Table 1S. Chemical composition of the biochar and stubble used in the study. Mean values for $n = 2$.

| Nutrient source | pH | % | | | | | |
|---|---|---|---|---|---|---|---|
| | | Ca | Mg | K | C | N | P |
| Biochar | 9.2 | 0.8 | 0.47 | 0.51 | 53.28 | 1.04 | 0.26 |
| Straw | 6.5 | 0.53 | 0.04 | 0.47 | 45.05 | 0.94 | 0.08 |

Table 2S. Growth and development stages of spring wheat based on Zadoks et al. (1974) scale.

| Date | Growth stages | Features |
|---|---|---|
| 20-April | Tillering stage | Begins with main shoot and crown formation and these is soon followed by the appearance of tillers and development of a secondary root system. Leaves twist spirally. Spring wheat shows an upright form at this growth stage. |
| 25- May to 11-June | Jointing stage | Nodes appear and elongate to produce long strong stem, leaf sheaths are erected prominently, flag leaf visible. |
| 12-June to 22-June | Booting stage | Flag leaf sheath extend and opens, boot swollen and first awns appears. |
| 23-June | Heading stage | First spikelet of head appears but flowering has not started |
| 26-June | Anthesis stage | Flowering usually begins in middle of head and completed on top of head before the bottom. Flowering begins one or two days earlier on the main stem than on tillers. |
| 1-July | Milking stage | Early kernel watery ripe formation occurs during the milk stage and progress until noticeable increase in solids of liquid endosperm occurs when the kernel is crushed between fingers. Kernel size increases rapidly during this stage. |
| 6-July | Dough development | kernels are soft but dry and kernel formation is completed |
| 26-July | Physiological maturity | Kernel hard and split during daytime. Dry matter accumulation ends. Straw is dead and plant is mature for harvest |

Table 3S. Soil water content recorded for the different treatments in 2014. Means values ± SE ($n$ = 3), and means comparison based on *Duncan*'s Multiple Range Test ($p$<0.05). *Different letters* within columns denote significance at $p$<0.05.

| Soil depth (cm) | Treatments | | | |
|---|---|---|---|---|
| | $CN_0$ | $CN_{50}$ | $BN_{50}$ | $SN_{50}$ |
| | Anthesis stage | | | |
| 0-5 | 6.85 ± 0.13$^{a}$ | 8.08 ± 0.44$^{a}$ | 10.59 ± 3.46$^{a}$ | 7.38 ± 0.38$^{a}$ |
| 5-10 | 8.34 ± 0.57$^{b}$ | 9.08 ± 0.99$^{b}$ | 12.62 ± 0.29$^{a}$ | 12.72 ± 0.86$^{a}$ |
| 10-30 | 11.26 ± 0.40$^{b}$ | 12.36 ± 0.49$^{b}$ | 15.12 ± 0.33$^{a}$ | 13.12 ± 1.18$^{ab}$ |
| 30-50 | 12.91 ± 0.44$^{a}$ | 14.69 ± 0.63$^{a}$ | 15.14 ± 1.03$^{a}$ | 14.94 ± 0.45$^{a}$ |
| 50-80 | 14.65 ± 0.67$^{b}$ | 15.00 ± 0.66$^{b}$ | 17.12 ± 0.48$^{ab}$ | 15.54 ± 0.35$^{a}$ |
| 80-110 | 15.66 ± 1.10$^{a}$ | 17.21 ± 1.51$^{ab}$ | 17.53 ± 0.50$^{a}$ | 19.28 ± 0.72$^{ab}$ |
| 110-140 | 16.44 ± 0.72$^{b}$ | 17.63 ± 0.79$^{ab}$ | 19.28 ± 0.32$^{a}$ | 18.80 ± 0.43$^{a}$ |
| 140-170 | 17.47 ± 0.75$^{a}$ | 18.65 ± 0.28$^{a}$ | 20.02 ± 1.37$^{a}$ | 19.90 ± 0.51$^{a}$ |
| 170-200 | 17.45 ± 0.42c | 19.22 ± 0.29$^{b}$ | 22.00 ± 0.21$^{a}$ | 20.71 ± 0.88$^{ab}$ |
| | Milking stage | | | |
| 0-5 | 7.08 ± 0.27d | 8.33 ± 0.50c | 12.39 ± 0.37$^{a}$ | 10.00 ± 0.14$^{b}$ |
| 5-10 | 9.75 ± 0.49$^{b}$ | 9.68 ± 0.72$^{b}$ | 13.02 ± 1.38$^{a}$ | 11.33 ± 0.05$^{ab}$ |
| 10-30 | 10.51 ± 0.81$^{b}$ | 12.27 ± 1.33$^{ab}$ | 14.09 ± 0.10$^{a}$ | 13.71 ± 1.31$^{ab}$ |
| 30-50 | 12.28 ± 0.79$^{a}$ | 13.17 ± 0.57$^{a}$ | 14.69 ± 1.59$^{a}$ | 14.26 ± 0.57$^{a}$ |
| 50-80 | 13.70 ± 0.09$^{a}$ | 14.03 ± 1.68$^{a}$ | 15.32 ± 0.72$^{a}$ | 14.01 ± 1.72$^{a}$ |
| 80-110 | 14.55 ± 0.28$^{b}$ | 15.09 ± 0.52$^{ab}$ | 17.89 ± 0.38$^{a}$ | 15.89 ± 1.74$^{ab}$ |
| 110-140 | 14.16 ± 0.40$^{a}$ | 18.31 ± 3.41$^{a}$ | 17.91 ± 1.44$^{a}$ | 16.90 ± 2.57$^{a}$ |
| 140-170 | 15.72 ± 0.24$^{a}$ | 17.67 ± 0.42$^{a}$ | 19.02 ± 2.22$^{a}$ | 18.34 ± 1.55$^{a}$ |
| 170-200 | 16.97 ± 0.33$^{a}$ | 19.50 ± 0.68$^{a}$ | 19.47 ± 0.98$^{a}$ | 18.82 ± 1.57$^{a}$ |
| | Maturity stage | | | |
| 0-5 | 6.77 ± 0.20$^{b}$ | 6.84 ± 0.54$^{b}$ | 10.28 ± 1.05$^{a}$ | 9.62 ± 0.59$^{a}$ |
| 5-10 | 7.14 ± 0.46c | 9.20 ± 0.55$^{b}$c | 12.55 ± 0.66$^{a}$ | 11.61 ± 1.14$^{ab}$ |
| 10-30 | 9.22 ± 0.41$^{b}$ | 11.94 ± 0.99$^{ab}$ | 14.13 ± 0.48$^{a}$ | 12.46 ± 1.66$^{ab}$ |
| 30-50 | 12.48 ± 1.03$^{a}$ | 13.77 ± 0.73$^{a}$ | 15.27 ± 0.60$^{a}$ | 14.17 ± 1.33$^{a}$ |
| 50-80 | 13.91 ± 0.46$^{b}$ | 13.37 ± 0.69$^{b}$ | 16.26 ± 0.61$^{a}$ | 15.43 ± 0.90$^{ab}$ |
| 80-110 | 14.07 ± 0.63$^{a}$ | 14.68 ± 0.84$^{a}$ | 15.45 ± 0.98$^{a}$ | 15.08 ± 0.55$^{a}$ |
| 110-140 | 13.93 ± 0.61$^{b}$ | 15.86 ± 1.02$^{ab}$ | 16.52 ± 0.68$^{a}$ | 17.49 ± 0.74$^{ab}$ |
| 140-170 | 14.16 ± 0.43$^{b}$ | 14.99 ± 1.48$^{ab}$ | 17.12 ± 0.51$^{a}$ | 17.66 ± 1.06$^{ab}$ |
| 170-200 | 16.98 ± 0.85$^{a}$ | 17.19 ± 0.56$^{a}$ | 17.78 ± 0.62$^{a}$ | 18.12 ± 1.02$^{a}$ |

Table 4S. Soil water content recorded for the different treatments in 2015. Means values ± SE ($n$ = 3), and means comparison based on *Duncan*'s Multiple Range Test ($p$<0.05). *Different letters* within columns denote significance at $p$<0.05.

| Soil depth (cm) | $CN_0$ | $CN_{50}$ | $BN_{50}$ | $SN_{50}$ |
|---|---|---|---|---|
| | Anthesis stage | | | |
| 0-5 | 11.09 ± 0.06$^{c}$ | 12.22 ± 0.33$^{bc}$ | 15.52 ± 0.45$^{a}$ | 12.96 ± 0.55$^{b}$ |
| 5-10 | 12.18 ± 1.58$^{b}$ | 14.08 ± 0.59$^{ab}$ | 16.79 ± 0.12$^{a}$ | 14.47 ± 0.59$^{ab}$ |
| 10-30 | 13.93 ± 0.34$^{b}$ | 16.66 ± 0.56$^{a}$ | 18.58 ± 0.71$^{a}$ | 17.55 ± 0.85$^{a}$ |
| 30-50 | 14.96 ± 0.92$^{b}$ | 16.69 ± 0.06$^{ab}$ | 18.80 ± 0.75$^{a}$ | 18.55 ± 1.38$^{a}$ |
| 50-80 | 16.00 ± 1.58$^{a}$ | 16.73 ± 0.38$^{a}$ | 18.76 ± 0.37$^{a}$ | 18.39 ± 1.50$^{a}$ |
| 80-110 | 15.71 ± 0.80$^{a}$ | 16.61 ± 1.41$^{a}$ | 17.59 ± 0.63$^{a}$ | 18.93 ± 0.82$^{a}$ |
| 110-140 | 15.92 ± 1.00$^{a}$ | 17.76 ± 1.66$^{a}$ | 18.98 ± 0.38$^{a}$ | 19.29 ± 1.55$^{a}$ |
| 140-170 | 17.73 ± 0.28$^{b}$ | 19.20 ± 0.59$^{ab}$ | 20.22 ± 0.59$^{ab}$ | 20.84 ± 1.18$^{a}$ |
| 170-200 | 19.55 ± 0.87$^{a}$ | 20.65 ± 0.26$^{a}$ | 21.18 ± 2.66$^{a}$ | 21.55 ± 0.34$^{a}$ |
| | Milking stage | | | |
| 0-5 | 8.98 ± 0.62$^{a}$ | 10.22 ± 1.52$^{a}$ | 12.81 ± 1.75$^{a}$ | 11.81 ± 0.67$^{a}$ |
| 5-10 | 10.25 ± 0.85$^{b}$ | 11.78 ± 0.48$^{ab}$ | 13.61 ± 0.88$^{a}$ | 13.35 ± 0.24$^{a}$ |
| 10-30 | 14.49 ± 0.78$^{a}$ | 13.13 ± 0.99$^{a}$ | 14.70 ± 0.05$^{a}$ | 14.46 ± 0.65$^{a}$ |
| 30-50 | 12.27 ± 1.02$^{a}$ | 13.03 ± 2.10$^{a}$ | 15.76 ± 0.93$^{a}$ | 14.63 ± 0.67$^{a}$ |
| 50-80 | 13.09 ± 0.16$^{c}$ | 13.80 ± 0.61$^{bc}$ | 15.69 ± 0.41$^{a}$ | 15.04 ± 0.37$^{ab}$ |
| 80-110 | 15.30 ± 2.25$^{a}$ | 14.83 ± 1.05$^{a}$ | 16.31 ± 0.47$^{a}$ | 16.00 ± 0.24$^{a}$ |
| 110-140 | 14.10 ± 0.31$^{b}$ | 16.55 ± 0.83$^{b}$ | 19.80 ± 0.93$^{a}$ | 18.56 ± 1.06$^{ab}$ |
| 140-170 | 18.86 ± 0.89$^{a}$ | 19.60 ± 0.56$^{a}$ | 21.09 ± 0.82$^{a}$ | 20.40 ± 0.45$^{a}$ |
| 170-200 | 19.38 ± 2.56$^{a}$ | 19.99 ± 0.04$^{a}$ | 22.04 ± 0.61$^{a}$ | 21.91 ± 0.42$^{a}$ |
| | Maturity stage | | | |
| 0-5 | 5.40 ± 0.65$^{b}$ | 6.42 ± 1.03$^{b}$ | 10.09 ± 0.31$^{a}$ | 9.82 ± 0.11$^{a}$ |
| 5-10 | 7.40 ± 1.19$^{c}$ | 9.97 ± 0.58$^{b}$ | 11.88 ± 0.39$^{a}$ | 11.07 ± 0.37$^{ab}$ |
| 10-30 | 11.78 ± 2.67$^{a}$ | 12.47 ± 0.38$^{a}$ | 14.01 ± 0.22$^{a}$ | 13.84 ± 2.43$^{a}$ |
| 30-50 | 12.79 ± 0.38$^{b}$ | 13.31 ± 0.46$^{b}$ | 14.63 ± 0.53$^{ab}$ | 15.51 ± 0.90$^{a}$ |
| 50-80 | 13.58 ± 0.66$^{b}$ | 13.74 ± 0.62$^{b}$ | 15.46 ± 0.08$^{a}$ | 15.61 ± 0.14$^{a}$ |
| 80-110 | 13.39 ± 0.58$^{b}$ | 14.87 ± 0.21$^{a}$ | 15.33 ± 0.23$^{a}$ | 15.93 ± 0.37$^{a}$ |
| 110-140 | 14.94 ± 0.69$^{a}$ | 17.61 ± 1.16$^{a}$ | 17.00 ± 0.42$^{a}$ | 16.67 ± 2.41$^{a}$ |
| 140-170 | 16.25 ± 0.26$^{c}$ | 17.95 ± 0.77$^{b}$ | 19.72 ± 0.34$^{a}$ | 18.93 ± 0.42$^{ab}$ |
| 170-200 | 17.59 ± 0.72$^{b}$ | 18.47 ± 0.71$^{ab}$ | 20.06 ± 0.61$^{a}$ | 19.80 ± 0.23$^{a}$ |

Table 5S. Leaf area (LA), chlorophyll content (Chl) and leaf water potential ($\Psi_w$) recorded for the different treatments in 2014 and 2015, respectively. Mean values ± SE ($n$ = 3), and means comparison based on *Duncan*'s Multiple Range Test ($p$<0.05). *Different letters* within columns denote significance at $p$<0.05.

| Treatment | LA | | Chl | | $\Psi_w$ | |
|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2014 | 2015 | 2014 | 2015 |
| $CN_0$ | 3.07 ± 0.16$^{c}$ | 3.40 ± 0.28$^{c}$ | 41.44 ± 0.78$^{b}$ | 45.22 ± 1.03$^{b}$ | −1.81 ± 0.16$^{b}$ | −2.02 ± 0.26$^{b}$ |
| $CN_{50}$ | 3.52 ± 0.10$^{c}$ | 3.90 ± 0.25$^{bc}$ | 42.60 ± 1.02$^{b}$ | 47.94 ± 0.25$^{b}$ | −1.70 ± 0.16$^{a\ b}$ | −1.92 ± 0.06$^{a\ b}$ |
| $BN_{50}$ | 5.33 ± 0.19$^{a}$ | 5.67 ± 0.18$^{a}$ | 50.58 ± 2.67$^{a}$ | 54.01 ± 1.61$^{a}$ | −1.37 ± 0.04$^{a}$ | −1.39 ± 0.19$^{a}$ |
| $SN_{50}$ | 4.42 ± 0.15$^{b}$ | 4.58 ± 0.09$^{b}$ | 49.06 ± 2.34$^{a}$ | 52.03 ± 0.54$^{a}$ | −1.49 ± 0.10$^{a\ b}$ | −1.53 ± 0.07$^{a\ b}$ |

Table 6S. Diurnal variation in stomatal conductance ($g_s$) as affected by treatment in 2014 and 2015, respectively. Mean values ± SE ($n$ = 3), and means comparison based on *Duncan*'s Multiple Range Test ($p$<0.05). *Different* letters within columns denote significance at $p$<0.05.

| Treatment | $g_s$ [mmol m$^{-2}$ s$^{-1}$] | | | | |
|---|---|---|---|---|---|
| | 8:00 | 10:00 | 12:00 | 14:00 | 16:00 |
| | 2014 | | | | |
| $CN_0$ | 80.17 ± 20.01$^{a}$ | 127.22 ± 29.12$^{a}$ | 127.25 ± 14.51$^{b}$ | 87.22 ± 9.21$^{b}$ | 60.61 ± 5.31$^{b}$ |
| $^{C}N_{50}$ | 84.70 ± 22.01$^{a}$ | 138.35 ± 29.72$^{a}$ | 133.58 ± 14.48$^{b}$ | 100.33 ± 10.24$^{ab}$ | 72.27 ± 6.23$^{ab}$ |
| $^{B}N_{50}$ | 113.96 ± 28.01$^{a}$ | 192.75 ± 38.48$^{a}$ | 194.34 ± 27.99$^{a}$ | 126.71 ± 12.96$^{a}$ | 106.22 ± 18.42$^{a}$ |
| $SN_{50}$ | 109.05 ± 27.23$^{a}$ | 182.01 ± 36.81$^{a}$ | 184.84 ± 26.33$^{a}$ | 126.53 ± 9.67$^{a}$ | 96.97 ± 17.41$^{a}$ |
| | 2015 | | | | |
| $^{C}N_{0}$ | 70.09 ± 20.83$^{b}$ | 168.65 ± 14.94$^{a}$ | 190.5112 ± 35.38$^{a}$ | 98.23 ± 20.05$^{b}$ | 95.34 ± 36.68$^{a}$ |
| $^{C}N_{50}$ | 67.93 ± 20.16$^{b}$ | 180.02 ± 19.08$^{a}$ | 201.101 ± 45.12$^{a}$ | 113.33 ± 27.26$^{ab}$ | 93.11 ± 33.46$^{a}$ |
| $^{B}N_{50}$ | 121.27 ± 19.93$^{a}$ | 214.90 ± 35.17$^{a}$ | 221.97 ± 42.48$^{a}$ | 162.66 ± 26.36$^{a}$ | 150.36 ± 37.89$^{a}$ |
| $SN_{50}$ | 123.75 ± 29.85$^{a}$ | 212.00 ± 36.88$^{a}$ | 217.9234 ± 42.33$^{a}$ | 147.36 ± 32.83$^{a}$ | 141.83 ± 38.40$^{a}$ |

Table 7S: Diurnal variation in net photosynthesis rate ($P_N$) as affected by treatment in 2014 and 2015, respectively. Mean values ± SE ($n$ = 3), and means comparison based on *Duncan*'s Multiple Range Test ($p$<0.05). *Different letters* within columns denote significance at $p$<0.05.

| Treatment | $P_N$ [µmol m$^{-2}$ s$^{-1}$] | | | | |
|---|---|---|---|---|---|
| | 8:00 | 10:00 | 12:00 | 14:00 | 16:00 |
| | 2014 | | | | |
| CN0 | 3.05 ± 0.73$^{a}$ | 3.98 ± 0.33$^{b}$ | 4.73 ± 0.70$^{b}$ | 3.70 ± 0.57$^{b}$ | 3.20 ± 0.50$^{a}$ |
| CN50 | 3.38 ± 0.87$^{a}$ | 3.92 ± 0.38$^{b}$ | 5.22 ± 0.55$^{b}$ | 3.75 ± 0.54$^{b}$ | 3.47 ± 0.54$^{a}$ |
| BN50 | 4.54 ± 0.89$^{a}$ | 5.97 ± 0.25$^{a}$ | 7.16 ± 0.84$^{a}$ | 5.34 ± 0.79$^{a}$ | 4.90 ± 0.67$^{a}$ |
| $SN_{50}$ | 4.35 ± 0.72$^{a}$ | 5.70 ± 0.11$^{a}$ | 6.71 ± 0.90$^{a}$ | 5.09 ± 0.44$^{a}$ | 4.60 ± 0.70$^{a}$ |
| | 2015 | | | | |
| CN0 | 2.91 ± 0.73$^{a}$ | 4.81 ± 0.67$^{a}$ | 5.46 ± 0.76$^{a}$ | 3.89 ± 0.49$^{b}$ | 3.09 ± 0.56$^{c}$ |
| CN50 | 3.31 ± 0.71$^{a}$ | 5.25 ± 0.69$^{a}$ | 5.72 ± 0.82$^{a}$ | 4.07 ± 0.37$^{b}$ | 3.86 ± 0.25$^{cb}$ |
| BN50 | 4.42 ± 0.47$^{a}$ | 7.08 ± 0.81$^{a}$ | 7.38 ± 0.93$^{a}$ | 6.00 ± 0.40$^{a}$ | 5.62 ± 0.67$^{a}$ |
| $SN_{50}$ | 4.29 ± 0.44$^{a}$ | 6.58 ± 0.89$^{a}$ | 7.30 ± 0.53$^{a}$ | 5.85 ± 0.45$^{a}$ | 5.14 ± 0.79$^{ab}$ |

Table 8S. Diurnal variation in transpiration rate (*E*) as affected by treatment in 2014 and 2015, respectively. Mean values ± SE ($n = 3$), and means comparison based on *Duncan*'s Multiple Range Test ($p<0.05$). *Different letters* within columns denote significance at $p<0.05$.

| Treatment | *E* [mmol $m^{-2}$ $s^{-1}$] | | | | |
|---|---|---|---|---|---|
| | 8:00 | 10:00 | 12:00 | 14:00 | 16:00 |
| | 2014 | | | | |
| $CN_0$ | 1.43 ± 0.16$^{b}$ | 2.67 ± 0.47$^{a}$ | 3.31 ± 0.54$^{b}$ | 2.39 ± 0.38$^{b}$ | 0.98 ± 0.29$^{b}$ |
| $CN_{50}$ | 1.39 ± 0.14$^{b}$ | 2.50 ± 0.50$^{a}$ | 3.32 ± 0.61$^{b}$ | 2.73 ± 0.24$^{b}$ | 0.97 ± 0.21$^{b}$ |
| BN50 | 1.96 ± 0.33$^{a}$ | 3.25 ± 0.45$^{a}$ | 3.96 ± 0.64$^{a}$ | 3.50 ± 0.29$^{a}$ | 1.60 ± 0.22$^{a}$ |
| $SN_{50}$ | 1.80 ± 0.46$^{ab}$ | 3.39 ± 0.36$^{a}$ | 3.89 ± 0.71$^{a}$ | 3.43 ± 0.12$^{a}$ | 1.58 ± 0.12$^{a}$ |
| | 2015 | | | | |
| $CN_0$ | 2.36 ± 0.51$^{a}$ | 3.35 ± 0.78$^{a}$ | 3.24 ± 0.50$^{b}$ | 2.49 ± 0.74$^{b}$ | 1.71 ± 0.43$^{a}$ |
| $CN_{50}$ | 2.41 ± 0.33$^{a}$ | 3.41 ± 0.71$^{a}$ | 3.45 ± 0.54$^{b}$ | 2.56 ± 0.64$^{b}$ | 1.78 ± 0.39$^{a}$ |
| BN50 | 2.32 ± 0.45$^{a}$ | 4.05 ± 0.53$^{a}$ | 4.82 ± 0.40$^{a}$ | 3.52 ± 0.25$^{a}$ | 2.25 ± 0.43$^{a}$ |
| $SN_{50}$ | 2.64 ± 0.48$^{a}$ | 4.25 ± 0.66$^{a}$ | 4.45 ± 0.54$^{a}$ | 3.27 ± 0.31$^{ab}$ | 2.21 ± 0.38$^{a}$ |

Table 9S. Diurnal variation in intercellular $CO_2$ concentration ($C_i$) as affected by treatment in 2014 and 2015, respectively. Mean values ± SE ($n = 3$), and means comparison based on *Duncan*'s Multiple Range Test ($p<0.05$). *Different letters* within columns denote significance at $p<0.05$.

| Treatment | $C_i$ [mmol $m^{-2}$ $s^{-1}$ ] | | | | |
|---|---|---|---|---|---|
| | 8:00 | 10:00 | 12:00 | 14:00 | 16:00 |
| | 2014 | | | | |
| $CN_0$ | 349.55 ± 16.80$^{a}$ | 287.52 ± 26.24$^{a}$ | 280.87 ± 13.17$^{a}$ | 311.60 ± 39.64$^{a}$ | 389.50 ± 41.36$^{a}$ |
| $CN_{50}$ | 339.69 ± 7.72$^{a}$ | 296.77 ± 17.78$^{a}$ | 277.63 ± 18.35$^{a}$ | 315.13 ± 40.24$^{a}$ | 378.17 ± 23.10$^{a}$ |
| $BN_{50}$ | 339.45 ± 17.32$^{a}$ | 273.63 ± 10.10$^{a}$ | 246.38 ± 11.09$^{a}$ | 275.065 ± 34.25$^{a}$ | 349.91 ± 17.78$^{a}$ |
| $SN_{50}$ | 351.98 ± 11.91$^{a}$ | 277.27 ± 6.31$^{a}$ | 254.94 ± 15.46$^{a}$ | 288.99 ± 25.96$^{a}$ | 375.65 ± 11.08$^{a}$ |
| | 2015 | | | | |
| $CN_0$ | 368.71 ± 4.71$^{a}$ | 313.41 ± 4.73$^{a}$ | 284.19 ± 23.33$^{a}$ | 300.53 ± 34.03$^{a}$ | 409.45 ± 21.81$^{a}$ |
| $CN_{50}$ | 340.60 ± 13.96$^{a}$ | 307.93 ± 9.70$^{a}$ | 279.17 ± 26.43$^{a}$ | 312.09 ± 37.90$^{a}$ | 370.31 ± 13.19$^{a}$ |
| $BN_{50}$ | 321.78 ± 4.27$^{a}$ | 308.39 ± 3.66$^{a}$ | 286.61 ± 14.13$^{a}$ | 311.05 ± 24.60$^{a}$ | 333.59 ± 19.20$^{a}$ |
| $SN_{50}$ | 344.44 ± 5.51$^{a}$ | 306.75 ± 9.15$^{a}$ | 272.47 ± 26.72$^{a}$ | 286.78 ± 38.26$^{a}$ | 371.50 ± 31.62$^{a}$ |

Table 10S. Diurnal variation in stomatal limitation ($L_S$) as affected by treatment in 2014 and 2015. Mean values ± SE ($n = 3$), and means comparison based on *Duncan*'s Multiple Range Test ($p<0.05$). *Different letters* within columns denote significance at $p<0.05$.

| Treatment | $L_S$ | | | | |
|---|---|---|---|---|---|
| | 8:00 | 10:00 | 12:00 | 14:00 | 16:00 |
| | 2014 | | | | |
| $CN_0$ | 0.28 ± 0.044[a] | 0.51 ± 0.021[a] | 0.58 ± 0.046[a] | 0.52 ± 0.07[a] | 0.30 ± 0.07[a] |
| $CN_{50}$ | 0.24 ± 0.051[a] | 0.47 ± 0.035[a] | 0.54 ± 0.071[a] | 0.50 ± 0.12[a] | 0.21 ± 0.04[a] |
| $^{B}N_{50}$ | 0.18 ± 0.013[a] | 0.42 ± 0.015[b] | 0.44 ± 0.083[a] | 0.32 ± 0.06[a] | 0.09 ± 0.005[b] |
| $SN_{50}$ | 0.20 ± 0.023[a] | 0.37 ± 0.028[b] | 0.51 ± 0.030[a] | 0.35 ± 0.06[a] | 0.11 ± 0.023[b] |
| | 2015 | | | | |
| $CN_0$ | 0.13 ± 0.05[a] | 0.28 ± 0.03[a] | 0.296 ± 0.04[a] | 0.27 ± 0.05[a] | 0.15 ± 0.05[a] |
| $CN_{50}$ | 0.16 ± 0.02[a] | 0.19 ± 0.02[ab] | 0.29 ± 0.01[a] | 0.27 ± 0.05[a] | 0.19 ± 0.01[a] |
| $^{B}N_{50}$ | 0.10 ± 0.03[a] | 0.19 ± 0.04[b] | 0.21 ± 0.008[b] | 0.19 ± 0.02[a] | 0.15 ± 0.06[a] |
| $SN_{50}$ | 0.13 ± 0.03[a] | 0.21 ± 0.02[b] | 0.24 ± 0.02[b] | 0.22 ± 0.05[a] | 0.13 ± 0.03[a] |