

Table S1 Number of SNPs called by each pipeline per sample. Average, minimum, and maximum number of SNPs per sample called by each pipeline for 48 wheat cultivars (sample) are shown. RSD stands for relative standard deviation which is defined as the ratio of the standard deviation to the mean. Read aligners and variant callers in a pipeline are separated with an underscore symbol.

	Before filtering				After filtering			
	average	RSD	min	max	average	RSD	min	max
Bowtie2_BCFtools	978,443	8	826,717	1,171,019	132,797	16	83,718	177,541
Bowtie2_FreeBayes	317,345	7	277,881	372,250	35,102	15	23,351	48,615
Bowtie2_VarScan	282,273	18	178,770	400,365	194,039	20	117,530	274,243
Bowtie2-local_BCFtools	814,822	10	662,044	1,053,343	156,294	17	99,565	212,912
Bowtie2-local_FreeBayes	248,147	8	213,940	291,484	28,000	15	19,159	37,958
Bowtie2-local_VarScan	306,528	19	192,098	436,306	209,776	20	126,537	298,749
BWA-backtrack_BCFtools	1,889,604	11	1,537,859	2,466,080	186,712	17	123,136	252,249
BWA-backtrack_FreeBayes	886,538	8	751,378	1,099,124	110,607	15	76,940	144,506
BWA-backtrack_VarScan	234,661	18	144,726	331,514	162,209	20	94,794	228,775
BWA-mem_BCFtools	2,993,361	14	2,340,967	4,128,734	253,163	17	168,957	351,611
BWA-mem_FreeBayes	1,367,505	8	1,146,060	1,682,846	187,123	16	128,939	253,860
BWA-mem_VarScan	292,727	18	183,726	413,002	203,583	20	122,654	287,458
GSNAP_BCFtools	5,079,109	17	3,834,097	7,135,397	275,246	18	164,161	384,081
GSNAP_FreeBayes	2,052,114	9	1,724,375	2,517,808	291,472	16	195,253	395,371
GSNAP_VarScan	247,817	19	142,305	353,044	173,411	20	94,414	246,536
Hisat2_BCFtools	2,386,939	17	1,825,369	3,393,135	120,409	16	78,865	161,888
Hisat2_FreeBayes	1,239,130	8	975,311	1,458,064	177,955	16	118,546	234,396
Hisat2_VarScan	143,629	17	88,545	195,879	98,729	19	57,157	137,862
Novoalign_BCFtools	3,094,586	14	2,412,166	4,254,600	211,377	18	139,225	298,939
Novoalign_FreeBayes	1,259,015	8	1,063,957	1,481,847	182,645	17	122,994	247,641
Novoalign_VarScan	219,349	19	136,191	307,587	153,475	20	90,504	215,220
STAR_BCFtools	733,697	10	601,905	960,377	172,776	17	112,219	233,877
STAR_FreeBayes	1,581,001	8	1,324,930	1,915,956	222,865	16	161,444	296,046
STAR_VarScan	278,141	18	178,871	390,579	193,908	19	120,087	271,130