

## Rhizobial Inoculation

### **FERTILIZER DOSES ON TARGETED YIELD CONCEPT**

On the basis of the experiments conducted on paddy in rainfall conditions of Kangra district during the last 10 years, the following equations have been worked out for paddy in respect of N,P and K application :

$$FN = 5.46 T - 0.32 SN$$

$$F P_2O_5 = 2.50 T - 2.67 SP$$

$$FK_2O = 2.82 T - 0.68 SK$$

Where FN,  $FP_2O_5$  and  $F_2KO$  are the doses of N,  $P_2O_5$  and  $KO_2$ /ha, respectively. T is the yield target (q/ha) and SN, SP and SK are the soil test values in kg/ha for N,P and K, respectively.

Therefore, if the soil test value of N, P and K is available for the farmer's field, the doses of N,P and K in kg/ha can be calculated by substituting the soil test value in the equation.

#### **Basic data developed for rice and maize in sub-humid sub-tropical zone and their fertilizer equations**

Crop	Nutrient reqd. (kg/q grain)			Nut. Contri. from soil (%)			Nut. contri. from fertilizer (%)		
	N	$P_2O_5$	$K_2O$	N	$P_2O_5$	$K_2O$	N	$P_2O_5$	$K_2O$
Paddy (HPAU 741)	1.68	1.28	7.34	9.0	57.0	137.0	21.3	39.8	233.8
Maize (Vijay composite)	2.72	1.57	1.89	11.0	37.0	19.0	47.0	40.0	73.0

Fertilizer adjustment equations for paddy and maize

Paddy :  $FN = 7.90 T - 0.43 SN$

$$FP_2O_5 = 3.22 T - 3.29 SP$$

$$FK_2O = 3.14 T - 0.71 SK$$

Maize :  $FN = 5.82 T - 0.24 SN$

$$FP_2O_5 = 3.91 T - 2.11 SP$$

$$FK_2O = 2.58 T - 0.31 SK$$

**Ready reckoner for soil test based fertilizer recommendation for 40 q/ha rice in sub humid sub-tropical zone of Himachal Pradesh**

<b>Soil Nitrogen</b>	<b>Fertilizer</b>	<b>Olsen's</b>	<b>Fertilizer</b>	<b>NAOAc-K</b>	<b>Fertilizer</b>
<b>KMnO<sub>4</sub>N</b>	<b>N</b>	<b>P</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>(kg/ha)</b>	<b>K<sub>2</sub>O</b>
	<b>(kg/ha)</b>	<b>(kg/ha)</b>	<b>(kg/ha)</b>		<b>(kg/ha)</b>
250	209	5	133	50	90
300	187	10	116	75	72
350	165	15	99	100	54
400	143	20	82	125	36
450	121	25	65	150	18
500	99	30	48	175	-
550	77	35	31	200	-
600	55	40	14	225	-
700	33	50	-	250	-

**Ready reckoner for soil test based fertilizer recommendation for 40 q/ha maize in sub-humid sub-tropical zone of Himachal Pradesh**

300	161	5	146	50	88
350	149	10	135	85	80
400	137	15	125	100	72
450	125	20	114	125	64
500	113	25	104	150	57
550	101	30	93	175	49
600	89	35	83	200	41
650	77	40	72	225	33
700	65	50	51	250	26