

**Report of PCGIN 2006 Micro-Plot  
Trial at  
NIAB, PGRO and JIC**

- **Plant material:** 20 lines comprising of 18 exotic germplasm lines and two current cultivars as controls.

- **Experimental design:** Complete randomised block design. (60 plots comprising of 3 blocks of 20 lines with 1 replicate per block).

| Line No. | JI No | NAME                  | Flowering date | Height at flowering (cm) | Downey mildew score (05)<br>9= fully sus.<br>7= mod. Sus. | SDWT |
|----------|-------|-----------------------|----------------|--------------------------|---|------|
| 1        | 15    | WBH 1458              | 06-Jun-05      | 60                       | 3   | 204  |
| 2        | 45    | P.TRANSCAUCASICUM     | 24-Jun-05      | 105                      | 4   | 56   |
| 3        | 181   | KEERAU PEA            | 12-Jun-05      | 50                       | 4   | 87   |
| 4        | 188   | WIRAIG                | 18-Jun-05      | 110                      | 4   | 195  |
| 5        | 201   | P.THEBAICUM           | 25-Jun-05      | 115                      | 4   | 180  |
| 6        | 216   | KANAWARI              | 20-Jun-05      | 90                       | 4   | 361  |
| 7        | 228   | P.SATIVUM-BOLIVIA     | 22-Jun-05      | 110                      | 4   | 175  |
| 8        | 281   | P.SATIVUM-ETHIOPIA    | 14-Jun-05      | 60                       | 4   | 141  |
| 9        | 284   | P.SATIVUM-AFGHANISTAN | 26-Jun-05      | 115                      | 4   | 222  |
| 10       | 399   | CENNIA                | 06-Jun-05      | 48                       | 4   | 200  |
| 11       | 813   | YELLOW POLLEN-yp      | 06-Jun-05      | 43                       | 4   | 482  |
| 12       | 1089  | P.ELATIUS             | 18-Jun-05      | 73                       | 3   | 108  |
| 13       | 1194  | MISOG-1:CONVENTIONAL  |                | 95                       | 4   | 240  |
| 14       | 1428  | P.TIBETANICUM         | 22-Jun-05      | 110                      | 3   | 119  |
| 15       | 2105  | P.ELATIUS             | 11-Jun-05      | 72                       | 4   | 132  |
| 16       | 2201  | P.ELATIUS             | 22-Jun-05      | 95                       | 4   | 101  |
| 17       | 2551  | P. SATIVUM SIBERIANUM | 20-Jun-05      | 110                      | 4   | 66   |
| 18       | 2605  | P. SPECIOSUM-LIBYA    | 16-Jun-05      | 90                       | 4   | 149  |
| 19       |       | BILBO                 |                |                          |   | 223  |
| 20       |       | COOPER                |                |                          |   | 233  |

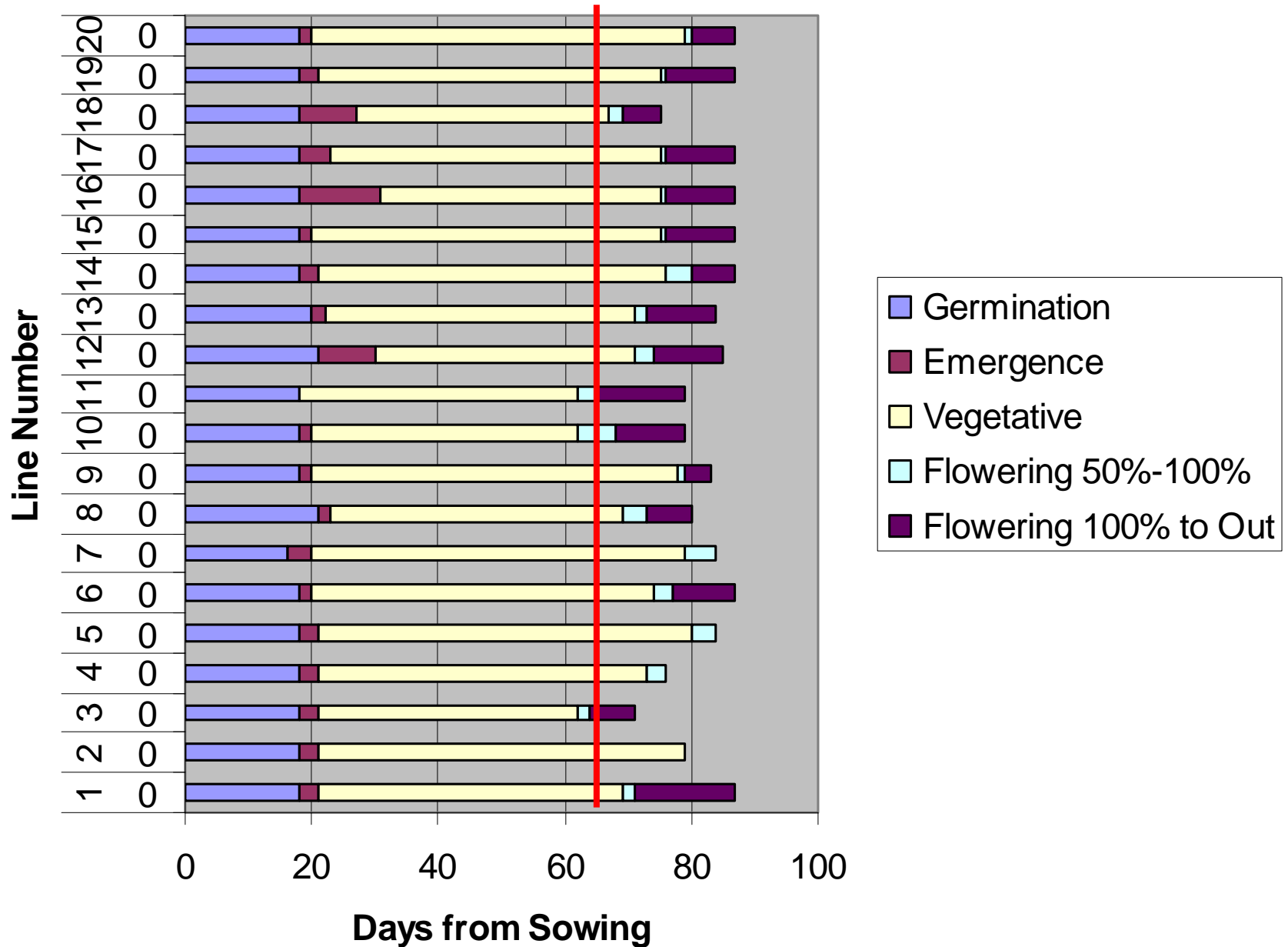
# 2006 Weather Summary for the East Anglian region.

(Met. Office statistics).

|                 | March  |               | April  |               | May    |               | June   |               | July   |               |
|-----------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|
|                 | Actual | Anom*<br>(°C) | Actual | Anom.<br>(°C) | Actual | Anom.<br>(°C) | Actual | Anom.<br>(°C) | Actual | Anom.<br>(°C) |
| Max. Temp. (°C) | 8.8    |               | 13.1   |               | 17.2   |               | 21.1   |               | 26.9   |               |
| Min. Temp.      | 1.5    |               | 4.4    |               | 8.3    |               | 10.6   |               | 14.3   |               |
| Mean Temp.      | 5.0    | -0.6          | 8.8    | 0.9           | 12.7   | 1.5           | 16.9   | 1.8           | 20.5   | 4.2           |
|                 |        | (%)           |        | (%)           |        | (%)           |        | (%)           |        | (%)           |
| Rainfall (mm)   | 37.9   | 83            | 34.2   | 75            | 81.3   | 173           | 16.6   | 39            | 29.7   | 59            |

\* Anomalies = difference from or % from 1961-1990 long term average.

# Crop Phenology: Data from JIC rep. 1

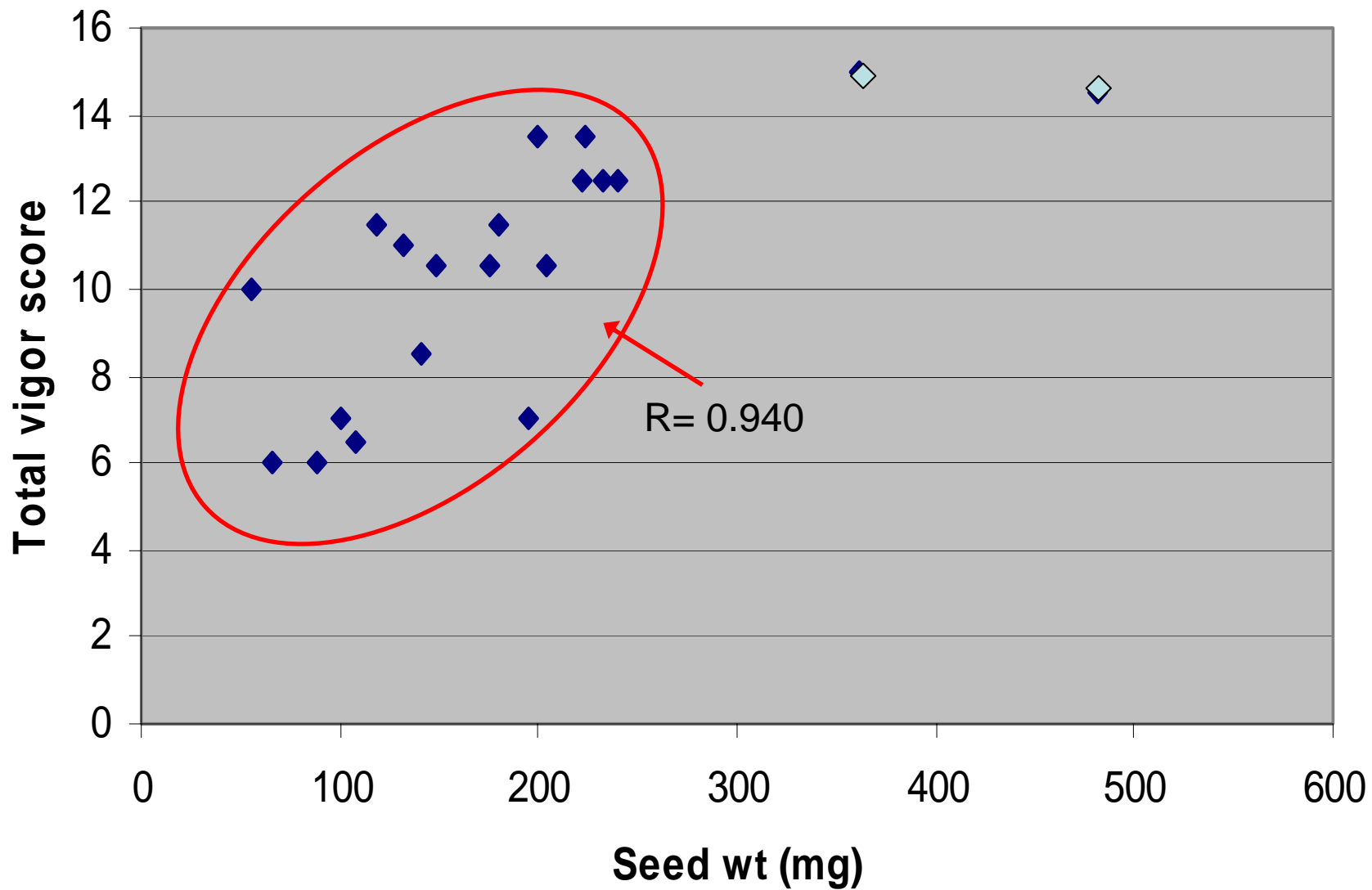


Vigour

# Average Vigour Assessments

(5=Good, 1=Poor)

| Line         | PGRO | NIAB | JIC | Total<br>over sites |  |
|--------------|------|------|-----|---------------------|--|
| (1) JI 15    | 4    | 3.5  | 4   | 10.5                |  |
| (2) JI 45    | 2    | 3    | 5   | 10                  |  |
| (3) JI 181   | 1.5  | 2.5  | 2   | 6                   |  |
| (4) JI 188   | 2.5  | 3.5  | 1   | 7                   |  |
| (5) JI 201   | 3.5  | 5    | 3   | 11.5                |  |
| (6) JI 216   | 5    | 5    | 5   | 15                  |  |
| (7) JI 228   | 4    | 3.5  | 3   | 10.5                |  |
| (8) JI 281   | 2    | 3.5  | 3   | 8.5                 |  |
| (9) JI 284   | 4.5  | 4    | 4   | 12.5                |  |
| (10) JI 399  | 4    | 4.5  | 5   | 13.5                |  |
| (11) JI 813  | 5    | 4.5  | 5   | 14.5                |  |
| (12) JI 1089 | 2    | 2.5  | 2   | 6.5                 |  |
| (13) JI 1194 | 4.5  | 4    | 4   | 12.5                |  |
| (14) JI 1428 | 3.5  | 4    | 4   | 11.5                |  |
| (15) JI 2105 | 3.5  | 3.5  | 4   | 11                  |  |
| (16) JI 2201 | 1    | 4    | 2   | 7                   |  |
| (17) JI 2551 | 1.5  | 2.5  | 2   | 6                   |  |
| (18) JI 2605 | 3.5  | 4    | 3   | 10.5                |  |
| (19) Bilbo   | 4    | 4.5  | 5   | 13.5                |  |
| (20) Cooper  | 4.5  | 3    | 5   | 12.5                |  |



# Standing Ability

## Overall lodging score for each replicate at maturity (Yes/No).

| Line         | PGRO          | NIAB           | JIC          |
|--------------|---------------|----------------|--------------|
| (1) JI 15    | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (2) JI 45    | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (3) JI 181   | Y Y,Y         | <b>N</b> ,Y,Y  | Y,Y,Y        |
| (4) JI 188   | Y Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (5) JI 201   | Y Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (6) JI 216   | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (7) JI 228   | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (8) JI 281   | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (9) JI 284   | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (10) JI 399  | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (11) JI 813  | Y,Y,Y         | <b>N,N</b> ,Y  | Y,Y,Y        |
| (12) JI 1089 | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (13) JI 1194 | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (14) JI 1428 | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (15) JI 2105 | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (16) JI 2201 | Y,Y,Y         | Y, <b>N</b> ,Y | <b>N,N,N</b> |
| (17) JI 2551 | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (18) JI 2605 | Y,Y,Y         | Y,Y,Y          | Y,Y,Y        |
| (19) Bilbo   | Y,Y, <b>N</b> | Y,Y, <b>N</b>  | <b>N,N,N</b> |
| (20) Cooper  | <b>N,N,N</b>  | Y, <b>N,N</b>  | <b>N</b> ,Y  |

## Examples of specific scoring criteria for lodging

**Basal Sag**



**Leaning**



**Leaning and creeping**



# Replicate scores for basal sag (B), leaning (L) and creeping habit (C) across the sites.

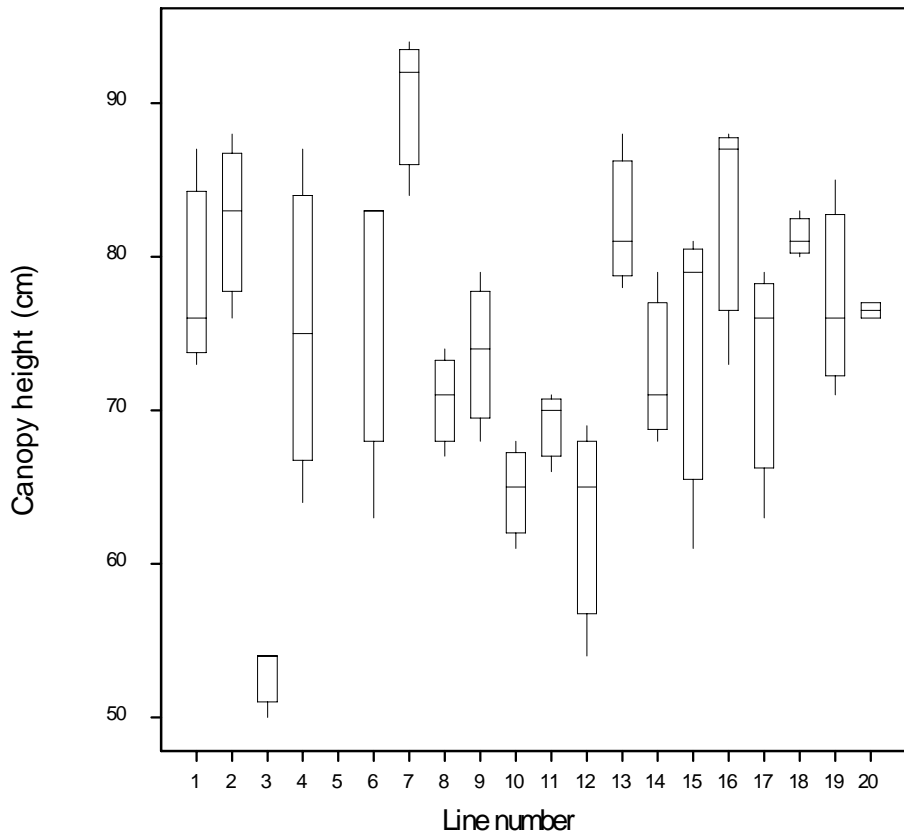
All scales on 1 – 5. (1=upright, 5= severe).

| LINE         | PGRO |     |     | NIAB |     |     | JIC |     |     |
|--------------|------|-----|-----|------|-----|-----|-----|-----|-----|
|              | B    | L   | C   | B    | L   | C   | B   | L   | C   |
| (1) JI 15    | 000  | 004 | 355 | 200  | 300 | 121 | 000 | 433 | 403 |
| (2) JI 45    | 330  | 554 | 000 | 000  | 000 | 121 | 000 | 454 | 000 |
| (3) JI 181   | 000  | 343 | 334 | 000  | 000 | 011 | 000 | 523 | 000 |
| (4) JI 188   | 000  | 433 | 434 | 101  | 001 | 443 | 000 | 433 | 000 |
| (5) JI 201   | 000  | 544 | 300 | 000  | 000 | 212 | 300 | 534 | 003 |
| (6) JI 216   | 000  | 334 | 000 | 010  | 003 | 233 | 000 | 544 | 000 |
| (7) JI 228   | 000  | 433 | 000 | 000  | 200 | 233 | 000 | 544 | 300 |
| (8) JI 281   | 000  | 555 | 000 | 210  | 000 | 132 | 300 | 555 | 542 |
| (9) JI 284   | 000  | 555 | 000 | 001  | 001 | 342 | 000 | 544 | 000 |
| (10) JI 399  | 000  | 333 | 000 | 000  | 223 | 221 | 000 | 555 | 000 |
| (11) JI 813  | 000  | 334 | 000 | 000  | 000 | 200 | 000 | 543 | 000 |
| (12) JI 1089 | 000  | 555 | 500 | 000  | 200 | 224 | 000 | 352 | 200 |
| (13) JI 1194 | 000  | 444 | 000 | 000  | 340 | 013 | 000 | 545 | 000 |
| (14) JI 1428 | 000  | 332 | 444 | 200  | 020 | 123 | 300 | 354 | 200 |
| (15) JI 2105 | 554  | 333 | 000 | 000  | 000 | 111 | 000 | 544 | 000 |
| (16) JI 2201 | 000  | 333 | 000 | 000  | 300 | 230 | 000 | 242 | 000 |
| (17) JI 2551 | 000  | 555 | 555 | 100  | 000 | 111 | 000 | 444 | 000 |
| (18) JI 2605 | 000  | 355 | 505 | 112  | 311 | 022 | 300 | 422 | 000 |
| (19) Bilbo   | 000  | 121 | 000 | 000  | 000 | 001 | 000 | 030 | 000 |
| (20) Cooper  | 000  | 100 | 000 | 000  | 003 | 001 | 00  | 04  | 00  |

# Canopy heights for a single rep. of lines grown at JIC

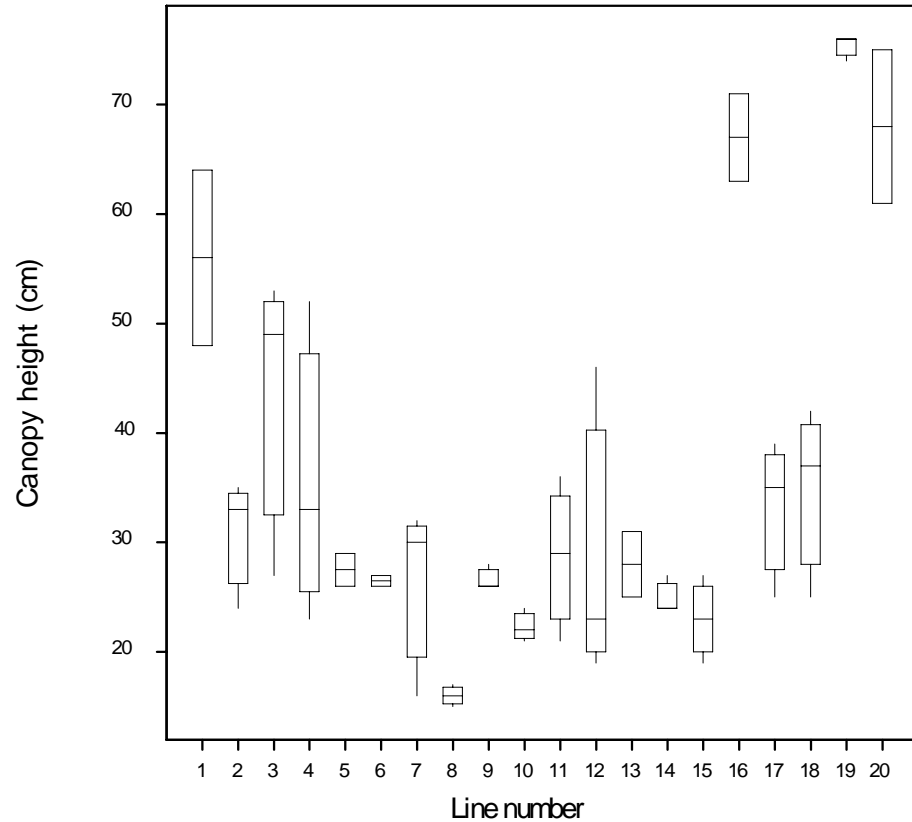
## Height at Full flower

### Boxplot for canopy height at full flower JIC

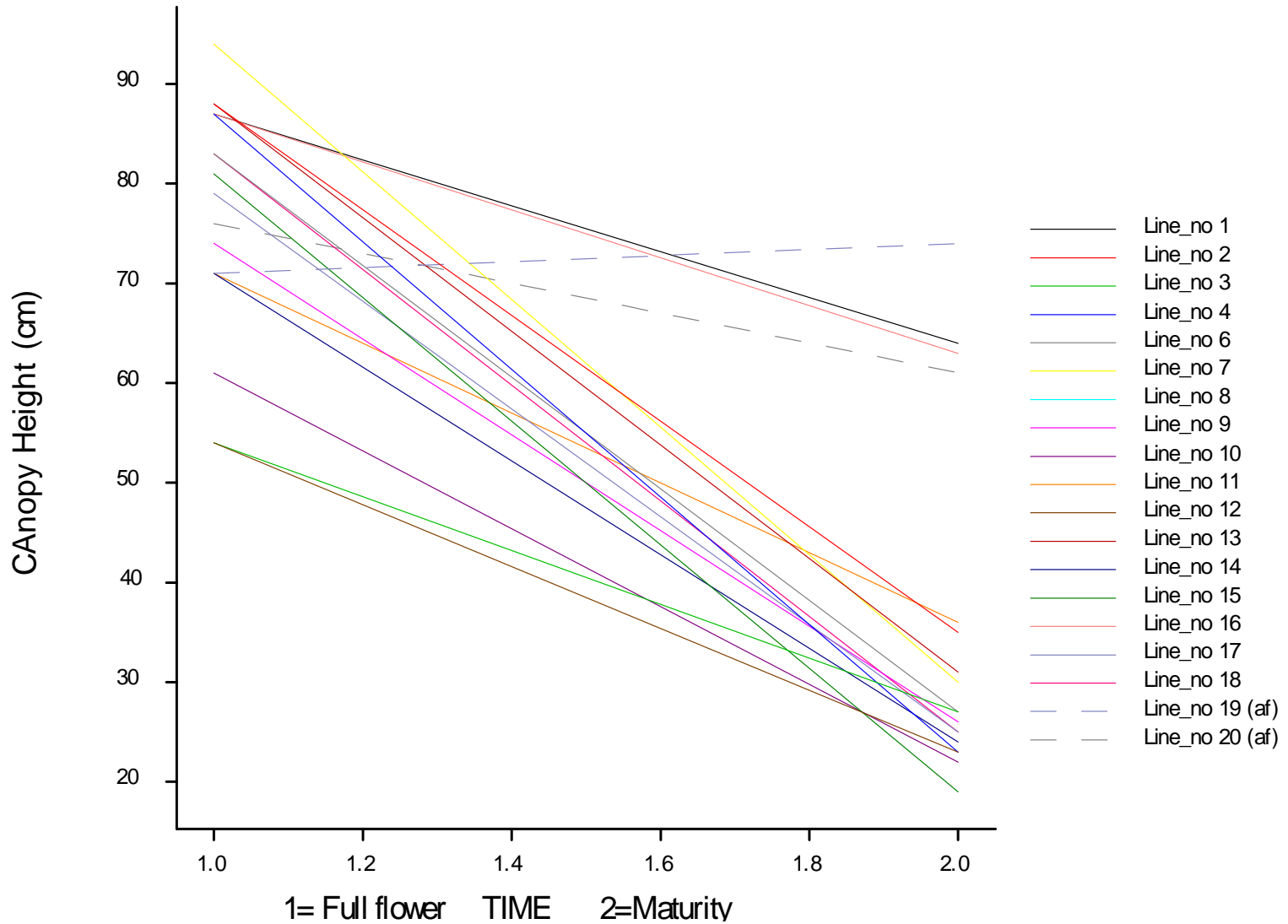


## Height at Maturity

### Boxplot for Canopy height at Maturity at JIC

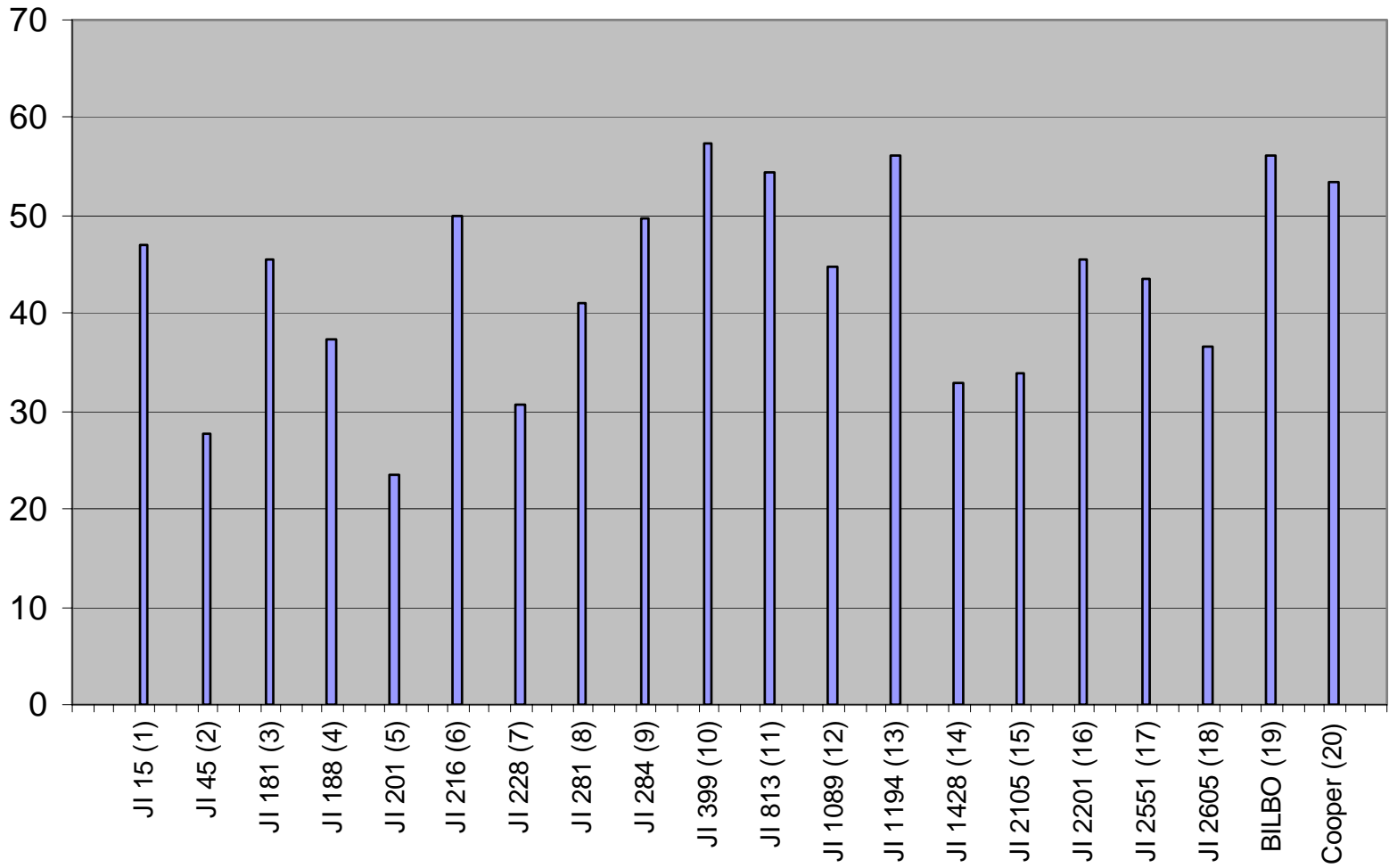


# Change in canopy height from full flower to maturity for replicate at JIC.

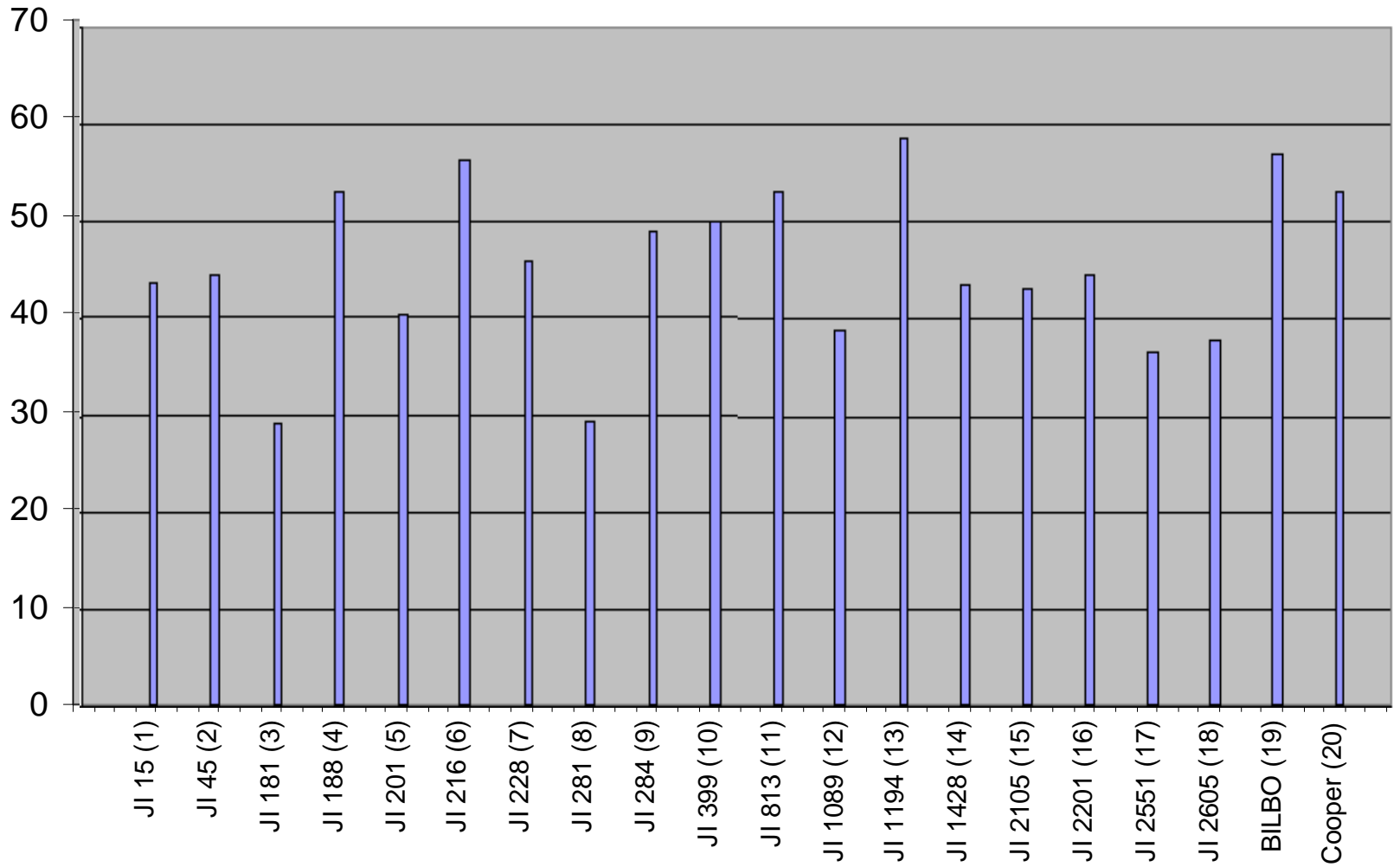


# Harvest Index

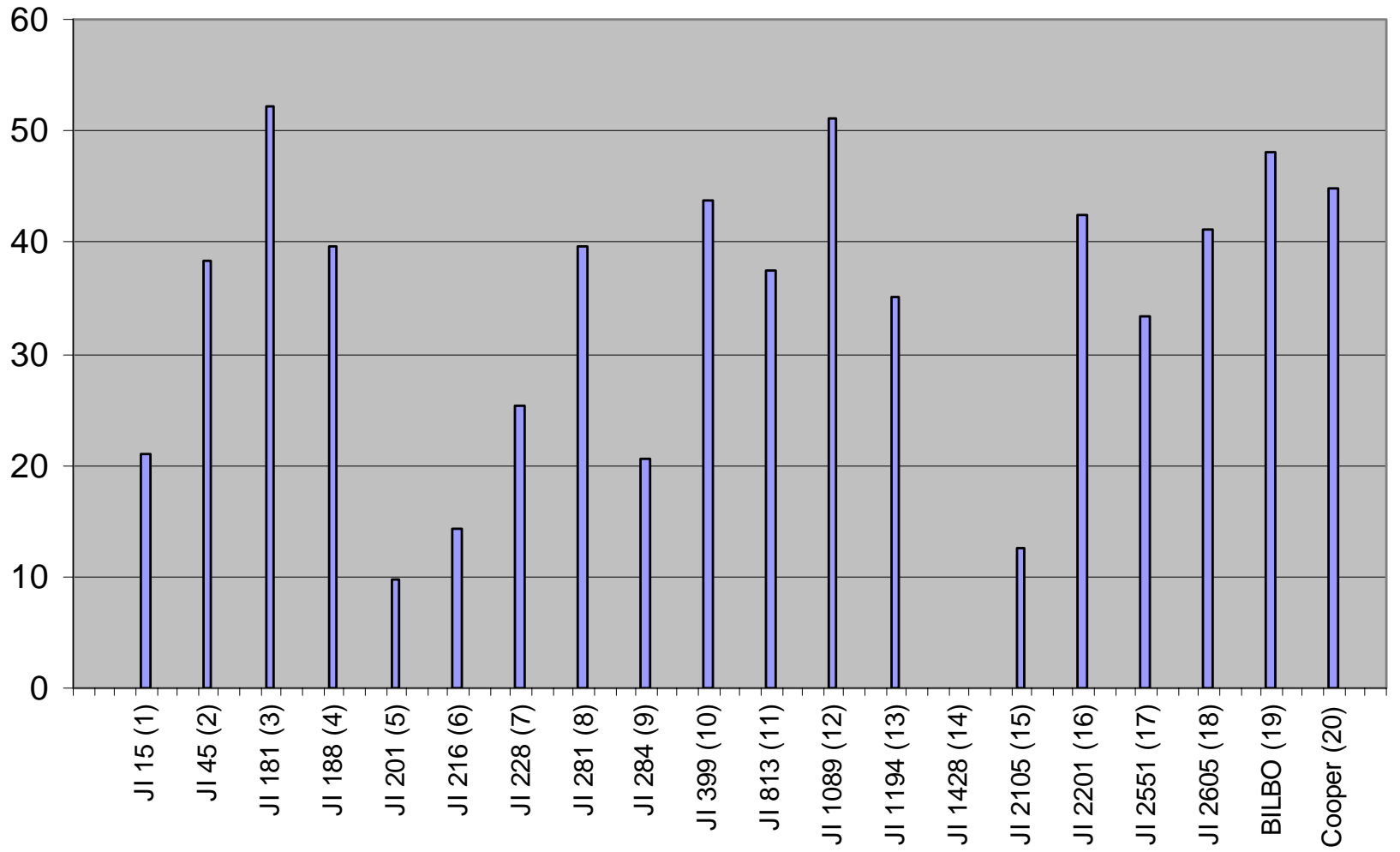
### Harvest index - PGRO in



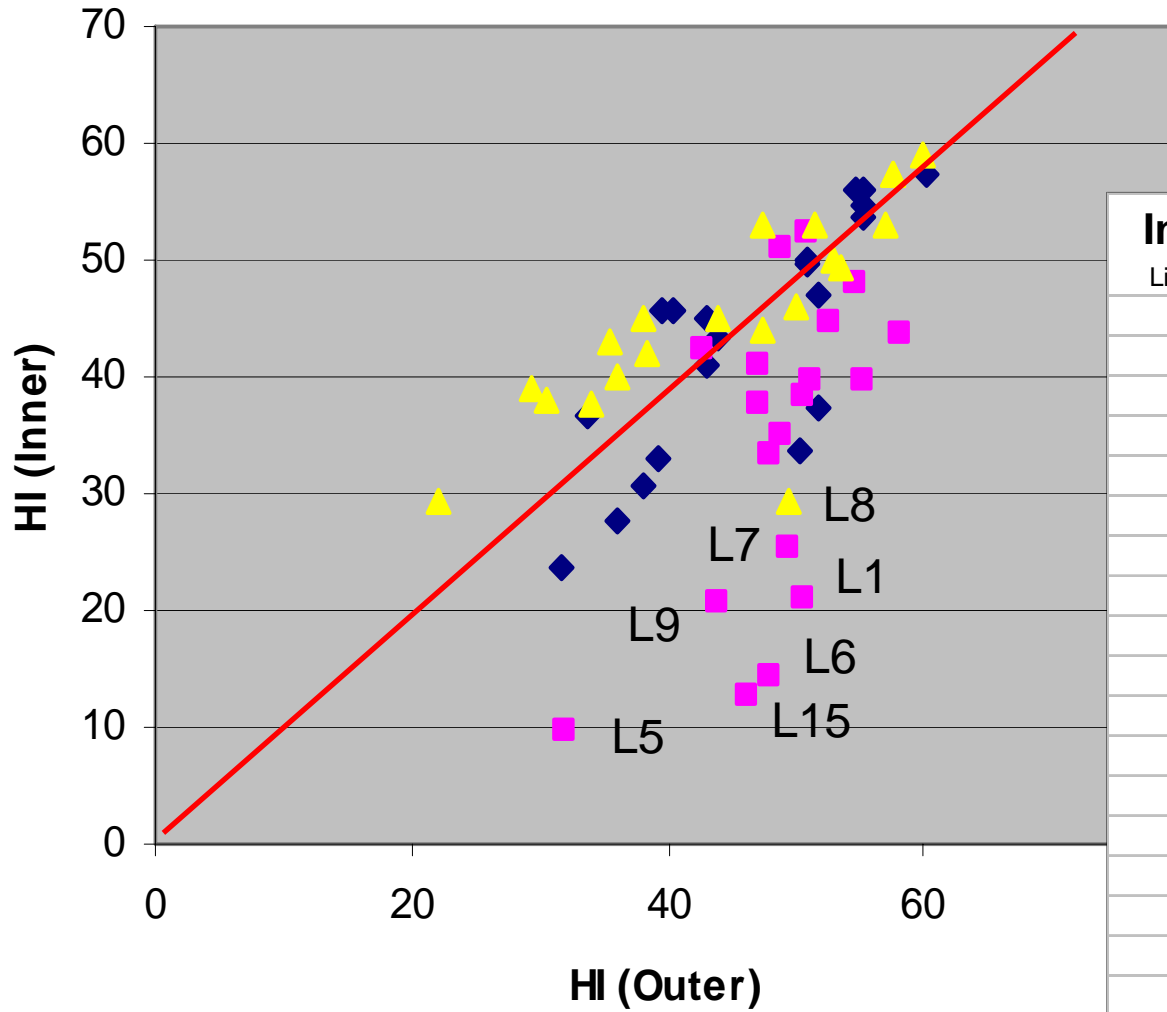
## Harvest index NIAB in



## Harvest index - JIC in



# Harvest Index



| Inner Exceeded Outer |      |      |     |
|----------------------|------|------|-----|
| Line                 | NIAB | PGRO | JIC |
| 1                    |      |      |     |
| 2                    | H    |      |     |
| 3                    | H    | H    | H   |
| 4                    | H    |      |     |
| 5                    | H    |      |     |
| 6                    |      |      |     |
| 7                    |      |      |     |
| 8                    |      |      |     |
| 9                    |      |      |     |
| 10                   |      |      |     |
| 11                   | H    |      |     |
| 12                   |      | H    | H   |
| 13                   |      | H    |     |
| 14                   | H    |      |     |
| 15                   | H    |      |     |
| 16                   | H    | H    |     |
| 17                   | H    |      |     |
| 18                   | H    |      |     |
| 19                   |      | H    |     |
| 20                   |      |      |     |