AOV Means Table  **AGROPRAISALS PTY LTD**

 **Carryover of winter field crop herbicides into a subsequent drill sown rice crop**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Trial ID: | H21-15  |   |   |  Trial Year: | 2015 |
| Protocol ID: |   |  Investigator: | MALCOLM TAYLOR  |   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Crop Code | ORYSA | ORYSA | ORYSA | ORYSA |
| Crop Scientific Name | Oryza sativa | Oryza sativa | Oryza sativa | Oryza sativa |
| Crop Name | Common rice | Common rice | Common rice | Common rice |
| Description | Biomass Red'n | Biomass Red'n | Plants/m2 | Grain Yield |
| Part Rated | Rating - | Rating - |   | t/ha - |
| Rating Date | 6Jan16 | 10Mar16 | 6Jan16 | 19May16 |
| Trt | Treatment | Form | Form | Form | Lot |   | Rate |  |  |  |  |  |  |  |  |
| No. | Name | Conc | Unit | Type | Code | Rate | Unit | 2 | 3 | 5 | 7 |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 1 | untreated control |   |   |   |   |   |   | 0.0 | e | 0.6 | cd | 39.8 | a | 10.74 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 2 | BOXER GOLD | 920 | GA/L | EC | BOXERGOLD | 5.0 | l/ha | 16.3 | bcd | 6.6 | bcd | 35.7 | a | 11.12 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 3 | SAKURA | 850 | GA/kg | WG | SAKURA | 236 | g/ha | 63.8 | a | 68.8 | a | 14.8 | b | 8.91 | c |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 4 | AVADEX XTRA | 500 | GA/L | EC | AVADEX XTRA | 3.2 | l/ha | 0.0 | e | 1.9 | bcd | 39.8 | a | 11.85 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 5 | LOGRAN | 750 | GA/kg | WG | LOGRAN | 70 | g/ha | 10.0 | cde | 1.9 | bcd | 29.8 | a | 11.39 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 6 | GLEAN | 750 | GA/kg | WG | GLEAN | 40 | g/ha | 28.8 | b | 14.5 | b | 31.4 | a | 11.45 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 7 | TRIFLURX | 480 | GA/L | EC | TRIFLURX | 4.0 | l/ha | 0.0 | e | 0.6 | cd | 33.9 | a | 11.67 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 8 | STOMP | 440 | GA/L | EC | STOMP | 3.6 | l/ha | 2.5 | de | 10.6 | bc | 34.2 | a | 11.43 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 9 | DIURON | 500 | GA/L | SC | DIURON | 1.0 | l/ha | 0.0 | e | 7.5 | bcd | 37.7 | a | 10.65 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 10 | SIMAZINE | 900 | GA/kg | WG | SIMAZINE | 2.2 | kg/ha | 15.0 | b-e | 11.9 | bc | 34.7 | a | 11.78 | ab |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 11 | ATRAZINE | 900 | GA/kg | WG | ATRAZINE | 2.2 | kg/ha | 17.5 | bc | 0.0 | d | 37.7 | a | 11.98 | a |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 12 | ALLY | 600 | GA/kg | WG | ALLY | 14 | g/ha | 5.0 | cde | 0.6 | cd | 31.1 | a | 12.05 | a |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 13 | INTERVIX | 48 | GA/L | SL | INTERVIX | 1.5 | l/ha | 76.3 | a | 51.3 | a | 14.8 | b | 10.38 | b |
|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
| LSD (P=.05) | 12.99 | 14.77t | 12.26 | 1.283 |
| Standard Deviation | 9.09 | 10.34t | 8.58 | 0.898 |
| CV | 50.29 | 60.09 | 26.84 | 8.03 |

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Trial description:

Field ploughed and graded in autumn 2015

All treatments applied to fallow field on 4th June 2015. Negligible trash.

Fallow maintained with two glyphosate treaments prior to drill seeding in November 2015 with YRM 70 rice.

Paraquat plus clomazone plus pendimethalin applied to all plots prior to crop emergence and cyhalofop-butyl prior to permanent flooding.

Soil type medium clay, pH (1:5 CaCl2) 4.5, CEC 7.3

**Comments:**

**Rice sown immediately after a prior cereal or broadleaf winter crop may be susceptible to injury from carryover of herbicide residues. The current rice crop protection guide has warnings in relation to carryover of Group A, B and C herbicides. Herbicide carryover will be influenced by temperature, seasonal rainfall, soil pH, organic matter and soil texture, thus it is difficult to offer definitive answers to questions regarding the risk of damage to a following rice crop.**

**In June 2015 we applied twelve different winter crop herbicides at twice their common use rate in a replicated study at Old Coree.**

**Rice biomass reduction ratings and plant counts showed severe to moderate injury (in descending order) from INTERVIX, SAKURA, GLEAN, ATRAZINE, BOXER GOLD, SIMAZINE and LOGRAN. No or negligible injury was discernible with AVADEX XTRA, TRIFLURX, ALLY, STOMP and DIURON.**

**Rice yields were significantly depressed only by the most injurious treatments ie: SAKURA and INTERVIX.**