

Table 1: Mean values of yield and its attributes as affected by irrigation intervals, genotypes and spatial distribution of plants in the two growing seasons (2007 and 2008).

| Main effects | Plant height (cm) | | First ear height (cm) | | Ear length (cm) | | Ear diameter (cm) | | No. of rows/ear | | No. of grains/row | | Shelling (%) | | 200-grain weight (g) | | Grain yield/ fed. (ard.) | |
|-----------------------|-------------------|--------|-----------------------|--------|-----------------|-------|-------------------|------|-----------------|-------|-------------------|-------|--------------|------|----------------------|-------|--------------------------|------|
| | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 |
| I₁ | 252.17 | 243.54 | 125.29 | 120.02 | 20.17 | 19.71 | 2.08 | 2.55 | 12.67 | 12.83 | 46.75 | 44.48 | 85.1 | 85.4 | 66.80 | 66.05 | 12.12 | 13.3 |
| I₂ | 232.88 | 224.85 | 112.50 | 108.79 | 18.50 | 17.81 | 2.47 | 2.32 | 12.00 | 12.00 | 41.54 | 39.63 | 83.7 | 83.9 | 58.24 | 55.75 | 9.10 | 9.6 |
| I₃ | 210.38 | 204.42 | 102.37 | 99.13 | 16.75 | 16.17 | 2.21 | 2.08 | 11.63 | 11.92 | 37.25 | 34.33 | 81.9 | 81.5 | 50.18 | 47.77 | 6.6 | 6.2 |
| F-test | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| LSD 5% | 6.47 | 1.55 | 1.25 | 1.62 | 0.30 | 0.31 | 0.05 | 0.02 | 0.19 | 0.12 | 0.34 | 0.36 | 0.31 | 0.26 | 0.45 | 0.53 | 0.28 | 0.56 |
| G₁ | 234.72 | 225.86 | 114.44 | 110.31 | 18.58 | 18.13 | 2.48 | 2.34 | 12.19 | 12.31 | 42.25 | 39.92 | 83.8 | 83.9 | 59.20 | 57.27 | 9.6 | 10.3 |
| G₂ | 228.89 | 222.68 | 112.33 | 108.32 | 18.36 | 17.67 | 2.43 | 2.29 | 12.00 | 12.19 | 41.44 | 39.04 | 83.4 | 83.4 | 57.62 | 55.78 | 9.00 | 9.1 |
| F-test | * | ** | ** | ** | n.s | ** | ** | ** | ** | * | ** | ** | ** | ** | ** | ** | ** | ** |
| Sd₁ | 219.50 | 215.42 | 107.00 | 103.81 | 17.44 | 17.06 | 2.34 | 2.18 | 11.67 | 11.89 | 39.83 | 36.22 | 82.6 | 82.5 | 53.91 | 52.30 | 7.8 | 8.0 |
| Sd₂ | 229.83 | 222.08 | 112.33 | 108.06 | 18.28 | 17.61 | 2.42 | 2.29 | 11.83 | 12.06 | 41.06 | 39.28 | 83.5 | 83.4 | 56.98 | 54.83 | 8.8 | 8.8 |
| Sd₃ | 242.28 | 233.53 | 118.72 | 114.64 | 19.50 | 18.72 | 2.57 | 2.44 | 12.67 | 12.67 | 44.11 | 41.92 | 84.3 | 84.7 | 62.82 | 61.23 | 10.8 | 12.4 |
| Sd₄ | 235.61 | 226.06 | 115.50 | 110.75 | 18.67 | 18.19 | 2.48 | 2.34 | 12.22 | 12.39 | 42.39 | 40.50 | 83.9 | 83.9 | 59.92 | 57.73 | 9.7 | 9.7 |
| F-test | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| LSD 5% | 5.54 | 1.04 | 1.04 | 1.02 | 0.18 | 0.19 | 0.05 | 0.20 | 0.16 | 0.12 | 0.34 | 0.46 | 0.21 | 0.20 | 0.34 | 0.36 | 0.14 | 0.44 |

I₁, I₂ and I₃ = Irrigated at 12, 18 and 24 days, respectively

G₁ and G₂ = Single cross Watania 4 and three way cross 310.

Sd₁, Sd₂, Sd₃ and Sd₄ = Spatial distribution of plants (40x50 cm), (35x60 cm), (30x70 cm) and (25x80 cm), respectively.

LSD 5% = Least significant difference at 5% of probability.

Table 2: Mean values of yield and its attributes as affected by the interaction between irrigation and genotypes in the two growing seasons (2007 and 2008).

| Inter-action I x G | | Plant height (cm) | | First ear height (cm) | | Ear length (cm) | | Ear diameter (cm) | | No. of rows/ear | | No. of grains/row | | Shelling (%) | | 200-grain weight (g) | | Grain yield/ fed. (ard.) | |
|-----------------------|----------------|-------------------|--------|-----------------------|--------|-----------------|-------|-------------------|------|-----------------|-------|-------------------|-------|--------------|------|----------------------|-------|--------------------------|------|
| | | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 |
| I ₁ | G ₁ | 254.50 | 245.33 | 126.42 | 121.17 | 20.25 | 19.96 | 2.73 | 2.58 | 12.83 | 12.92 | 47.33 | 44.96 | 85.2 | 85.7 | 67.92 | 66.98 | 12.5 | 14.8 |
| | G ₂ | 249.83 | 241.75 | 124.17 | 118.88 | 20.08 | 19.46 | 2.63 | 2.53 | 12.50 | 12.75 | 46.17 | 44.00 | 84.9 | 85.2 | 65.68 | 65.12 | 11.7 | 11.8 |
| I ₂ | G ₁ | 233.67 | 225.46 | 113.08 | 109.12 | 18.50 | 18.00 | 2.48 | 2.33 | 12.00 | 12.00 | 41.75 | 39.96 | 83.7 | 84.0 | 58.57 | 56.17 | 9.2 | 9.8 |
| | G ₂ | 232.08 | 224.25 | 111.92 | 108.46 | 18.50 | 17.63 | 2.47 | 2.30 | 12.00 | 12.00 | 41.33 | 39.29 | 83.6 | 83.9 | 57.92 | 55.33 | 9.0 | 9.5 |
| I ₃ | G ₁ | 216.00 | 206.79 | 103.83 | 100.63 | 17.00 | 16.42 | 2.24 | 2.10 | 11.75 | 12.00 | 37.67 | 34.83 | 82.3 | 81.8 | 51.10 | 48.65 | 7.0 | 6.5 |
| | G ₂ | 204.75 | 202.04 | 100.92 | 97.63 | 16.50 | 15.92 | 2.18 | 2.05 | 11.50 | 11.83 | 36.83 | 33.83 | 81.6 | 81.8 | 49.27 | 46.88 | 6.2 | 5.9 |
| F-test | | n.s. | ** | n.s. | * | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | n.s. | * | * | ** | ** | ** | ** |
| LSD 5% | | - | 1.45 | - | 1.31 | - | - | - | - | - | - | 0.35 | -- | 0.32 | 0.27 | 0.30 | 0.42 | 0.13 | 0.5 |

I₁, I₂ and I₃ = Irrigated at 12, 18 and 24 days, respectively

G₁ and G₂ = Single cross Watania 4 and three way cross 310.

LSD 5% = Least significant difference at 5% of probability.

Table 3: Mean values of yield and its attributes as affected by the interaction between genotypes and spatial distribution of plants in the two growing seasons (2007 and 2008).

| Inter-action G x Sd | | Plant height (cm) | | First ear height (cm) | | Ear length (cm) | | Ear diameter (cm) | | No. of rows/ear | | No. of grains/row | | Shelling (%) | | 200-grain weight (g) | | Grain yield/ fed. (ard.) | |
|------------------------|-----------------|-------------------|--------|-----------------------|--------|-----------------|-------|-------------------|------|-----------------|-------|-------------------|-------|--------------|------|----------------------|-------|--------------------------|------|
| | | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 |
| G ₁ | Sd ₁ | 226.22 | 217.89 | 109.00 | 105.50 | 17.57 | 17.39 | 2.37 | 2.23 | 11.67 | 12.00 | 40.22 | 36.89 | 83.00 | 82.8 | 54.52 | 53.16 | 8.3 | 8.3 |
| | Sd ₂ | 230.89 | 223.22 | 113.00 | 108.56 | 18.33 | 17.72 | 2.43 | 2.30 | 12.00 | 12.11 | 41.33 | 39.78 | 83.6 | 83.5 | 57.98 | 55.57 | 9.0 | 8.9 |
| | Sd ₃ | 244.33 | 235.44 | 119.56 | 115.83 | 19.67 | 19.06 | 2.63 | 2.46 | 12.67 | 12.67 | 44.78 | 42.28 | 84.4 | 85.0 | 63.89 | 62.10 | 11.1 | 14.2 |
| | Sd ₄ | 237.44 | 226.89 | 116.22 | 111.33 | 18.67 | 18.33 | 2.50 | 2.37 | 12.44 | 12.44 | 42.07 | 40.72 | 84.0 | 84.1 | 60.40 | 58.23 | 9.9 | 9.9 |
| G ₂ | Sd ₁ | 212.78 | 212.94 | 105.00 | 102.11 | 17.22 | 16.72 | 2.32 | 2.14 | 11.67 | 11.78 | 39.44 | 35.56 | 82.1 | 82.1 | 53.29 | 51.43 | 7.4 | 7.6 |
| | Sd ₂ | 228.78 | 220.94 | 111.67 | 107.56 | 18.22 | 17.50 | 2.41 | 2.28 | 11.67 | 12.00 | 40.78 | 38.78 | 83.3 | 83.2 | 59.99 | 54.09 | 8.6 | 8.7 |
| | Sd ₃ | 240.22 | 231.61 | 117.89 | 113.44 | 19.33 | 18.39 | 2.50 | 2.42 | 12.67 | 12.67 | 43.44 | 41.56 | 84.2 | 84.4 | 61.76 | 60.36 | 10.4 | 10.5 |
| | Sd ₄ | 233.78 | 225.22 | 114.78 | 110.17 | 18.67 | 18.06 | 2.47 | 2.32 | 12.00 | 12.33 | 42.1 | 40.28 | 83.8 | 83.8 | 59.44 | 57.22 | 9.5 | 9.4 |
| F-test | | n.s | ** | * | n.s. | n.s. | ** | n.s. | ** | ** | n.s. | n.s. | n.s. | ** | n.s. | ** | n.s. | * | * |
| LSD 5% | | - | 1.48 | 1.47 | - | - | 0.26 | - | 0.03 | 0.23 | - | - | - | 0.29 | - | 0.49 | - | 0.19 | 0.62 |

G₁ and G₂ = Single cross Watania 4 and three way cross 310.

Sd₁, Sd₂, Sd₃ and Sd₄ = Spatial distribution of plants (40x50 cm), (35x60 cm), (30x70 cm) and (25x80 cm), respectively.

LSD 5% = Least significant difference at 5% of probability.

Table 4: Mean values of yield and its attributes as affected by the interaction between irrigation and spatial distribution of plants in the two growing seasons (2007 and 2008).

| Inter-action I x Sd | | Plant height (cm) | | First ear height (cm) | | Ear length (cm) | | Ear diame- ter (cm) | | No. of rows/ear | | No. of grains/row | | Shelling (%) | | 200-grain weight (g) | | Grain yield/ fed. (ard.) | |
|------------------------|-----------------|----------------------|--------|--------------------------|--------|--------------------|-------|------------------------|------|--------------------|-------|----------------------|-------|--------------|------|-------------------------|-------|--------------------------------|------|
| | | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 |
| I ₁ | Sd ₁ | 242.67 | 234.50 | 118.83 | 114.08 | 19.00 | 19.00 | 2.60 | 2.43 | 12.00 | 12.00 | 44.67 | 42.00 | 84.4 | 84.6 | 61.32 | 60.25 | 10.5 | 10.6 |
| | Sd ₂ | 247.00 | 239.00 | 122.50 | 117.33 | 20.00 | 19.08 | 2.60 | 2.50 | 12.00 | 12.17 | 45.50 | 43.25 | 84.9 | 84.9 | 64.49 | 62.58 | 11.2 | 11.1 |
| | Sd ₃ | 265.33 | 256.50 | 132.50 | 127.75 | 21.67 | 20.92 | 2.87 | 2.72 | 14.00 | 14.00 | 49.67 | 47.50 | 85.8 | 86.8 | 73.33 | 74.08 | 14.4 | 19.2 |
| | Sd ₄ | 253.67 | 244.17 | 127.33 | 120.92 | 20.00 | 19.83 | 2.65 | 2.57 | 12.67 | 13.17 | 47.17 | 45.17 | 85.4 | 85.4 | 68.10 | 67.29 | 12.4 | 12.3 |
| I ₂ | Sd ₁ | 227.17 | 220.80 | 109.33 | 106.67 | 18.00 | 17.25 | 2.40 | 2.26 | 12.00 | 12.00 | 40.00 | 37.75 | 83.2 | 83.5 | 56.42 | 53.37 | 8.4 | 8.9 |
| | Sd ₂ | 230.33 | 224.17 | 111.33 | 107.83 | 18.00 | 17.75 | 2.48 | 2.30 | 12.00 | 12.00 | 40.83 | 39.17 | 83.5 | 83.8 | 57.72 | 54.82 | 8.8 | 9.6 |
| | Sd ₃ | 238.67 | 228.33 | 116.17 | 111.25 | 19.00 | 18.25 | 2.50 | 2.40 | 12.00 | 12.00 | 43.33 | 41.25 | 84.2 | 84.4 | 60.12 | 58.42 | 10.0 | 10.1 |
| | Sd ₄ | 235.33 | 226.08 | 113.17 | 109.42 | 19.00 | 18.00 | 2.50 | 2.31 | 12.00 | 12.00 | 42.00 | 40.33 | 83.9 | 84.1 | 58.72 | 56.40 | 9.2 | 9.9 |
| I ₃ | Sd ₁ | 188.67 | 190.92 | 92.83 | 90.67 | 15.33 | 14.92 | 2.03 | 1.87 | 11.00 | 11.67 | 34.83 | 28.92 | 82.2 | 79.2 | 43.98 | 43.28 | 4.5 | 4.4 |
| | Sd ₂ | 212.17 | 203.08 | 103.17 | 99.00 | 16.83 | 16.00 | 2.18 | 2.08 | 11.50 | 12.00 | 36.83 | 35.42 | 82.1 | 81.3 | 48.78 | 47.10 | 6.4 | 5.8 |
| | Sd ₃ | 222.83 | 215.75 | 107.50 | 104.92 | 17.83 | 17.00 | 2.33 | 2.20 | 12.00 | 12.00 | 39.33 | 37.00 | 82.9 | 83.0 | 55.02 | 51.19 | 7.9 | 7.7 |
| | Sd ₄ | 217.83 | 207.92 | 106.00 | 101.92 | 17.00 | 16.75 | 2.30 | 2.16 | 12.00 | 12.00 | 38.00 | 36.00 | 82.6 | 82.4 | 52.95 | 49.49 | 7.4 | 6.8 |
| F-test | | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| LSD 5% | | 9.59 | 1.80 | 1.80 | 1.76 | 0.31 | 0.32 | 0.08 | 0.04 | 0.28 | 0.20 | 0.59 | 0.80 | 0.36 | 2.9 | 0.60 | 0.63 | 0.23 | 0.75 |

I₁, I₂ and I₃ = Irrigated at 12, 18 and 24 days, respectively

Sd₁, Sd₂, Sd₃ and Sd₄ = Spatial distribution of plants (40x50 cm), (35x60 cm), (30x70 cm) and (25x80 cm), respectively.

LSD 5% = Least significant difference at 5% of probability.