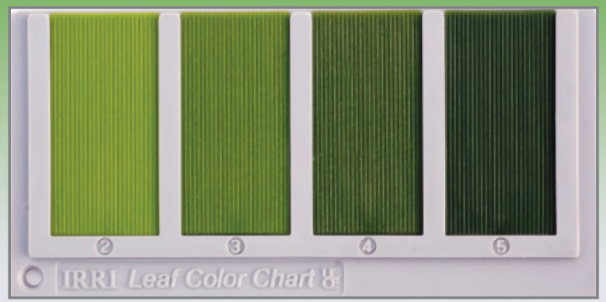

Note:

- Stop urea broadcast, in case Bacterial Leaf Blight (BLB) symptoms appear.
- Apply $ZnSO_4$ once in three years
- As far as practicable, drain out standing water before fertilizer application. The leaf color chart (LCC) is a tool that can be used for assessing leaf N status and the N need of the crop.
- Never apply N fertilizer in dry fields.
- Apply a complete dose of P and K fertilizer at the time of field preparation for transplanting or sowing.
- When deficiency symptoms of macro-nutrients appear, foliar spray of water soluble formulation of NPK (19:19:19) @ 2.5 kg/ha should be done for mid-season recovery.
- SSNM must be adjusted to local needs taking into consideration cropping history, seasonal effects, irrigation strategies and expected weather patterns.

- The World Bank is the funding agency of APART
- Department of Agriculture, Govt. of Assam is the nodal department for APART
- ARIAS Society is the State level coordinating and monitoring agency for APART
- Assam Agricultural University is one of the implementing agencies of APART, imparting scientific support.
- International Rice Research Institute (IRRI) is the rice global leader providing technical support for paddy value chain in APART

Site-Specific Nutrient Management

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IRRI

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Site-specific nutrient management (SSNM) is a need-based approach, which helps farmers to optimize the use of fertilizers in their rice fields. The growth and nutrient requirement of rice crop varies not only within and between fields, but also in seasons and years with weather.

Steps for SSNM

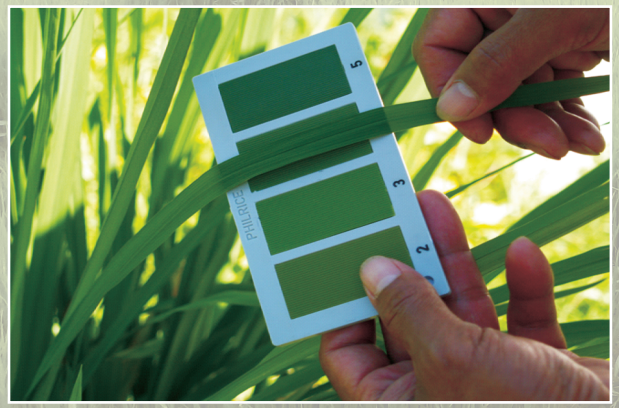
Step 1: Establish an attainable yield target

The amount of nutrients taken up by a rice crop is directly related to yield. It is the yield target to be achieved with a specific amount of nutrients to be applied to the crop.

Step 2: Effectively use existing nutrients

The uptake of nutrients from indigenous sources can be estimated by the grain yield of the crop without applying N, P or K. This can be determined using Nutrient Omission Plot Technique (NOPT) by leaving a strip in the field, where the respective nutrient sources (N, P or K) are not applied.

Step 3: Apply fertilizer to fill the deficit between crop-need and indigenous supply due to inherent capacity of soil



N, P and K fertilizers are applied to supplement the nutrients from indigenous sources to achieve the yield target. The quantity of fertilizer needed is determined by subtracting the yield of the omission plots from the target yield. As a baseline, each ton of grain requires approximately 15-20 kg N, 2-3 kg P and 12-18 kg K, if the straw is not removed.

In SSNM, fertilizers are applied using the following principles to achieve high yield and high efficiency of plant use:

For transplanted rice under submergence, fertilizer recommendation of N-P-K-Zn per ha is 60-20-40-5 kg for *Sali* season, and 60-30-30-5 kg for *boro/early ahu* season.

The detailed schedule and method of applying the nutrients is given in the table below:

Time of Application	Fertilizer	Dose (kg/bigha)				Application Method
		Sali season		*Boro/Ahu season*		
		Through DAP	Through SSP	Through DAP	Through SSP	
Basal	Urea	3.0	6.0	2.0	6.0	Broadcast & incorporate in soil at the time of field preparation
	DAP	6.0	-	9.0	-	
	SSP	-	17.0	-	25.0	
	MOP	9.0	9.0	7.0	7.0	
	$ZnSO_4$	3.0	3.0	3.0	3.0	
Tillering (20-25 DAT), after first weeding	Urea	6.0	6.0	6.0	6.0	Broadcast
Panicle initiation (40-45 DAT), after second weeding	Urea	6.0	6.0	6.0	6.0	Broadcast
***Additional fertilizer 5-7 days after the flood recedes**	Urea	6.0				Broadcast
	MOP	4.0				

DAT= Days after transplanting