1	48.3
NORTON	8.6	11.4	12.5	2.8	3.9	24.7	31.5
OTTAWA	8.4	10.9	13.7	2.5	5.3	22.8	38.5
PHILLIPS	7.5	8.6	15.3	1.0	7.8	12.1	50.8
POTTAWATOMIE	7.5	8.5	14.3	1.0	6.8	11.4	47.7
RENO	7.4	8.1	17.9	0.7	10.5	8.2	58.6
REPUBLIC	7.8	9.9	12.5	2.1	4.7	21.3	37.7
RICE	7.9	9.2	15.2	1.3	7.3	14.3	48.0
ROOKS	7.6	9.7	22.1	2.1	14.5	21.6	65.8
SEDGWICK	8.0	9.4	15.6	1.5	7.6	15.4	48.9
SMITH	7.7	9.2	11.3	1.4	3.5	15.5	31.3
SUMNER	6.7	8.0	12.8	1.4	6.2	16.9	48.2
WASHINGTON	6.9	8.3	13.1	1.4	6.1	16.8	46.9
Mean	**7.5**	**9.2**	**15.5**	**1.6**	**7.9**	**17.5**	**49.8**