

from nutrient and crop prices, nutrient rates, and yield responses. The calculation assumed Argentina prices as of December 1999: US\$1.50/kg P, US\$0.89/kg S, and US\$0.06/kg corn (includes all discounts for commercialization).

Net margin increased with the increase in P and S rates (Figure 3). The highest net profit was obtained with the P30 and S24 combination. The increase in grain yield will also result in a lower impact from other costs (for example, land, seed, tillage operations, herbicides, insecticides, etc.), and thus higher profits.

### Conclusion

This study has shown that with any high yielding crop, the use of low P rates results not only in soil P losses but also in decreased profitability. Results also encourage fertilization studies with S. Future research should determine guidelines to predict S deficiencies. Ongoing field experiments at other locations of the Pampean region of Argentina indicate a weak relationship between soil SO<sub>4</sub>-S availability at planting and S fertilization response. **BCI**

*Hugo Fontanetto and Oscar Keller are research agronomist and extension agent, respectively, with EEA INTA Rafaela, CC 22, (2300) Rafaela, Santa Fe, Argentina; e-mail: hfontanetto@inta.gov.ar. Rubén Inwinkleried and Norberto Citroni are private consultants based at Rafaela, Santa Fe, Argentina. Fernando García is Director, Latin America, Southern Cone, PPI/PPIC (INPOFOS), Av. Santa Fe 910, (B1641ABO) Acassuso, Argentina, e-mail: fgarcia@ppi-ppic.org.*

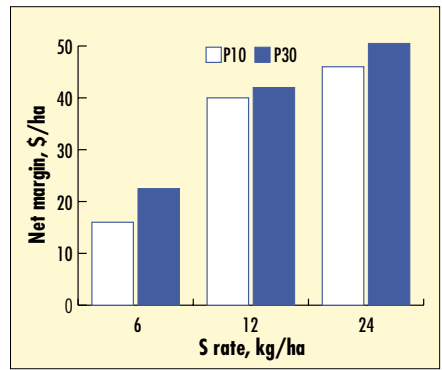


Figure 3. Net margin for the P and S treatments evaluated in the experiment at San Carlos, Santa Fe.

## World Population Reaches 6 Billion

The world's population increased to over 6 billion people on October 12, 1999, according to the United Nations. While the population growth appears to be slowing, it is still adding more than twice as many people as were added annually at the middle of the 20th century.

In 1950, world population reached a total of 2.56 billion. The graph shown here tracks the number at each decade since then. While tremendous progress in food and fiber production has eased concerns in many areas of the world, the challenge of improving practices and developing more efficient crop and soil management systems continues. **BCI**

