

**Table 4.** Effect of nutrient management options on total net return of different cropping systems.

Nutrient management options	Sesamum-wheat	Pigeon pea-wheat	Ground nut-wheat	Rice-wheat	Maize-wheat	Sorghum fodder-wheat
	Total cost of cultivation, Rs./ha					
FFP	30,020	33,967	35,982	43,432	41,488	26,589
SR	30,830	34,408	38,078	45,115	41,956	29,267
ISR	31,758	35,421	39,301	46,570	43,456	30,542
STLR	30,940	34,442	38,399	45,269	42,279	29,477
SSNM	33,950	37,836	41,258	47,692	45,541	31,950
Mean	31,499	35,215	38,604	45,616	42,944	29,565
Total net return, Rs./ha						
FFP	32,452	38,655	38,560	45,002	43,347	29,916
SR	42,091	44,697	41,123	54,192	49,284	37,090
ISR	46,112	50,809	49,181	62,418	57,274	43,034
STLR	43,565	43,149	42,735	52,922	52,191	37,599
SSNM	49,426	54,102	54,139	67,099	62,112	46,003
Mean	42,729	46,282	45,147	56,327	52,842	38,728
CD (p<0.05)	2,665	2,815	2,690	3,212	3,254	2,358

Note: Prices for N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, S, Zn, and B were Rs.10.5, 16.5, 7.5, 26.5, 20, and 34 per kg. Prices for rice, sesamum, pigeon pea, groundnut, maize, and sorghum (fodder) were Rs.5.80, 15.60, 14.10, 15.20, 5.40, and 0.25 per kg. Labour cost = Rs105 per labourer per day. In addition, land lease cost (rental value), irrigation cost, and pesticides costs are included in the total cost.

the lowest (Rs.38,728) was registered in the sorghum fodder-wheat system (**Table 4**). The cost of cultivation was lowest in sesamum-wheat and this was comparable with the sorghum fodder-wheat system. Under SSNM, 8.1 to 17%, 6.3 to 11.3%, 2.6 to 7.7%, and 5.9 to 11.5% additional investment was accrued

compared to FFP, SR, ISR, and STLR treatments, respectively. Similarly, the total net returns for the different systems were also greater by 36 to 55%, 16 to 32%, 6.0 to 10%, and 12 to 27%, respectively, over FFP, SR, ISR, and STLR (**Figure 3**). As for adoption of nutrient management options, the highest return was from SSNM, which furnished Rs. 67,099, 62,112, 54,139, 54,102, 49,426, and 46,003 in rice-wheat, maize-wheat, groundnut-wheat, pigeon pea-wheat, sesamum-wheat, and sorghum fodder-wheat, respectively. **CG INDIA**

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## International Certified Crop Adviser Program Coming to India

The International Certified Crop Adviser (ICCA) program of the American Society of Agronomy (ASA) is coming to India in 2010. The ICCA program is a voluntary initiative that certifies candidates who successfully complete an exam which tests their knowledge on principles and practices associated with crop management, integrated pest management, nutrient management, and soil and water management.

Who are CCAs?

- CCAs are working mainly with the crop production and soil management industry, or government service. They are involved in providing recommendations to farmers on a daily basis, using scientific knowledge and experience to help solve real problems.

When will the certification exams be held?

- The first opportunity to be tested under the ICCA program in India will be in November of 2010. The exam will be offered in the states of Punjab and Haryana. Future expansion of the exam testing process is expected in 2011.

Who manages the exam in India?

- The exam is managed by a select committee of Indian experts working in the four core competency areas being tested. Candidates who are successful in passing the exam will present their education and work experience credentials to the ICCA certifying board, who are then in a position to approve the candidate for certification.

Watch for more details on the ICCA program in India in 2010. It is your opportunity to become part of the largest crop production certification program in the world. **CG INDIA**

