

Rice phenological phases and their nutrition requirements

Nutrients removal by a rice crop (cv. IR36) yielding 9,8 MT/ha of rough rice grains and 8,3 MT/ha of straw

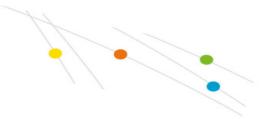
Plant nutrients Nutrientes de la planta	Amounts of nutrient removed (at harvest) / Cantidad de nutrientes removidos (en cosecha)							
	Straw / Paja		Grain /	Total				
	kg/ha	%	kg/ha	%	kg/ha			
Ν	75	21	143	70	218			
Р	5	1	25,5	12	30,5			
K	232	65	26	13	258			
Са	27	7	1	0	28			
Mg	13	4	10	5	23			
S	3,3	0,2	0,5	0,2	3,8			

Nutrients removal by a high yielding rice variety ('IR64'), 12 MT/ha rough rice grains and 8,3 MT/ha of straw, by 2 - 3 crops per year.

Plant nutrients Nutrientes de la planta	Amounts of nutrient removed (at harvest) / Cantidad de nutrientes removidos (en cosecha)						
	Straw* / Paja*		Grain /	Total			
	kg/ha	%	kg/ha	%	kg/ha		
N	63	20	137	63	200		
P	10	3	24	11	34		
К	168	53	36	17	204		
Са	46	14	6	3	52		
S	31	10	13	6	44		

Removal of Si and  $K_2O$  are particularly large if panicles and straw are taken away from the field at harvest. However, if only the grains are removed, and the straw is returned and incorporated back into the soil, the removal of Si and  $K_2O$  is greatly





reduced, although significant amounts of N and  $\mathrm{P_2O_5}$  are still removed.

Optional mineral nutrition schedule for field-grown rice at expected yield of 7-10 MT/ha.

Phenological stage Fase fenológica	Days after transplanting Días después de transplante	Physical application rates (kg/ha) Tasa de aplicación física (kg/ha)			Proportional application rates Tasas proporcionales de aplicación				
Pre-planting Pre-siembra	-20	N K₂O MgO	45 42 7	P <sub>2</sub> O <sub>5</sub> CaO S	42 18 8	N K <sub>2</sub> O MgO	1 1 0,17	P₂O₅ CaO S	1 0,43 0,18
Transplanting Transplante	0								
Transplant establishment Establecimiento de transplante	0 - 14								
Active tillering Labranza activa	20 - 30	N K₂O MgO	66 97 2	P <sub>2</sub> O <sub>5</sub> CαO S	6 3 5,6	N K <sub>2</sub> O MgO	1 1,5 0,03	$P_2O_5$ CaO S	0,1 0,05 0,09
Panicle initiation Iniciación de la panícula	35 - 50	N K <sub>2</sub> O	15 49	P <sub>2</sub> O <sub>5</sub>	19	N K <sub>2</sub> O	1 3,3	P <sub>2</sub> O <sub>5</sub>	1,3
Heading	60 - 70								
Grain filling Relleno de grano	80 - 100								
Harvest Cosecha	110 - 130								
Total application rate (kg/ha) Tasa total de aplicación (kg/ha)		N K <sub>2</sub> O MgO	126 188 9	P <sub>2</sub> O <sub>5</sub> CaO S	67 21 13	N K Mg	1 1,5 0,07	P Ca S	0,53 0,17 0,10



