Analysis of Climate Resources Utilization Efficiency of Late Sowing *Japonica* Rice in Xinyang Area

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Abstract: Based on global solar radiation, daily average temperatures and rainfall in rice growth period during the past 30 years (1981-2010) in Xinyang City, the yield of 7 500 kg/hm^2, using the predecessors′ research climate resource utilization analysis method, the climate resource utilization were calculated after delayed sowing of *japonica* rice. The results showed that the utilization efficiency of solar energy increased by 0.03 percentage point, the utilization efficiency of thermal energy increased by 1.74%, and the utilization efficiency of precipitation increased by 10.85% after delayed sowing of *japonica* rice in Xinyang City.

Key words: *japonica* rice; late sowing; climate resource utilization efficiency; Xinyang City

·综合信息·

2014 年全国及各省(市、区)粮食及水稻播种面积和产量

地区	粮食			稻谷			早稻			中稻和一季晚稻			双季晚稻		
	播种面积(万 hm^2)	总产量(万 t)	产量(kg/hm^2)	播种面积(万 hm^2)	总产量(万 t)	产量(kg/hm^2)	播种面积(万 hm^2)	总产量(万 t)	产量(kg/hm^2)	播种面积(万 hm^2)	总产量(万 t)	产量(kg/hm^2)	播种面积(万 hm^2)	总产量(万 t)	产量(kg/hm^2)
全国总计	11 272.26	60 702.6	5 385	3 030.99	20 650.7	6 813	579.50	3 401.2	5 869	1 816.42	13 453.6	7 407	635.07	3 795.9	5 977
北京	12.02	63.9	5 320	0.02	0.1	6 943				0.02	0.1	6 943			
天津	34.58	176.0	5 088	1.64	12.1	7 414				1.64	12.1	7 414			
河北	633.20	3 360.2	5 307	8.48	54.2	6 383				8.48	54.2	6 383			
山西	328.64	1 330.8	4 049	0.09	0.6	6 889				0.09	0.6	6 889			
内蒙古	565.10	2 753.0	4 872	7.81	52.4	6 704				7.81	52.4	6 704			
辽宁	323.51	1 753.9	5 421	56.21	451.5	8 032				56.21	451.5	8 032			
吉林	500.07	3 532.8	7 065	74.71	587.6	7 866				74.71	587.6	7 866			
黑龙江	1 169.64	6 242.2	5 337	320.55	2 251.0	7 023				320.55	2 251.0	7 023			
上海	16.49	112.5	6 826	9.84	84.1	8 544				9.84	84.1	8 544			
江苏	537.61	3 490.6	6 493	227.17	1 912.0	8 417				227.17	1 912.0	8 417			
浙江	126.68	757.4	5 979	82.42	590.1	7 160	11.64	71.5	6 144	58.77	444.0	7 555	12.01	74.6	6 211
安徽	662.89	3 415.8	5 153	221.73	1 394.6	6 289	22.53	128.3	5 693	175.35	1 137.3	6 486	23.85	129.0	5 408
福建	119.77	667.0	5 569	80.45	497.1	6 179	18.92	113.9	6 020	30.66	194.1	6 333	30.87	189.0	6 122
江西	369.73	2 143.5	5 797	333.95	2 025.2	6 064	139.46	820.1	5 881	39.45	272.5	6 907	155.04	932.6	6 015
山东	744.00	4 596.6	6 178	12.24	101.0	8 252				12.24	101.0	8 252			
河南	1 020.98	5 772.3	5 654	64.97	528.6	8 136				64.97	528.6	8 136			
湖北	437.04	2 584.2	5 913	214.40	1 729.5	8 067	41.24	238.7	5 787	125.86	1 167.9	9 279	47.29	322.9	6 828
湖南	497.51	3 001.3	6 033	412.07	2 634.0	6 392	145.33	854.8	5 882	117.37	816.5	6 957	149.38	962.7	6 445
广东	250.70	1 357.3	5 414	189.33	1 091.6	5 766	89.32	523.2	5 857	0.00			100.01	568.5	5 684
广西	306.77	1 534.4	5 002	202.62	1 166.1	5 755	91.76	543.3	5 921	14.89	97.5	6 549	95.97	525.3	5 473
海南	39.40	186.6	4 736	31.22	155.4	4 979	14.33	81.0	5 650	0.00			16.89	74.5	4 410
重庆	224.25	1 144.5	5 104	68.97	503.2	7 296				68.97	503.2	7 296			
四川	646.74	3 374.9	5 218	199.18	1 526.5	7 664	0.08	0.4	5 000	199.10	1 526.1	7 665			
贵州	313.84	1 138.5	3 628	68.20	403.2	5 913				68.20	403.2	5 913			
云南	450.82	1 860.7	4 127	114.47	666.1	5 819	4.89	26.1	5 337	105.82	623.1	5 888	3.76	16.9	4 495
西藏	17.64	98.0	5 554	0.10	0.5	4 747				0.10	0.5	4 747			
陕西	307.65	1 197.8	3 893	12.34	90.9	7 363				12.34	90.9	7 363			
甘肃	284.25	1 158.7	4 076	0.51	3.5	6 887				0.51	3.5	6 887			
青海	28.01	104.8	3 742												
宁夏	77.13	377.9	4 899	7.81	61.8	7 923				7.81	61.8	7 923			
新疆	225.59	1 414.5	6 270	7.51	76.2	10 148				7.51	76.2	10 148			

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