

The Degree of Financial Support for Agriculture across 31 provinces and cities in China is defined as the ratio of the Expenditure for Agriculture, Forestry, and Water Conservancy to the General Public Budget Expenditure. The respective values for the years 2017 to 2020 are presented in Table S1.

Table S1. 2017-2020 China's 31 provinces and cities degree of financial support for agriculture Calculation result statistics

		Expenditure for agriculture,Forestr y and Water Conservancy(100m illionCNY)	General public budget expenditure(100millio nCNY)	Degree of financial support for agriculture
2017	Beijing	518.35	6824.5284	0.075953
2017	Tianjin	158.36	3282.5404	0.048244
2017	Hebei	782.91	6639.184	0.117923
2017	Shanxi	477.91	3756.4199	0.127224
2017	Inner Mongolia	807.71	4529.9252	0.178306
2017	Liaoning	459.23	4879.4234	0.094116
2017	Jilin	554.77	3725.722	0.148902
2017	Heilongjiang	815.16	4641.0771	0.17564
2017	Shanghai	456.53	7547.6208	0.060487
2017	Jiangsu	918.22	10621.0275	0.086453
2017	Zhejiang	696.69	7530.3171	0.092518
2017	Anhui	681.91	6203.811	0.109918
2017	Fujian	447.70	4684.1517	0.095578
2017	Jiangxi	607.71	5111.4673	0.118891
2017	Shandong	953.59	9258.3984	0.102997
2017	Henan	916.81	8215.5182	0.111595
2017	Hubei	714.73	6801.2572	0.105088
2017	Hunan	782.42	6869.3867	0.1139
2017	Guangdong	754.40	15037.4788	0.050168
2017	Guangxi	646.87	4908.5507	0.131784
2017	Hainan	198.42	1443.9723	0.13741
2017	Chongqing	347.57	4336.28	0.080153
2017	Sichuan	1023.13	8694.7591	0.117672
2017	Guizhou	612.05	4612.5164	0.132693
2017	Yunnan	674.82	5712.9709	0.11812
2017	Tibet	238.09	1681.9444	0.141557
2017	Shaanxi	545.40	4833.1854	0.112845
2017	Gansu	520.79	3304.4417	0.157604
2017	Qinghai	233.12	1530.4375	0.152322
2017	Ningxia	222.39	1372.7841	0.161998
2017	Xinjiang	612.49	4637.2435	0.13208

2018	Beijing	576.04	7471.4332	0.077099
2018	Tianjin	165.71	3103.1579	0.0534
2018	Hebei	906.27	7726.2086	0.117298
2018	Shanxi	581.34	4283.9099	0.135703
2018	Inner Mongolia	903.96	4831.4587	0.187099
2018	Liaoning	461.74	5337.715	0.086505
2018	Jilin	537.55	3789.5894	0.141849
2018	Heilongjiang	834.47	4676.7503	0.178429
2018	Shanghai	469.88	8351.5376	0.056263
2018	Jiangsu	996.67	11657.3521	0.085497
2018	Zhejiang	724.46	8629.5256	0.083951
2018	Anhui	704.86	6572.1484	0.10725
2018	Fujian	431.51	4832.693	0.08929
2018	Jiangxi	599.41	5667.5207	0.105762
2018	Shandong	998.50	10100.9606	0.098852
2018	Henan	1001.08	9217.7286	0.108604
2018	Hubei	785.55	7258.2663	0.108228
2018	Hunan	925.57	7479.6148	0.123746
2018	Guangdong	909.78	15729.2571	0.05784
2018	Guangxi	656.58	5310.741	0.123632
2018	Hainan	227.71	1691.3027	0.134636
2018	Chongqing	366.77	4540.9487	0.080769
2018	Sichuan	1310.89	9707.5048	0.135039
2018	Guizhou	664.84	5029.6774	0.132183
2018	Yunnan	842.20	6075.0283	0.138633
2018	Tibet	364.64	1970.6768	0.185033
2018	Shaanxi	626.79	5302.443	0.118208
2018	Gansu	678.35	3772.233	0.179827
2018	Qinghai	267.85	1647.4296	0.162587
2018	Ningxia	219.06	1419.0592	0.15437
2018	Xinjiang	753.25	5012.4518	0.150276
2019	Beijing	584.62	7408.1876	0.078915
2019	Tianjin	161.51	3555.7052	0.045423
2019	Hebei	978.27	8309.0391	0.117736
2019	Shanxi	626.04	4710.7629	0.132896
2019	Inner Mongolia	874.73	5100.9101	0.171485
2019	Liaoning	502.57	5745.0884	0.087478
2019	Jilin	564.35	3933.4231	0.143476
2019	Heilongjiang	881.99	5011.5589	0.175991
2019	Shanghai	523.10	8179.284	0.063954
2019	Jiangsu	1032.37	12573.5537	0.082106
2019	Zhejiang	744.24	10053.0335	0.074031

2019	Anhui	736.27	7392.2226	0.099601
2019	Fujian	442.06	5077.9329	0.087055
2019	Jiangxi	619.80	6386.8022	0.097044
2019	Shandong	1075.98	10739.756	0.100187
2019	Henan	1059.70	10163.9304	0.104261
2019	Hubei	828.21	7970.207	0.103913
2019	Hunan	978.68	8034.4155	0.121811
2019	Guangdong	957.68	17297.8532	0.055364
2019	Guangxi	747.21	5850.9609	0.127707
2019	Hainan	251.40	1858.597	0.135263
2019	Chongqing	389.53	4847.6795	0.080354
2019	Sichuan	1288.42	10348.1712	0.124507
2019	Guizhou	998.90	5948.7444	0.167918
2019	Yunnan	1117.20	6770.0881	0.16502
2019	Tibet	445.01	2187.7492	0.20341
2019	Shaanxi	684.18	5718.5163	0.119643
2019	Gansu	716.76	3951.5991	0.181385
2019	Qinghai	324.09	1863.6676	0.173899
2019	Ningxia	218.16	1438.2916	0.15168
2019	Xinjiang	977.41	5315.49	0.18388
2020	Beijing	497.33	7116.1764	0.069887
2020	Tianjin	154.82	3151.3505	0.049128
2020	Hebei	988.74	9022.7941	0.109582
2020	Shanxi	653.68	5110.8746	0.1279
2020	Inner Mongolia	867.59	5270.1616	0.164623
2020	Liaoning	504.83	6014.1675	0.08394
2020	Jilin	577.76	4127.1714	0.139989
2020	Heilongjiang	914.53	5449.411	0.167822
2020	Shanghai	473.80	8102.112	0.058479
2020	Jiangsu	1091.25	13681.5522	0.079761
2020	Zhejiang	764.89	10082.008	0.075867
2020	Anhui	924.29	7473.5925	0.123674
2020	Fujian	450.05	5216.0979	0.086281
2020	Jiangxi	740.31	6674.0791	0.110923
2020	Shandong	1065.29	11233.5163	0.094831
2020	Henan	1145.40	10372.6749	0.110425
2020	Hubei	868.90	8442.8818	0.102915
2020	Hunan	987.71	8403.1337	0.117541
2020	Guangdong	1125.81	17430.7853	0.064587
2020	Guangxi	904.38	6179.4664	0.146352
2020	Hainan	268.57	1972.4636	0.13616
2020	Chongqing	416.76	4893.9461	0.085158
2020	Sichuan	1339.36	11198.5355	0.119601

2020	Guizhou	1024.31	5739.4958	0.178467
2020	Yunnan	1100.13	6974.0176	0.157747
2020	Tibet	415.44	2210.9192	0.187904
2020	Shaanxi	742.25	5930.3198	0.125162
2020	Gansu	775.83	4163.399	0.186345
2020	Qinghai	279.80	1932.8396	0.144761
2020	Ningxia	253.45	1480.3577	0.171209
2020	Xinjiang	1127.88	5533.1576	0.20384

Degree of agribusiness: This represents the scale and industrial transformation of agricultural production, calculated as the ratio of the number of agricultural legal entities to the total number of legal entities in each province and city. The data on the number of agricultural legal entities for each province in 2018 is missing and is supplemented using linear interpolation.

Table S2. 2017-2020 China's 31 provinces and cities degree of agribusiness Calculation result statistics

		number of agricultural legal entities	total number of legal entities	Degree of agribusiness
2017	Beijing	9008	719624	0.012518
2017	Tianjin	12322	444546	0.027718
2017	Hebei	89801	1147414	0.078264
2017	Shanxi	99121	600802	0.164981
2017	Inner Mongolia	53418	328901	0.162414
2017	Liaoning	30723	655309	0.046883
2017	Jilin	19420	209045	0.092899
2017	Heilongjiang	47322	335310	0.141129
2017	Shanghai	6375	484495	0.013158
2017	Jiangsu	49738	2356034	0.021111
2017	Zhejiang	65778	1792465	0.036697
2017	Anhui	93247	872865	0.106829
2017	Fujian	50706	870050	0.058279
2017	Jiangxi	60700	573013	0.105931
2017	Shandong	114194	2015001	0.056672
2017	Henan	76844	964944	0.079636
2017	Hubei	85154	943502	0.090253
2017	Hunan	60149	685025	0.087806
2017	Guangdong	37645	1955087	0.019255
2017	Guangxi	77842	539342	0.144328
2017	Hainan	11912	100398	0.118648
2017	Chongqing	105628	598575	0.176466
2017	Sichuan	71812	629919	0.114002
2017	Guizhou	97661	447650	0.218164
2017	Yunnan	103864	579001	0.179385

2017	Tibet	589	26600	0.022143
2017	Shaanxi	50032	462710	0.108128
2017	Gansu	36953	222361	0.166185
2017	Qinghai	21704	108773	0.199535
2017	Ningxia	13909	90563	0.153584
2017	Xinjiang	17203	249768	0.068876
2018	Beijing	7828	816497	0.009587
2018	Tianjin	12087	383143	0.031547
2018	Hebei	96906	1232868	0.078602
2018	Shanxi	94116	617381	0.152444
2018	Inner Mongolia	53420	355286	0.150358
2018	Liaoning	36513	638233	0.05721
2018	Jilin	21686	210559	0.102993
2018	Heilongjiang	46711	315631	0.147992
2018	Shanghai	5747	483424	0.011888
2018	Jiangsu	44594	2341626	0.019044
2018	Zhejiang	55754	1849022	0.030153
2018	Anhui	92469	909687	0.101649
2018	Fujian	48545	905674	0.053601
2018	Jiangxi	62396	571605	0.109159
2018	Shandong	107175	2162184	0.049568
2018	Henan	99616	1191881	0.083579
2018	Hubei	71367	975224	0.07318
2018	Hunan	58383	678662	0.086027
2018	Guangdong	37883	2652122	0.014284
2018	Guangxi	76872	590423	0.130198
2018	Hainan	11628	112970	0.10293
2018	Chongqing	90309	594972	0.151787
2018	Sichuan	79788	748698	0.106569
2018	Guizhou	99883	459401	0.21742
2018	Yunnan	94728	575211	0.164684
2018	Tibet	1544	37896	0.040743
2018	Shaanxi	49307	524858	0.093944
2018	Gansu	45114	244481	0.18453
2018	Qinghai	19966	103645	0.192638
2018	Ningxia	15635	101911	0.153418
2018	Xinjiang	18812	259486	0.072497
2019	Beijing	6648	913369	0.007279
2019	Tianjin	11851	321740	0.036834
2019	Hebei	104011	1318321	0.078897
2019	Shanxi	89111	633960	0.140562
2019	Inner Mongolia	53421	381670	0.139966
2019	Liaoning	42302	621156	0.068102
2019	Jilin	23952	212073	0.112942

2019	Heilongjiang	46100	295952	0.155769
2019	Shanghai	5118	482353	0.01061
2019	Jiangsu	39449	2327217	0.016951
2019	Zhejiang	45729	1905578	0.023997
2019	Anhui	91691	946508	0.096873
2019	Fujian	46383	941297	0.049276
2019	Jiangxi	64092	570196	0.112403
2019	Shandong	100155	2309367	0.043369
2019	Henan	122388	1418818	0.086261
2019	Hubei	57579	1006945	0.057182
2019	Hunan	56616	672298	0.084213
2019	Guangdong	38120	3349156	0.011382
2019	Guangxi	75901	641503	0.118317
2019	Hainan	11343	125542	0.090352
2019	Chongqing	74990	591369	0.126807
2019	Sichuan	87763	867477	0.10117
2019	Guizhou	102105	471151	0.216714
2019	Yunnan	85592	571421	0.149788
2019	Tibet	2498	49191	0.050782
2019	Shaanxi	48581	587005	0.082761
2019	Gansu	53275	266600	0.199831
2019	Qinghai	18227	98516	0.185016
2019	Ningxia	17361	113259	0.153286
2019	Xinjiang	20421	269203	0.075857
2020	Beijing	6858	1174904	0.005837
2020	Tianjin	10684	371124	0.028788
2020	Hebei	106861	1456954	0.073345
2020	Shanxi	97184	772765	0.125761
2020	Inner Mongolia	60334	439523	0.137272
2020	Liaoning	50296	748782	0.06717
2020	Jilin	26302	237731	0.110638
2020	Heilongjiang	53748	344360	0.156081
2020	Shanghai	5200	532762	0.00976
2020	Jiangsu	41935	2540015	0.01651
2020	Zhejiang	48515	2277240	0.021304
2020	Anhui	96705	1160828	0.083307
2020	Fujian	54003	1156978	0.046676
2020	Jiangxi	77906	765836	0.101727
2020	Shandong	127605	2842426	0.044893
2020	Henan	136573	1652264	0.082658
2020	Hubei	67468	1183265	0.057019
2020	Hunan	66175	831104	0.079623
2020	Guangdong	40563	3526206	0.011503
2020	Guangxi	81140	754741	0.107507

2020	Hainan	11535	140362	0.08218
2020	Chongqing	78978	642720	0.122881
2020	Sichuan	93708	934554	0.10027
2020	Guizhou	108209	543603	0.199059
2020	Yunnan	97737	741669	0.13178
2020	Tibet	2533	49889	0.050773
2020	Shaanxi	55017	689053	0.079844
2020	Gansu	61979	302596	0.204824
2020	Qinghai	18304	112136	0.16323
2020	Ningxia	18974	133774	0.141836
2020	Xinjiang	24392	329091	0.074119

Percentage of Rural Population: The Chinese Statistical Yearbook only has data on the percentage of urban population , which can be subtracted from 1 to get the percentage of Rural Population.

Table S3. 2017-2020 China's 31 provinces and cities percentage of rural population calculation result statistics

		Percentage of urban population(%)	Percentage of Rural Population(%)
2017	Beijing	86.93	0.1307
2017	Tianjin	83.57	0.1643
2017	Hebei	55.74	0.4426
2017	Shanxi	58.59	0.4141
2017	Inner Mongolia	64.6	0.354
2017	Liaoning	69.49	0.3051
2017	Jilin	59.71	0.4029
2017	Heilongjiang	61.9	0.381
2017	Shanghai	89.1	0.109
2017	Jiangsu	70.18	0.2982
2017	Zhejiang	68.91	0.3109
2017	Anhui	54.29	0.4571
2017	Fujian	65.78	0.3422
2017	Jiangxi	55.7	0.443
2017	Shandong	60.79	0.3921
2017	Henan	50.56	0.4944
2017	Hubei	59.88	0.4012
2017	Hunan	54.62	0.4538
2017	Guangdong	70.74	0.2926
2017	Guangxi	50.59	0.4941
2017	Hainan	58.04	0.4196
2017	Chongqing	65	0.35
2017	Sichuan	51.78	0.4822
2017	Guizhou	47.76	0.5224
2017	Yunnan	46.29	0.5371

2017	Tibet	33.38	0.6662
2017	Shaanxi	58.07	0.4193
2017	Gansu	48.12	0.5188
2017	Qinghai	55.45	0.4455
2017	Ningxia	60.95	0.3905
2017	Xinjiang	51.9	0.481
2018	Beijing	87.09	0.1291
2018	Tianjin	83.95	0.1605
2018	Hebei	57.33	0.4267
2018	Shanxi	59.85	0.4015
2018	Inner Mongolia	65.51	0.3449
2018	Liaoning	70.26	0.2974
2018	Jilin	60.85	0.3915
2018	Heilongjiang	63.46	0.3654
2018	Shanghai	89.13	0.1087
2018	Jiangsu	71.19	0.2881
2018	Zhejiang	70.02	0.2998
2018	Anhui	55.65	0.4435
2018	Fujian	66.98	0.3302
2018	Jiangxi	57.34	0.4266
2018	Shandong	61.46	0.3854
2018	Henan	52.24	0.4776
2018	Hubei	61	0.39
2018	Hunan	56.09	0.4391
2018	Guangdong	71.81	0.2819
2018	Guangxi	51.82	0.4818
2018	Hainan	59.13	0.4087
2018	Chongqing	66.61	0.3339
2018	Sichuan	53.5	0.465
2018	Guizhou	49.54	0.5046
2018	Yunnan	47.44	0.5256
2018	Tibet	33.8	0.662
2018	Shaanxi	59.65	0.4035
2018	Gansu	49.69	0.5031
2018	Qinghai	57.27	0.4273
2018	Ningxia	62.15	0.3785
2018	Xinjiang	54.01	0.4599
2019	Beijing	87.35	0.1265
2019	Tianjin	84.31	0.1569
2019	Hebei	58.77	0.4123
2019	Shanxi	61.29	0.3871
2019	Inner Mongolia	66.46	0.3354
2019	Liaoning	71.21	0.2879
2019	Jilin	61.63	0.3837

2019	Heilongjiang	64.62	0.3538
2019	Shanghai	89.22	0.1078
2019	Jiangsu	72.47	0.2753
2019	Zhejiang	71.58	0.2842
2019	Anhui	57.02	0.4298
2019	Fujian	67.87	0.3213
2019	Jiangxi	59.07	0.4093
2019	Shandong	61.86	0.3814
2019	Henan	54.01	0.4599
2019	Hubei	61.83	0.3817
2019	Hunan	57.45	0.4255
2019	Guangdong	72.65	0.2735
2019	Guangxi	52.98	0.4702
2019	Hainan	59.37	0.4063
2019	Chongqing	68.24	0.3176
2019	Sichuan	55.36	0.4464
2019	Guizhou	51.48	0.4852
2019	Yunnan	48.67	0.5133
2019	Tibet	34.51	0.6549
2019	Shaanxi	61.28	0.3872
2019	Gansu	50.7	0.493
2019	Qinghai	58.78	0.4122
2019	Ningxia	63.63	0.3637
2019	Xinjiang	55.51	0.4449
2020	Beijing	87.55	0.1245
2020	Tianjin	84.7	0.153
2020	Hebei	60.07	0.3993
2020	Shanxi	62.53	0.3747
2020	Inner Mongolia	67.48	0.3252
2020	Liaoning	72.14	0.2786
2020	Jilin	62.64	0.3736
2020	Heilongjiang	65.61	0.3439
2020	Shanghai	89.3	0.107
2020	Jiangsu	73.44	0.2656
2020	Zhejiang	72.17	0.2783
2020	Anhui	58.33	0.4167
2020	Fujian	68.75	0.3125
2020	Jiangxi	60.44	0.3956
2020	Shandong	63.05	0.3695
2020	Henan	55.43	0.4457
2020	Hubei	62.89	0.3711
2020	Hunan	58.76	0.4124
2020	Guangdong	74.15	0.2585
2020	Guangxi	54.2	0.458

2020	Hainan	60.27	0.3973
2020	Chongqing	69.46	0.3054
2020	Sichuan	56.73	0.4327
2020	Guizhou	53.15	0.4685
2020	Yunnan	50.05	0.4995
2020	Tibet	35.73	0.6427
2020	Shaanxi	62.66	0.3734
2020	Gansu	52.23	0.4777
2020	Qinghai	60.08	0.3992
2020	Ningxia	64.96	0.3504
2020	Xinjiang	56.53	0.4347

Degree of energy support: This represents the policies in the aspect of energy, which is computed as the ratio of electricity usage in rural areas to the total electricity usage in each province and city.

Table S4. 2017-2020 China's 31 provinces and cities degree of energy support calculation result statistics

			Total electricity usage in each(Billion kWh) province and city(Billion kWh)	Degree of Energy Support
		Rural electricity consumption(Billion kWh)		
2017	Beijing	61.50	1066.8902	0.057644
2017	Tianjin	40.30	805.5945	0.050025
2017	Hebei	615.20	3441.7419	0.178747
2017	Shanxi	99.30	1990.6135	0.049884
2017	Inner Mongolia	78.90	2891.871437	0.027283
2017	Liaoning	528.00	2135.4959	0.247249
2017	Jilin	53.00	702.9803	0.075393
2017	Heilongjiang	79.80	928.5697	0.085939
2017	Shanghai	1013.20	1526.7716	0.663623
2017	Jiangsu	1888.00	5807.8899	0.325075
2017	Zhejiang	976.70	4192.6282	0.232957
2017	Anhui	171.30	1921.4817	0.08915
2017	Fujian	388.40	2112.7185	0.183839
2017	Jiangxi	108.50	1293.9826	0.08385
2017	Shandong	488.50	5430.1595	0.089961
2017	Henan	328.80	3166.1685	0.103848
2017	Hubei	156.60	1868.9963	0.083788
2017	Hunan	128.60	1581.5138	0.081314
2017	Guangdong	1414.80	5958.967844	0.237424
2017	Guangxi	103.50	1444.9478	0.071629

2017	Hainan	15.50	304.950538	0.050828
2017	Chongqing	80.20	996.548982	0.080478
2017	Sichuan	188.40	2205.1786	0.085435
2017	Guizhou	95.10	1384.885058	0.06867
2017	Yunnan	102.30	1538.104139	0.06651
2017	Tibet	1.30	58.1888	0.022341
2017	Shaanxi	130.80	1494.749845	0.087506
2017	Gansu	55.90	1164.366	0.048009
2017	Qinghai	6.40	687.0145	0.009316
2017	Ningxia	14.60	978.3029	0.014924
2017	Xinjiang	111.10	2542.8457	0.043691
2018	Beijing	65.1	1142.38093	0.056986
2018	Tianjin	36.9	861.4388286	0.042835
2018	Hebei	505.2	3665.660677	0.13782
2018	Shanxi	101.4	2160.527849	0.046933
2018	Inner Mongolia	85.5	3353.439732	0.025496
2018	Liaoning	306.2	2302.3759	0.132993
2018	Jilin	54.9	750.5674262	0.073145
2018	Heilongjiang	82.8	973.8818733	0.085021
2018	Shanghai	1053.4	1566.6595	0.672386
2018	Jiangsu	1933.1	6128.2703	0.31544
2018	Zhejiang	1008.3	4532.824785	0.222444
2018	Anhui	180.8	2135.069288	0.084681
2018	Fujian	403.9	2313.824617	0.174559
2018	Jiangxi	112.5	1428.768024	0.078739
2018	Shandong	416.2	5916.77285	0.070342
2018	Henan	330.6	3417.676901	0.096732
2018	Hubei	165.2	2071.4302	0.079752
2018	Hunan	130.8	1745.243039	0.074947
2018	Guangdong	1443.1	6323.353944	0.228217
2018	Guangxi	108.2	1702.748894	0.063544
2018	Hainan	17.4	326.780843	0.053247
2018	Chongqing	79.5	1114.470578	0.071334
2018	Sichuan	198.6	2459.489536	0.080748
2018	Guizhou	98.4	1482.121819	0.066391
2018	Yunnan	104.9	1679.077497	0.062475
2018	Tibet	1.6	69.01978756	0.023182
2018	Shaanxi	133.6	1594.173284	0.083805
2018	Gansu	59.1	1289.523614	0.045831
2018	Qinghai	6.6	738.3377449	0.008939
2018	Ningxia	15.1	1064.847565	0.01418
2018	Xinjiang	119.5	2138.32919	0.055885
2019	Beijing	67.8	1166.396372	0.058128

2019	Tianjin	39.2	878.433162	0.044625
2019	Hebei	501.6	3856.058057	0.130081
2019	Shanxi	104.9	2261.903452	0.046377
2019	Inner Mongolia	91.2	3653.015873	0.024966
2019	Liaoning	177	2401.4733	0.073705
2019	Jilin	54.9	780.365396	0.070352
2019	Heilongjiang	85.6	995.628011	0.085976
2019	Shanghai	1102	1568.5775	0.702547
2019	Jiangsu	1949.1	6264.364	0.311141
2019	Zhejiang	1026.7	4706.220244	0.218158
2019	Anhui	189.1	2300.683239	0.082193
2019	Fujian	417.9	2402.339635	0.173955
2019	Jiangxi	119.2	1535.70328	0.077619
2019	Shandong	435.9	6218.717545	0.070095
2019	Henan	353.8	3364.169941	0.105167
2019	Hubei	178.6	2214.300963	0.080658
2019	Hunan	133	1864.320265	0.07134
2019	Guangdong	1448	6695.85116	0.216253
2019	Guangxi	126.5	1907.330447	0.066323
2019	Hainan	18.7	354.8948	0.052692
2019	Chongqing	80.9	1160.270484	0.069725
2019	Sichuan	205.8	2635.825146	0.078078
2019	Guizhou	104.9	1540.677154	0.068087
2019	Yunnan	120.4	1812.26379	0.066436
2019	Tibet	2.5	77.595715	0.032218
2019	Shaanxi	137.8	1912.344563	0.072058
2019	Gansu	61.7	1288.048689	0.047902
2019	Qinghai	7.1	716.466108	0.00991
2019	Ningxia	16.1	1083.897981	0.014854
2019	Xinjiang	124.8	2867.5518	0.043521
2020	Beijing	69.3	1140	0.060789
2020	Tianjin	41	875	0.046857
2020	Hebei	509.8	3934	0.129588
2020	Shanxi	109.2	2342	0.046627
2020	Inner Mongolia	93.2	3900	0.023897
2020	Liaoning	184.6	2423	0.076187
2020	Jilin	56.6	805	0.070311
2020	Heilongjiang	89.7	1014	0.088462
2020	Shanghai	1087.1	1576	0.689784
2020	Jiangsu	2011	6374	0.3155
2020	Zhejiang	1038.1	4830	0.214928
2020	Anhui	205.3	2428	0.084555

2020	Fujian	445.1	2483	0.179259
2020	Jiangxi	130.2	1627	0.080025
2020	Shandong	445.6	6940	0.064207
2020	Henan	373.2	3392	0.110024
2020	Hubei	186.9	2144	0.087174
2020	Hunan	134.7	1929	0.069829
2020	Guangdong	1467.5	6926	0.211883
2020	Guangxi	141.3	2029	0.06964
2020	Hainan	21	363	0.057851
2020	Chongqing	82.5	1186	0.069562
2020	Sichuan	205.9	2865	0.071867
2020	Guizhou	117.1	1586	0.073834
2020	Yunnan	124	2025	0.061235
2020	Tibet	2.9	82	0.035366
2020	Shaanxi	126.8	1741	0.072832
2020	Gansu	65.8	1376	0.04782
2020	Qinghai	7.5	742	0.010108
2020	Ningxia	16.8	1038	0.016185
2020	Xinjiang	127.5	3099	0.041142

Degree of water support: This represents the supportive capacity of water infrastructure to agricultural production and to some extent reflects the effort in building agricultural water facilities. It is calculated as the ratio of the area of irrigated arable land to the total area of arable land in each province and city in a given year(Appendix Table S5).

Table S5. 2017-2020 China's 31 provinces and cities degree of water support calculation result statistics

		Arable irrigated land(1000ha)	Sown area of crops(1000ha)	Degree of Water Support
2017	Beijing	115.50	120.94	0.955028
2017	Tianjin	306.60	439.52	0.69758
2017	Hebei	4474.70	8381.65	0.533869
2017	Shanxi	1511.20	3577.62	0.422404
2017	Inner Mongolia	3174.80	9014.22	0.352199
2017	Liaoning	1610.60	4172.32	0.38602
2017	Jilin	1893.10	6086.20	0.311048
2017	Heilongjiang	6031.00	14767.59	0.408394
2017	Shanghai	190.80	284.95	0.669597
2017	Jiangsu	4131.90	7556.40	0.546808
2017	Zhejiang	1444.70	1981.11	0.729236
2017	Anhui	4504.10	8726.68	0.51613
2017	Fujian	1064.80	1549.34	0.687259
2017	Jiangxi	2039.40	5638.46	0.361695
2017	Shandong	5191.10	11107.79	0.467339

2017	Henan	5273.60	14732.53	0.357956
2017	Hubei	2919.20	7956.14	0.366912
2017	Hunan	3145.90	8321.97	0.378023
2017	Guangdong	1774.60	4227.51	0.419774
2017	Guangxi	1669.90	5969.88	0.279721
2017	Hainan	289.30	709.44	0.407786
2017	Chongqing	694.30	3339.56	0.207902
2017	Sichuan	2873.10	9575.05	0.300061
2017	Guizhou	1114.10	5659.37	0.196859
2017	Yunnan	1851.40	6790.80	0.272633
2017	Tibet	261.20	254.05	1.028131
2017	Shaanxi	1263.10	4063.88	0.310811
2017	Gansu	1331.40	3752.03	0.354848
2017	Qinghai	206.60	555.31	0.372042
2017	Ningxia	511.50	1132.63	0.451605
2017	Xinjiang	4952.30	5886.96	0.841232
2018	Beijing	109.7	103.8	1.05684
2018	Tianjin	304.7	429.3	0.70976
2018	Hebei	4492.3	8197.1	0.548035
2018	Shanxi	1518.7	3555.2	0.427177
2018	Inner Mongolia	3196.5	8824.1	0.362247
2018	Liaoning	1619.3	4207.1	0.384897
2018	Jilin	1893.1	6080.9	0.311319
2018	Heilongjiang	6119.6	14673.3	0.417057
2018	Shanghai	190.8	282.3	0.675877
2018	Jiangsu	4179.8	7520.2	0.55581
2018	Zhejiang	1440.8	1978.7	0.728155
2018	Anhui	4538.3	8771.1	0.517415
2018	Fujian	1085.2	1577.3	0.688011
2018	Jiangxi	2032	5555.8	0.365744
2018	Shandong	5236	11076.8	0.4727
2018	Henan	5288.7	14783.4	0.357746
2018	Hubei	2931.9	7952.9	0.368658
2018	Hunan	3164	8111.1	0.390083
2018	Guangdong	1775.2	4279.4	0.414825
2018	Guangxi	1706.9	5972.4	0.285798
2018	Hainan	290.5	712.9	0.407491
2018	Chongqing	696.9	3348.5	0.208123
2018	Sichuan	2932.5	9615.3	0.304983
2018	Guizhou	1132.2	5477.2	0.206711
2018	Yunnan	1898.1	6890.8	0.275454
2018	Tibet	264.5	270.4	0.97818
2018	Shaanxi	1275	4091	0.31166
2018	Gansu	1337.5	3773.6	0.354436

2018	Qinghai	214	557.3	0.383994
2018	Ningxia	523.4	1164.6	0.449425
2018	Xinjiang	4883.5	6068.9	0.804676
2019	Beijing	109.2	88.55	1.233197
2019	Tianjin	304.8	410.27	0.742924
2019	Hebei	4482.2	8132.69	0.551134
2019	Shanxi	1519.3	3524.42	0.431078
2019	Inner Mongolia	3199.2	8885.02	0.360067
2019	Liaoning	1629.2	4217.10	0.386332
2019	Jilin	1909.5	6117.05	0.31216
2019	Heilongjiang	6177.6	14770.08	0.418251
2019	Shanghai	190.8	261.39	0.729933
2019	Jiangsu	4205.4	7442.63	0.565042
2019	Zhejiang	1405.4	1999.62	0.702834
2019	Anhui	4580.8	8781.96	0.521615
2019	Fujian	1076.8	1599.29	0.673299
2019	Jiangxi	2036.1	5521.18	0.36878
2019	Shandong	5271.4	10933.09	0.482151
2019	Henan	5328.9	14713.98	0.362166
2019	Hubei	2969	7815.89	0.379867
2019	Hunan	3176.1	8122.79	0.391011
2019	Guangdong	1773.4	4357.38	0.406988
2019	Guangxi	1713.1	5989.21	0.286031
2019	Hainan	290.6	676.24	0.429732
2019	Chongqing	697.7	3345.74	0.208534
2019	Sichuan	2954.1	9692.98	0.304767
2019	Guizhou	1154	5481.56	0.210524
2019	Yunnan	1922.5	6938.86	0.277063
2019	Tibet	275.9	271.53	1.016082
2019	Shaanxi	1285.2	4132.09	0.311029
2019	Gansu	1328.9	3831.57	0.346829
2019	Qinghai	213.3	553.54	0.385336
2019	Ningxia	538.3	1152.96	0.466886
2019	Xinjiang	4959.9	6169.99	0.803874
2020	Beijing	109.4	98.18	1.114241
2020	Tianjin	299.1	419.17	0.713551
2020	Hebei	4470	8089.44	0.552572
2020	Shanxi	1517.4	3541.51	0.428461
2020	Inner Mongolia	3199.1	8882.81	0.360145
2020	Liaoning	1632.5	4287.78	0.380733
2020	Jilin	1905.4	6150.99	0.309771
2020	Heilongjiang	6171.6	14910.13	0.41392
2020	Shanghai	165	255.16	0.646653
2020	Jiangsu	4224.7	7478.40	0.56492

2020	Zhejiang	1415.7	2014.50	0.702755
2020	Anhui	4608.8	8817.99	0.522659
2020	Fujian	1110.4	1631.27	0.680697
2020	Jiangxi	2038.5	5644.37	0.361156
2020	Shandong	5293.6	10889.06	0.486139
2020	Henan	5463.1	14687.99	0.371943
2020	Hubei	3086	7974.39	0.386989
2020	Hunan	3192.9	8400.13	0.380101
2020	Guangdong	1776.5	4451.81	0.399051
2020	Guangxi	1731	6107.32	0.28343
2020	Hainan	292.2	676.86	0.431697
2020	Chongqing	698.3	3372.54	0.207055
2020	Sichuan	2992.2	9849.89	0.30378
2020	Guizhou	1165.5	5475.35	0.212863
2020	Yunnan	1978.1	6989.67	0.283003
2020	Tibet	282.8	272.08	1.039415
2020	Shaanxi	1336.8	4160.85	0.321281
2020	Gansu	1338.6	3931.82	0.340453
2020	Qinghai	219.2	571.42	0.383605
2020	Ningxia	552.5	1174.23	0.470523
2020	Xinjiang	4893.4	6280.01	0.779203

Degree of informatization: This represents the level of informatization in rural areas. It is calculated as the ratio of the number of internet access point in the rural areas of each province and city to the total number of internet access point in that province and city in a given year.

Table S6. 2017-2020 China's 31 provinces and cities degree of informatization calculation result statistics

		number of internet access point in the rural(10000)	total number of internet access point in the province and city(10000)	degree of Informatization
2017	Beijing	70.78	541.936	0.130599
2017	Tianjin	14.38	339.3455	0.042362
2017	Hebei	721.03	1910.1037	0.377483
2017	Shanxi	185.81	872.8714	0.212871
2017	Inner Mongolia	103.47	493.9967	0.209447
2017	Liaoning	213.72	1058.6202	0.201881
2017	Jilin	74.99	501.4876	0.14953
2017	Heilongjiang	150.77	664.5863	0.226858
2017	Shanghai	0.60	681.3347	0.000881
2017	Jiangsu	1152.91	3106.1459	0.37117
2017	Zhejiang	604.18	2464.5659	0.245148
2017	Anhui	422.84	1323.6528	0.319452

2017	Fujian	459.98	1373.599	0.334871
2017	Jiangxi	309.30	997.0684	0.310206
2017	Shandong	844.61	2588.7434	0.326264
2017	Henan	592.81	2128.3817	0.278526
2017	Hubei	263.43	1242.9214	0.211948
2017	Hunan	374.05	1315.4807	0.284344
2017	Guangdong	611.81	3246.8258	0.188433
2017	Guangxi	296.20	967.9745	0.306005
2017	Hainan	79.56	228.7071	0.347881
2017	Chongqing	205.48	866.9317	0.237024
2017	Sichuan	737.21	2167.5285	0.340113
2017	Guizhou	131.90	568.5707	0.231988
2017	Yunnan	118.33	812.5821	0.145628
2017	Tibet	5.94	61.2393	0.097068
2017	Shaanxi	241.04	903.2156	0.266867
2017	Gansu	196.37	576.3783	0.340691
2017	Qinghai	14.24	120.1494	0.118538
2017	Ningxia	18.56	159.1542	0.116642
2017	Xinjiang	161.59	569.9104	0.283544
2018	Beijing	67.8	638.8	0.106137
2018	Tianjin	26.2	437.91	0.05983
2018	Hebei	857.5	2159.77	0.397033
2018	Shanxi	196.7	991.03	0.19848
2018	Inner Mongolia	96.4	628.28	0.153435
2018	Liaoning	213.5	1135.99	0.187942
2018	Jilin	94.3	588.22	0.160314
2018	Heilongjiang	241.1	810.67	0.297408
2018	Shanghai	0.2	772.92	0.000259
2018	Jiangsu	1244.4	3351.87	0.371255
2018	Zhejiang	902.3	2653.79	0.340004
2018	Anhui	640.4	1662.42	0.385222
2018	Fujian	568	1629.12	0.348654
2018	Jiangxi	415.3	1323.36	0.313822
2018	Shandong	951.3	2884.82	0.329761
2018	Henan	729.7	2503.91	0.291424
2018	Hubei	406.6	1480.73	0.274594
2018	Hunan	520.2	1635.32	0.318103
2018	Guangdong	627.3	3597.84	0.174355
2018	Guangxi	475.8	1230.57	0.38665
2018	Hainan	82.6	279.12	0.29593
2018	Chongqing	215.8	1070.14	0.201656
2018	Sichuan	851.9	2624.49	0.324596
2018	Guizhou	164.1	732.01	0.224177
2018	Yunnan	305.9	1019.43	0.30007

2018	Tibet	12.1	78.21	0.154712
2018	Shaanxi	284.1	1057.4	0.268678
2018	Gansu	277.9	742.84	0.374105
2018	Qinghai	34.4	152.9	0.224984
2018	Ningxia	42.4	217.02	0.195374
2018	Xinjiang	195.8	647.25	0.302511
2019	Beijing	61.80	688.1051	0.089812
2019	Tianjin	44.10	523.6254	0.084221
2019	Hebei	952.40	2359.6651	0.403617
2019	Shanxi	216.90	1126.062	0.192618
2019	Inner Mongolia	87.70	682.504	0.128497
2019	Liaoning	128.50	1230.4063	0.104437
2019	Jilin	96.50	618.2973	0.156074
2019	Heilongjiang	267.60	848.2783	0.315463
2019	Shanghai	1.40	890.1477	0.001573
2019	Jiangsu	1368.30	3585.7369	0.381595
2019	Zhejiang	922.50	2778.9142	0.331964
2019	Anhui	705.90	1864.7013	0.378559
2019	Fujian	788.50	1779.043	0.443216
2019	Jiangxi	460.90	1448.7784	0.31813
2019	Shandong	1017.00	3186.0969	0.319199
2019	Henan	783.10	2769.1966	0.28279
2019	Hubei	499.70	1708.3228	0.292509
2019	Hunan	645.50	1873.7724	0.344492
2019	Guangdong	930.10	3801.6369	0.244658
2019	Guangxi	601.50	1447.3997	0.415573
2019	Hainan	99.70	323.1976	0.30848
2019	Chongqing	243.60	1163.9905	0.20928
2019	Sichuan	981.10	2811.746	0.348929
2019	Guizhou	177.20	892.8549	0.198464
2019	Yunnan	372.20	1156.0786	0.32195
2019	Tibet	16.10	91.4131	0.176124
2019	Shaanxi	319.50	1197.6613	0.26677
2019	Gansu	321.90	870.6881	0.369708
2019	Qinghai	44.20	174.5418	0.253234
2019	Ningxia	54.20	259.0947	0.20919
2019	Xinjiang	267.40	775.9005	0.344632
2020	Beijing	94.39	747.31	0.126306
2020	Tianjin	52.84	534.6	0.09884
2020	Hebei	1038.92	2534.35	0.409935
2020	Shanxi	233.63	1252.11	0.186589
2020	Inner Mongolia	87.25	722.92	0.120691
2020	Liaoning	77	1331.24	0.057841
2020	Jilin	112.6	654.23	0.172111

2020	Heilongjiang	164.22	886.33	0.185281
2020	Shanghai	2.73	918.96	0.002971
2020	Jiangsu	1416.43	3756.83	0.377028
2020	Zhejiang	892.69	2938.83	0.303757
2020	Anhui	802.13	2092.99	0.383246
2020	Fujian	577.57	1831.02	0.315436
2020	Jiangxi	518.5	1510.52	0.343259
2020	Shandong	1070.9	3445.62	0.3108
2020	Henan	901.69	3090.94	0.29172
2020	Hubei	570.26	1870.16	0.304926
2020	Hunan	701.64	2113.17	0.332032
2020	Guangdong	1017.02	3889.99	0.261445
2020	Guangxi	700.66	1650.84	0.424426
2020	Hainan	111.22	351.47	0.316442
2020	Chongqing	253.02	1228.37	0.20598
2020	Sichuan	1109.23	2975.45	0.372794
2020	Guizhou	224.3	1002.4	0.223763
2020	Yunnan	404	1278.12	0.316089
2020	Tibet	24.75	96.33	0.256929
2020	Shaanxi	346.56	1368.96	0.253156
2020	Gansu	336.03	931.42	0.360772
2020	Qinghai	50.12	181.97	0.27543
2020	Ningxia	61.71	283.64	0.217565
2020	Xinjiang	235.64	883.86	0.266603