

## OUR CORE VALUES

### DO THE GROUNDWORK

We do the groundwork by providing cost efficient fertilizer solutions for plantations.

### NOURISH THE TRUST

We nourish the trust with the aim to build deeper friendships that create shared value.

### GROW TOGETHER

We hope to grow together with our customers for the long term.

## MANURING PROGRAM

We have designed two recommended fertilizer programs to cater to your plantation's needs. Option 1 is best practice and Option 2 is a more affordable option.

### OPTION 1

### OPTION 2

#### IMMATURE

1st Year Planting		Kg/palm	
JAN	SUPREME GOLD + TE	16/20 + TE	0.25
MAR	RAJA YELLOW + TE	14.5/13.5/6/3 + TE	0.25
MAY	SUPREME GOLD + TE	16/20 + TE	0.40
JUL	RAJA YELLOW + TE	14.5/13.5/6/3 + TE	0.40
SEP	SUPREME GOLD + TE	16/20 + TE	0.60
NOV	RAJA YELLOW + TE	14.5/13.5/6/3 + TE	0.60
<b>TOTAL</b>			<b>2.50</b>

1st Year Planting		Kg/palm	
JAN	SUPREME GOLD + TE	16/20 + TE	0.25
MAR	PUTRA YELLOW + TE	11.5/7/6/4 + TE	0.25
MAY	SUPREME GOLD + TE	16/20 + TE	0.40
JUL	RAJA YELLOW + TE	14.5/13.5/6/3 + TE	0.40
SEP	SUPREME GOLD + TE	16/20 + TE	0.60
NOV	RAJA YELLOW + TE	14.5/13.5/6/3 + TE	0.60
<b>TOTAL</b>			<b>2.50</b>

2nd Year Planting		Kg/palm	
JAN	RAJA GOLDEN BLUE + TE	12.5/9/18/1.5 + TE	0.75
MAR	RAJA GOLDEN BLUE + 1.2B	12.5/9/17/1.5 + 1.2B	0.75
MAY	RAJA GOLDEN BLUE + TE	12.5/9/18/1.5 + TE	0.75
JUL	RAJA GOLDEN BLUE + 1.2B	12.5/9/17/1.5 + 1.2B	0.75
SEP	RAJA GOLDEN BLUE + TE	12.5/9/18/1.5 + TE	0.75
NOV	RAJA GOLDEN BLUE + 1.2B	12.5/9/17/1.5 + 1.2B	0.75
<b>TOTAL</b>			<b>4.50</b>

2nd Year Planting		Kg/palm	
JAN	PUTRA BLACK (K) + TE	9.5/5.5/18 + 2.5HA + TE	0.60
MAR	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	0.60
MAY	PUTRA BLACK (K) + TE	9.5/5.5/18 + 2.5HA + TE	0.80
JUL	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	0.80
SEP	PUTRA RED + 1.2B	8.5/3.5/28.5 + 1.2B	1.00
NOV	PUTRA 25K + EM	8/7/25 + EM + TE	1.00
<b>TOTAL</b>			<b>4.80</b>

3rd Year Planting		Kg/palm	
FEB	RAJA BIO + B	7.5/5/22/3+B+15%EM	1.00
APR	RAJA GOLDEN BLUE + TE	12.5/9/18/1.5 + TE	1.00
JUN	RAJA RED + TE	12.5/4.5/25 + TE	1.25
AUG	RAJA GOLDEN BLUE+1.2B	12.5/9/17/1.5 + 1.2B	1.25
OCT	RAJA BIO + B	7.5/5/22/3+B+15%EM	1.50
<b>TOTAL</b>			<b>6.00</b>

3rd Year Planting		Kg/palm	
FEB	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	1.00
APR	PUTRA BLUE + TE	12/5.5/18 + TE	1.00
JUN	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	1.50
AUG	PUTRA BLUE + TE	12/5.5/18 + TE	1.50
OCT	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	1.50
<b>TOTAL</b>			<b>6.50</b>

#### YOUNG MATURE

4th Year Planting		Kg/palm	
FEB	RAJA RED + TE	12.5/4.5/25 + TE	1.50
MAY	CROWN NK BLACK + TE	8.5/24 + 10HA + TE	2.00
JUL	RAJA GOLDEN BLUE + 1.2B	12.5/9/17/1.5 + 1.2B	1.50
OCT	CROWN NK + 2.4B	10/30 + 2.4B	2.00
<b>TOTAL</b>			<b>7.00</b>

4th Year Planting		Kg/palm	
FEB	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	1.50
MAY	CROWN NK BLACK + TE	8.5/24 + 10HA + TE	2.00
JUL	MOP	60%	1.50
OCT	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	2.00
<b>TOTAL</b>			<b>7.00</b>

#### MATURE

5th Year & above		Kg/palm	
FEB	RAJA RED + TE	12.5/4.5/25 + TE	2.00
MAY	RAJA RED + 2.4B	12.5/4.5/21 + 2.4B	2.00
JUL	RAJA EXTRA-K + TE	10.5/4.5/30 + TE	2.00
OCT	CROWN NK + 2.4B	10/30 + 2.4B	2.00
<b>TOTAL</b>			<b>8.00</b>

5th Year & above		Kg/palm	
FEB	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	2.00
MAY	PUTRA 44 + 1.2B	10/3/21/2 + 1.2B	2.00
JUL	PUTRA RED + 1.2B	8.5/3.5/28.5 + 1.2B	2.00
OCT	MOP	60%	2.00
<b>TOTAL</b>			<b>8.00</b>

## SOIL CHEMICAL PROPERTIES

Property	Very low	Low	Moderate	High
pH	<3.5	4.0	4.2	5.5
Total N (%)	<0.08	0.12	0.15	0.25
Total P (mg/kg)	<120	200	250	400
Available P (mg/kg)	<8.0	15.0	20.0	25.0
K (cmol/kg)	<0.08	0.20	0.25	0.30
Mg (cmol/kg)	<0.08	0.20	0.25	0.30

## LEAF NUTRIENT CONCENTRATIONS

### • Young palms (<6 years) - Frond #9

Element	Deficiency	Optimum	Excess
N (%)	<2.50	2.6-2.9	>3.1
P (%)	<0.15	0.16-0.19	>0.25
K (%)	<1.00	1.1-1.3	>1.8
Mg (%)	<0.2	0.3-0.45	>0.7

### • Mature palms (≥ 6 Years) - Frond #17

Element	Deficiency	Optimum	Excess
N (%)	<2.30	2.4-2.8	>3.0
P (%)	<0.14	0.15-0.19	>0.25
K (%)	<0.75	0.9-1.2	>1.6
Mg (%)	<0.2	0.25-0.40	>0.7

## OUR SERVICES



1

### SOIL & LEAF TEST

How will you know the nutrients lacking in your soil and palms if it is not tested? We are willing to invest in your plantation by sending samples to an external registered lab for analysis.



2

### FIELD VISITS

Equipped with experiences and test results, we will walk the ground with you and observe your palms and soil to gather as much information as we can.



3

### CUSTOMIZED FERTILIZER PROGRAM

After discussion with you together with the data collected, we will formulate a tailor-made fertilizer based on your plantation's needs. We will also follow up by repeating the process the following year to make sure the nutrient levels in the soil is optimum to your palms.

## FERTILIZER TYPE AND METHODS OF MANUFACTURING



1  
Straight fertilizers



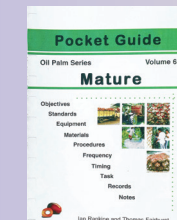
2  
Fertilizer mixtures



3  
Fertilizer blends



4  
Granulated compound fertilizers



\*Standards according to Field Handbook Oil Palm Series (Vol 6) by Ian Rankine & Thomas Fairhurst

## OUR PRODUCTS



**Non-volatile N**  
Non-Urea,  
Ammoniacal-N



**Water-soluble P**  
Supreme, Raja and  
Royal series



**No-inert Fillers**  
No filler material



## ABOUT LOONGSYN

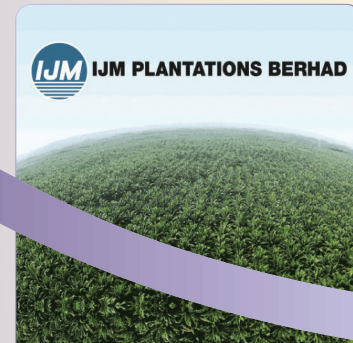
Loongsyn Sdn Bhd (LSB) incorporated in 1981 is principally involved in fertilizers trading and manufacturing. LSB is one of the most established fertilizer companies in Sabah, Malaysia; specializing in compound fertilizers.

The Chairman and co-founder, Mr. Albert Teh Chuan Seng, started the business in 1985 in Tawau. To date, Loongsyn has branches in all the major agriculture towns in Sabah, namely Tawau, Lahad Datu, Sandakan and Keningau.



**1985**

Our Company started as a handling agent for fertilizers of ICI Agriculture Malaysia (1972) Sdn Bhd in Sabah.



**1996**

We became an associate of IJM Plantations Bhd when IJM and its management company, Exotic Heritage Sdn Bhd (EHSB) invested 60% in LSB.



**2008**

We began to manufacture our own range of NPK in Sandakan. In 2011, majority of the shares were bought back from IJM and EHSB.



**2020 and beyond**

Mr Abel Teh, who is Mr Albert Teh's eldest son became Managing Director of LSB and together with a team of competent professionals, continue to serve more planters in Sabah.

# NPK COMPOUND SPECIALIST

Nourish your plantations with our cost effective fertilizing solutions



### RAJA SERIES

Raja Red + TE	12.5/4.5/25 + TE
Raja Red + 2.4B	12.5/4.5/21 + 2.4B
Raja Red + Mg + B	12.5/4.5/21/1.5 + B
Raja Extra K + TE	10.5/4.5/30 + TE
Raja Extra K + 2.4B	10.5/4.5/27 + 2.4B
Raja Golden Blue + TE	12.5/9/18/1.5 + TE
Raja Golden Blue + 1.2B	12.5 /9/17/1.5 + 1.2B
Raja Yellow + TE	14.5/13.5/6/3 + TE
Raja Black + 1.2B	11/4.5/20/1.5 + 2.5HA + 1.2B
Raja K-Maxx + B	8 / 8 /27 / 2 + B
Raja Bio + B	7.5 / 5 / 22 / 3 + B + 15%EM

### PUTRA SERIES

Putra Extra-K + TE	8.5 / 3.5 / 30 + TE
Putra Red + 1.2B	8.5 / 3.5 / 28.5 + 1.2B
Putra Blue + TE	12/5.5/18 + TE
Putra Yellow + TE	11.5/7/6/4 + TE
Putra 44 + 1.2B	10/3/21/2 + 1.2B
Putra Black (K) + TE	9.5/5.5/18 + 2.5 HA + TE
Putra 25K + EM	8 / 7 /25 + EM + TE
Putra NPKMg + EM	8.5 / 3 / 18 / 4 + EM + TE
Putra 44 + EM	8.5 / 3 / 21 / 3 + EM + TE
Putra NPK Special + 2.4B	8/8/18/1.5 + 2.4B
Putra Red Special + Mg + 0.6B	8 / 6 /25 / 3 + 0.6B
Putra Bio Special + B	7 / 4 / 22 / 3 + B + 15%EM

### SUPREME SERIES

Supreme Gold + TE	16/20 + TE
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### ROYAL SERIES

Royal K-Maxx + TE	8/10/30 + TE
Royal K-Maxx + 2.4B	8 / 10 / 28.5 + 2.4B

### CROWN SERIES

Crown NK Black + TE	8.5/24 + 10HA + TE
Crown NK (AS) + TE	10.5/30 + TE
Crown NK + 2.4B	10/30 + 2.4B
Crown NK Black + 2.4B	8.5/24 + 8HA + 2.4B



## CONTACT US

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**LOONGSYN**  
FERTILIZERS