

To calculate nutrient rate from the given amount of fertilizer:

Fertilizer kg	Times	Equals Nutrient kg
Urea	0.46	Nitrogen
Suphala (15/17)	0.15/17	Nitrogen
SSP	0.16	Phosphorus
TSP	0.46	Phosphorus
Suphala (15/17)	0.15/17	Phosphorus
Muriate of potash	0.60	Potassium
Suphala (15/17)	0.15/17	Potassium
Bonemeal	0.20	Phosphorus
Diammonium phosphate	0.18	Nitrogen
Diammonium phosphate	0.46	Phosphorus
Calcium ammonium nitrate	0.25	Nitrogen

The easiest way

Nutrient – fertilizer conversion chart

Nutr- ient kg	N Urea kg	P(P <sub>2</sub> O <sub>5</sub> ) SSP kg	K(K <sub>2</sub> O) MOP kg	N/P/K (N/P <sub>2</sub> O <sub>5</sub> /K <sub>2</sub> O) Suphala kg	
				15%	17%
1	2.2	6.3	1.7	6.7	5.9
2	4.3	12.5	3.3	13.5	11.8
3	6.5	18.8	5.0	20.0	17.6
4	8.7	25.0	6.7	26.7	23.5
5	10.9	31.3	8.3	33.4	29.4
6	13.0	37.5	10.0	40.0	35.3
7	15.2	43.8	11.7	46.7	41.2
8	17.4	50.0	13.3	53.4	47.0
9	19.6	56.3	15.0	60.0	52.3
10	21.7	62.5	16.7	66.7	58.8
11	23.9	68.8	18.3	73.4	64.7
12	26.1	75.0	20.0	80.0	70.6
13	28.3	81.3	21.7	86.7	76.4
14	30.4	87.5	23.3	93.4	82.3
15	32.6	93.8	25.0	100.0	88.2

Nutrient – fertilizer conversion chart

Nutr- ient kg	N Urea kg	P(P <sub>2</sub> O <sub>5</sub> ) SSP kg	K(K <sub>2</sub> O) MOP kg	N/P/K (N/P <sub>2</sub> O <sub>5</sub> /K <sub>2</sub> O) Suphala kg	
				15%	17%
16	34.8	100.0	26.7	106.7	94.0
17	37.0	106.3	28.3	113.4	100.0
18	39.1	112.5	30.0	120.0	105.8
19	41.3	118.8	31.7	126.7	111.7
20	43.5	125.0	33.3	133.4	117.6
21	45.7	131.3	35.0	140.0	123.5
22	47.8	137.5	36.7	146.7	129.4
23	50.0	143.8	38.3	153.4	135.2
24	52.2	150.0	40.0	160.0	141.1
25	54.3	156.3	41.7	166.7	147.0
26	56.5	162.5	43.3	173.4	152.9
27	58.7	168.7	45.0	180.0	158.8
28	60.9	175.0	46.7	186.7	164.6
29	63.0	181.3	48.3	193.4	170.5
30	65.2	187.5	50.0	200.0	176.4
31	67.4	193.8	51.7	206.6	182.4
32	69.6	200.0	53.3	213.3	188.2
33	71.7	206.3	55.0	220.0	194.0
34	73.9	212.5	56.7	226.7	200.0
35	76.1	218.8	58.3	233.3	205.8
36	78.3	225.0		240.0	211.7
37	80.4	231.3		246.6	217.6
38	82.6	237.5		252.3	223.5
39	84.8	243.8		260.0	229.4
40	87.0	250.0		266.7	235.2

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Post Box 907 Semtokha. ☎ 351037 / 351174  
☎ 351038

E-MAIL: [nssc@druknet.bt](mailto:nssc@druknet.bt)  
<http://www.nssc.gov.bt/>



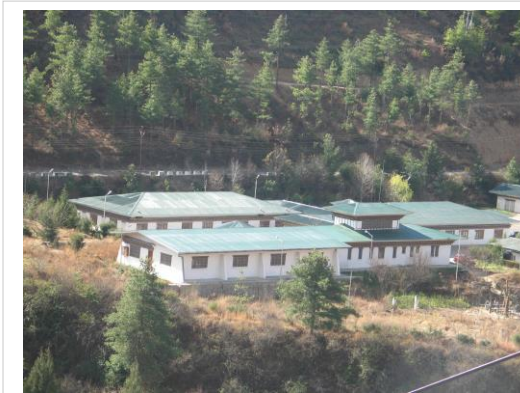
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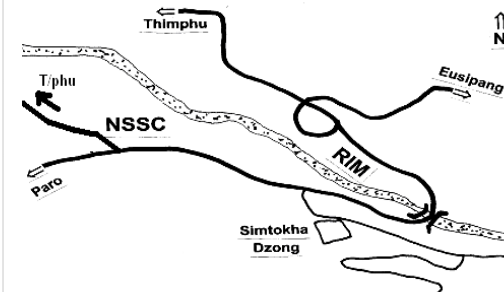
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# FERTILIZER RATE CALCULATIONS

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NSSC Complex at Semtokha



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Published & Content by: SFU, NSSC, DoA, MoA  
Post Box 907 Semtokha. ☎ 351037 / 351174 ☎ 351038  
E-mail: [nssc@druknet.bt](mailto:nssc@druknet.bt) <http://www.nssc.gov.bt>

## FERTILIZER CALCULATIONS

### 1. Organic fertilizer (FYM/Compost) rate calculation

To calculate how many baskets of FYM are required per langdo or per drey seed area, use the appropriate formula from below [1 mt (metric tonne) = 1000kg]:

**Mt/ha**  
**From FYM fresh weight mt/ha**

**to baskets/ langdo wetland:**

$$\frac{\text{Recommended FYM rate mt/ha} \times 1000}{\text{Fresh weight 1 basket manure} \times 10}$$

**to baskets/ langdo dryland:**

$$\frac{\text{Recommended FYM rate mt/ha} \times 1000}{\text{Fresh weight 1 basket manure} \times 7.5}$$

**to baskets/ sendrey:**

$$\frac{\text{Recommended FYM rate mt/ha} \times 1000}{\text{Fresh weight 1 basket manure} \times 60}$$

**Mt/ac**  
**From FYM fresh weight mt/ac**

**to baskets/ langdo wetland:**

$$\frac{\text{Recommended FYM rate mt/ac} \times 1000}{\text{Fresh weight 1 basket manure} \times 4}$$

**to baskets/ langdo dryland:**

$$\frac{\text{Recommended FYM rate mt/ac} \times 1000}{\text{Fresh weight 1 basket manure} \times 3}$$

**to baskets/ sendrey**

$$\frac{\text{Recommended FYM rate mt/ac} \times 1000}{\text{Fresh weight 1 basket manure} \times 24}$$

### 2. Nutrient contents of inorganic fertilizers:

Fertilizer	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Urea	46	0	0
MOP	0	0	60
SSP	0	16	0
Suphala	15	15	15
TSP	0	46-8	0

### 3. Inorganic fertilizer rate calculation:

#### The best way

To convert nutrient recommendations (kg/ha or kg/ac) into how many kg of fertilizer per hectare or per acre are required, use the appropriate formula from below.

**Kg/ha**  
**From nutrient kg/ha to fertilizer kg/ha**

$$\frac{\text{Recommended nutrient rate kg/ha} \times 100}{\text{Nutrient \% of fertilizer}}$$

For fertilizer as **gm/m<sup>2</sup>** divide answer by 10

**Example:**  
Recommended nutrient rate      **60 kg N/ha**  
N % of urea fertilizer              **46 %**

$$\frac{60 \text{ kg/ha} \times 100}{46} = 130.4 \text{ kg urea/ha}$$

$$= 13.0 \text{ gm urea/m}^2$$

**Kg/ac**  
**From nutrient kg/ac to fertilizer kg/ac**

$$\frac{\text{Recommended nutrient rate kg/ac} \times 100}{\text{Nutrient \% of fertilizer}}$$

For fertilizer as **gm/m<sup>2</sup>** divide answer by 4

**Example:**  
Recommended nutrient rate      **24 kg N/ac**  
N % of urea fertilizer              **46 %**

$$\frac{24 \text{ kg/ac} \times 100}{46} = 52.2 \text{ kg urea/ac}$$

$$= 13.0 \text{ gm urea/m}^2$$

#### The easy way

**To calculate fertilizer amount from the given nutrient rate:**

Nutrient kg	Times	Equals Fertilizer kg
Nitrogen	2.2	Urea
Nitrogen	6.7/5.9	Suphala (15/17)
Phosphorus	6.25	SSP
Phosphorus	2.2	TSP
Phosphorus	6.7/5.9	Suphala (15/17)
Potassium	1.7	Muriate of potash
Potassium	6.7/5.9	Suphala (15/17)
Phosphorus	5.0	Bonemeal
Nitrogen	5.5	Diammonium phosphate
Phosphorus	2.2	Diammonium phosphate
Nitrogen	4.0	Calcium ammonium nitrate