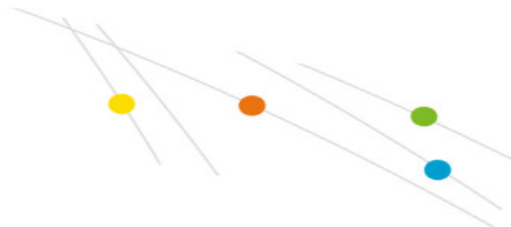


Foliar applied Speedfol® Rice SP and Ultrasol® K increase rice net income by 9 to 16%

"Under low K and Zn soil conditions, 3 foliar applications with Speedfol® Rice SP or 3 with Ultrasol® K on Japonica rice, grown under 3 different soil K application levels of the recommended KCL dose rate, increased crop yield by 9 to 17% and raised the farmer's net income by 9 to 16%" reports Sissi Ji, Agronomist at SQM China.

Speedfol® Rice SP outperformed Ultrasol® K, while Ultrasol® K surpassed the control treatment with respect to crop height, panicle length, number of panicles per hill, percentage of effective panicle, percentage of grains filled, 1.000-grain weight and the percentage of brown rice, calculated as an average of the 3 soil K input levels per foliar treatment. When soil K input levels were reduced from 100% to 50% of the recommended dose, the 1.000 grain-weight dropped from 26,0 to 25,1 grams, whereas the number of grains per panicle dropped from 133 to 120, also calculated as an average of the 3 foliar treatments per soil K input level.

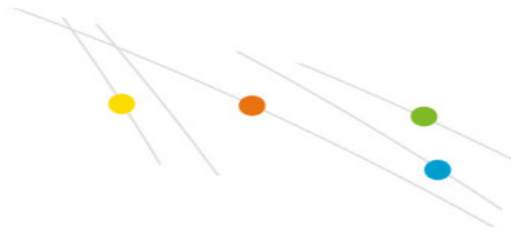
The trial was set up in a Japonica rice field in Dandong, Liaoning province in China. The soil was medium fertile sandy loam with 42 mg exchangeable K/kg (low level), 0,7 mg available Zn/kg (low level) and 1,46 mg available B/kg soil (adequate level). All plots received equal amounts of 25 MT farmyard manure/ha, 160 kg N/ha and 69 kg P₂O₅/ha in the base and side dressings. The trial design consisted of a completely randomized block design with 36 plots in total: 3 soil K levels, 3 foliar treatments and 4 replicates.



| Treatments Tratamientos | Code Clave | Dose per product Dosis por producto |
|---|---------------|--|
| KCL in the base dressing KCL en el abonado de fondo | K1 (100% K) | 150 kg KCL/ha - 150 kg KCL/há |
| | K2 (75% K) | 113 kg KCL/ha - 113 kg KCL/há |
| | K3 (50% K) | 75 kg KCL/ha - 75 kg KCL/há |
| Foliar treatments at panicle initiation (22/07/10), booting (11/08/10) and at end of flowering (01/09/10). Tratamientos foliares a la iniciación de la panoja (22/07/10), al embuchamiento (11/08/10) y al fin de floración (01/09/10). | F1 | 3 * 4,5 kg/ha = 13,5 kg Ultrasol® K /ha 3 * 4,5 kg/há = 13,5 kg Ultrasol® K /há |
| | F2 | 3 * 4,7 kg/ha = 14,2 kg Speedfol® Rice SP /ha 3 * 4,7 kg/há = 14,2 kg Speedfol® Rice SP /há |
| | C | 3 * water only 3 * solamente agua |

Main results

- Foliar applied Speedfol® Rice SP and Ultrasol® K, on top of the current standard practice of 150 kg KCL/ha in the base dressing, increased crop yield by 9 to 17% and raised the farmer's net income by 9 to 16%.
- Lower soil K input levels of 75% and 50% resulted in respectively 3,5% and 6% less crop yield and respectively 3% and 5% less net farmer's income.
- 5 to 10% higher crop yields and 6 to 8% extra net income can be obtained with only 50% or 75% of the recommended KCL dose rate in combination with 3 foliar applications of Speedfol® Rice SP or Ultrasol® K,



compared to the current standard of 100% KCL and no foliar applications.

| Treatments Tratamientos | | | Yield Rendi- miento | Yield increase versus the control Incremento del rendimiento versus al testigo | | Net income (yield minus fertiliser costs) Ingresos netos (rendimiento menos costos de fertilizantes) | Total extra net income Total de los ingresos netos adicionales | |
|--|---------------------------------|--|---------------------------|--|-------|--|---|-------|
| Code Clave | Base dressing Abono de fondo | Foliar treatments Tratamientos foliares | MT/ha MT/há | MT/ha MT/há | % | US\$/ha US\$/há | US\$/ha US\$/há | % |
| K1F1 | 100% KCL | | 7,57 | 0,6 | 9,4 | 2.752 | 227 | 9,0 |
| K1F2 | | | 8,10 | 1,2 | 17,2 | 2.919 | 394 | 15,6 |
| K1C | | control - testigo | 6,92 | - | - | 2.525 | - | - |
| K2F1 | 75% KCL | | 7,45 | 0,7 | 10,4 | 2.727 | 246 | 9,9 |
| K2F2 | | | 7,58 | 0,8 | 12,2 | 2.739 | | 10,4 |
| K2C | | control - testigo | 6,75 | - | - | 2.481 | - | - |
| K3F1 | 50% KCL | | 7,27 | 0,8 | 12,4 | 2.673 | 283 | 11,9 |
| K3F2 | | | 7,50 | 1,0 | 16,0 | 2.726 | 336 | 14,1 |
| K3C | | control - testigo | 6,47 | - | - | 2.390 | - | - |
| LSD 5% | | | 0,33 | | | | | |
| | | | | | | | | |
| Treatment averages Promedios de los tratamientos | | | MT/ha MT/há | MT/ha MT/há | % | US\$/ha US\$/há | US\$/ha US\$/há | % |
| | | | 7,4 | 0,7 | 10,7 | 2.718 | 252 | 10,3 |
| | | | 7,7 | 1,0 | 15,1 | 2.795 | 330 | 13,4 |
| control - testigo | | | 6,7 | - | - | 2.465 | - | - |
| | | | | | | | | |
| 100% KCL | | | 7,5 | - | - | 2.732 | - | - |
| 75% KCL | | | 7,3 | - 0,3 | - 3,5 | 2.649 | - 83 | - 3,0 |
| 50% KCL | | | 7,1 | - 0,5 | - 6,0 | 2.597 | - 135 | - 5,0 |