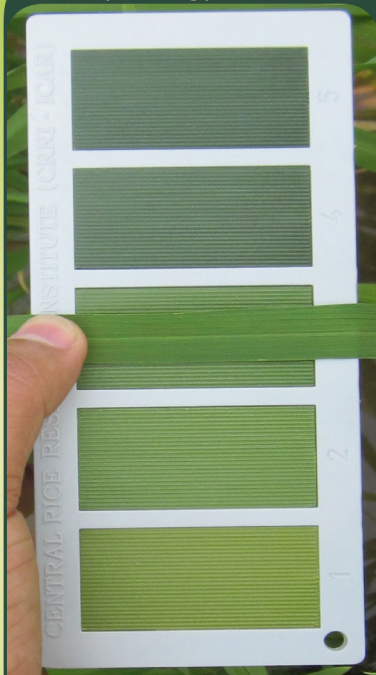


#### Proper holding position



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### Customized Leaf Colour Chart for Nitrogen Management in Rice for Different Ecologies

2013



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#### How to use Leaf Colour Chart (LCC)

1. Monitor leaf colour continuously from 21 days after transplanting (DAT) /28 days after sowing (DAS) at weekly interval until 1 week after panicle initiation for varieties and up to flowering for hybrids.
2. Reading should be taken in the morning (8-10AM) or in the afternoon (2-4 PM) preferably by the same person.
3. Ten topmost fully expanded leaves should be selected randomly from disease-free rice plants for taking LCC reading.
4. Leaf colour should be measured under the shade of the body by placing the middle part of the leaf on the top of the colour strip for comparison, care should be taken to avoid direct sun light.
5. If six or more leaves have reading below the critical LCC value, apply N as per the recommendation given in the table.

### Real Time N management using Leaf Colour Chart (LCC)

- ♦ LCC is an easy-to-use and inexpensive diagnostic tool used for monitoring the relative greenness of rice leaf as an indicator of the leaf N status.
- ♦ The LCC can be used by the farmer himself to rapidly assess leaf nitrogen status and to decide the amount and time of nitrogen application.
- ♦ This will help to maintain optimal leaf nitrogen content of rice crop, which can be vital for achieving higher nitrogen use efficiency and better yield.
- ♦ The customized LCC developed at CRRI, Cuttack on the basis of spectral evaluation of leaves of hundreds of varieties under different N levels can be used for real time N management by using the N application schedules given below

### LCC based N application schedule for different rice ecologies

Particulars	Rainfed favorable lowland	Rainfed upland	Submerged and flood affected	Irrigated Kharif	Irrigated Rabi	Hybrid
System of cultivation	Transplanting or direct seeding	Direct seeding	Transplanting or direct seeding	Transplanting	Transplanting	Transplanting
Initial application	Within 0-7 days of transplanting/ 0-14 days of sowing	Within 0-14 days of sowing	Within 0-7 days of transplanting/0-14 days of sowing	Within 0-7 days of transplanting	Within 0-7 days of transplanting	Within 0-7 days of transplanting
	Apply 17 kg urea/acre	Apply 17 kg urea/acre	Apply 17 kg urea/acre	Apply 23 kg urea/acre	Apply 29 kg urea/acre	Apply 35 kg urea/acre
Start of LCC reading	21 DAT/28 DAS	28 DAS	21 DAT/28 DAS	21 DAT	21 DAT	21 DAT
Next application	17 kg urea/acre as and when LCC < 3*	17 kg urea/acre as and when LCC < 3*	17 kg urea/acre <sup>5</sup> as and when LCC < 3*	23 kg urea/acre as and when LCC < 3*	29 kg urea/acre as and when LCC < 3*	23 kg urea/acre as and when LCC < 3*
No. of applications	3 (including initial)	2 (including initial)	2 (including initial)	3 (including initial)	3 (including initial)	4 (including initial)
*4 for varieties with dense green leaf colour such as Swarna; <sup>5</sup> When water level recedes to 5-10 cm depth						