



**深不可测的奥秘...**

**A story of hidden depth...**

**杂卤石的施用促进马来  
西亚农作物的生长与产量**

**Improving the growth and yield of  
crops in Malaysia with Polyhalite**

**谢征祥, 东南亚高级农艺师, 以色列化工集团特种肥料**  
**Seh Cheng Siang, Senior Agronomist (SEA), ICL Specialty Fertilizers**





# 杂卤石在马来西亚的 田间试验效果如何？

Polyhalite trial results  
from Malaysia?

田间试验证明  
杂卤石更加有效

Trials prove that  
Polyhyllite is more efficient







复合肥

Compound Fertiliser

叶子较多弯曲与缺水症状  
Curved leaves & more symptom on water deficiency



复合肥 + 杂卤石

Compound Fertiliser + Polyhalite

叶子较绿、较厚与叶子较少弯曲  
Leaves are greener, thicker and less curved leaves





复合肥

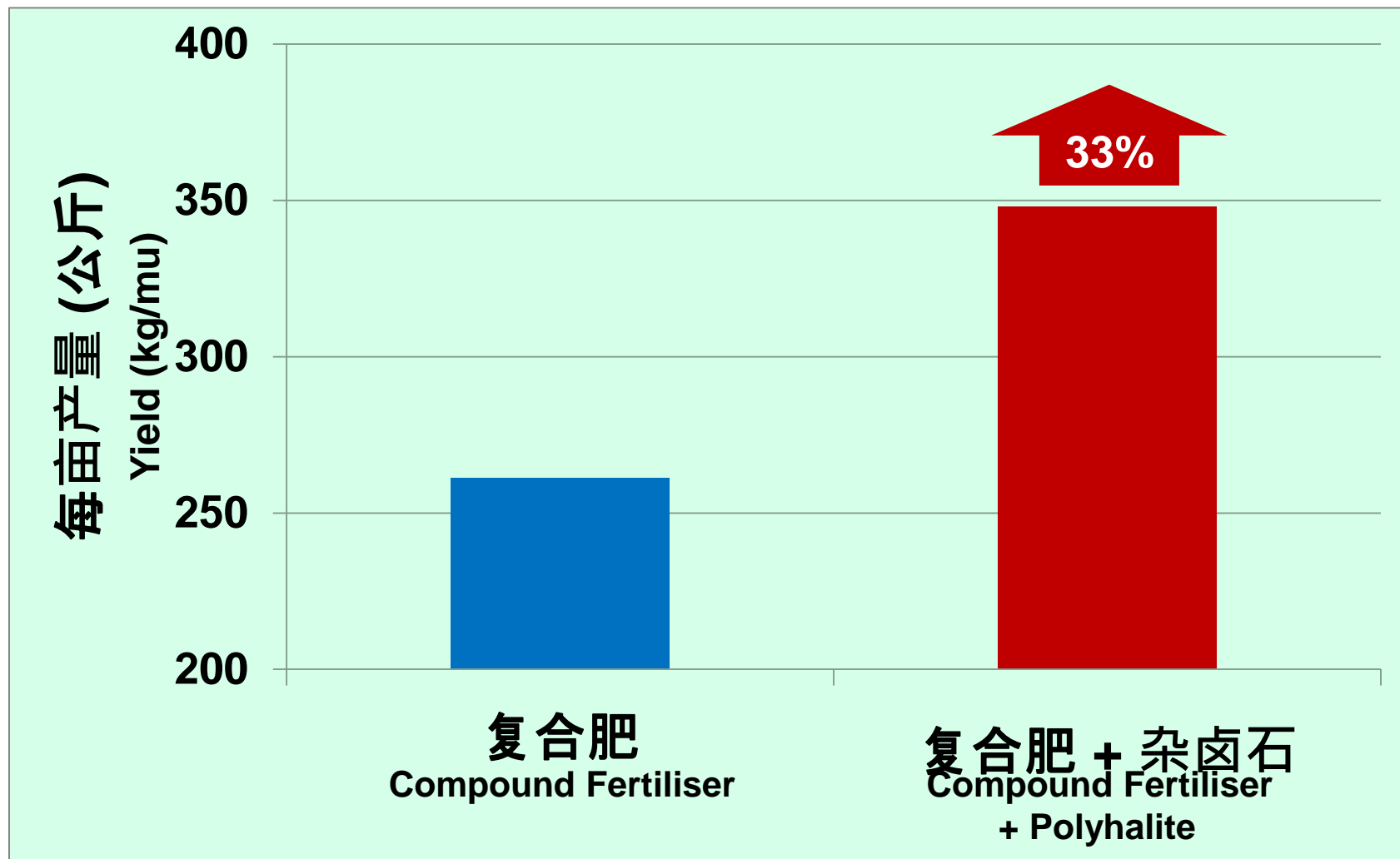
Compound Fertiliser

叶子较多弯曲与缺水症状  
Curved leaves & more symptom on water deficiency

复合肥 + 杂卤石

Compound Fertiliser + Polyhalite

叶子较绿、较厚与叶子较少弯曲  
Leaves are greener, thicker and less curved leaves







有机肥  
Organic Fertiliser

有机肥 + 杂卤石  
Organic Fertiliser +  
Polyhalite



有机肥  
Organic Fertiliser



较小的根部  
Smaller root

有机肥 + 杂卤石  
Organic Fertiliser +  
Polyhalite

较健壮的根部  
Stronger root

较多缺钙的症状  
More on  
Calcium deficiency



较大的叶子并没有  
缺钙的症状  
Bigger leaves & no  
Calcium deficiency





复合肥  
Compound Fertiliser

切花品质一般，枝干与花朵较小  
Normal quality on cut flowers, smaller stems and flowers



复合肥 + 杂卤石  
Compound Fertiliser + Polyhalite

切花品质较好，枝干与花朵较大  
Better quality on cut flowers, bigger stems and flowers





复合肥  
Compound Fertiliser

杂卤石  
Polyhalite

较多缺钾症状  
More symptom on Potassium deficiency

较少缺钾症状  
Less symptom on Potassium deficiency



复合肥  
Compound  
Fertiliser



糖度介于13-16%  
13-16% Brix

杂卤石  
Polyhalite



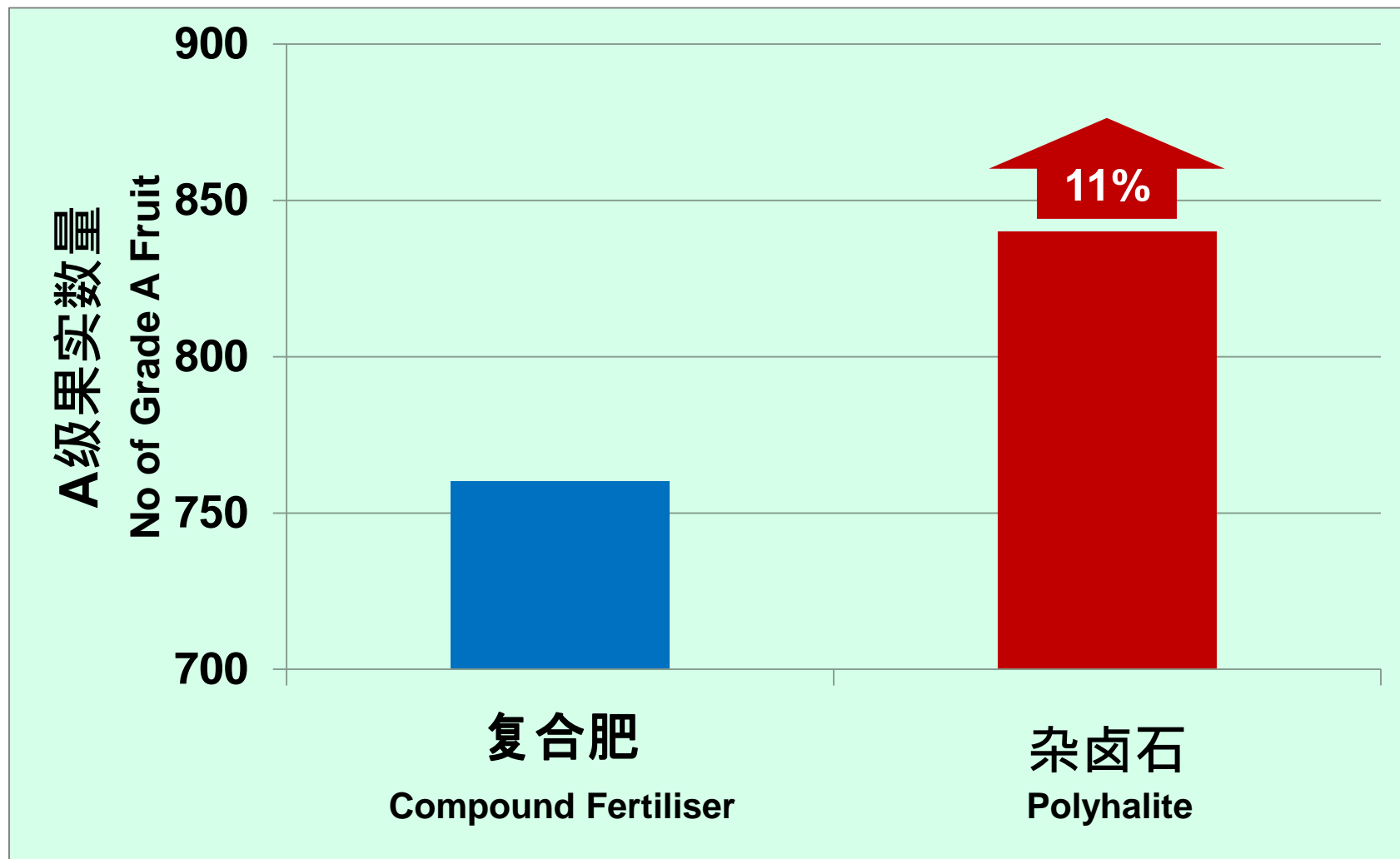
糖度介于16-19%  
16-19% Brix

较差的保鲜期  
Shorter shelf life



较长的保鲜期  
Better shelf life









各式单一肥  
Straight Fertilisers

较多缺钾症状，  
较少与较小颖的谷粒  
Symptom of K deficiency, less number of  
grain per tiller & smaller grain



各式单一肥 + 杂卤石  
Straight Fertilisers + Polyhalite

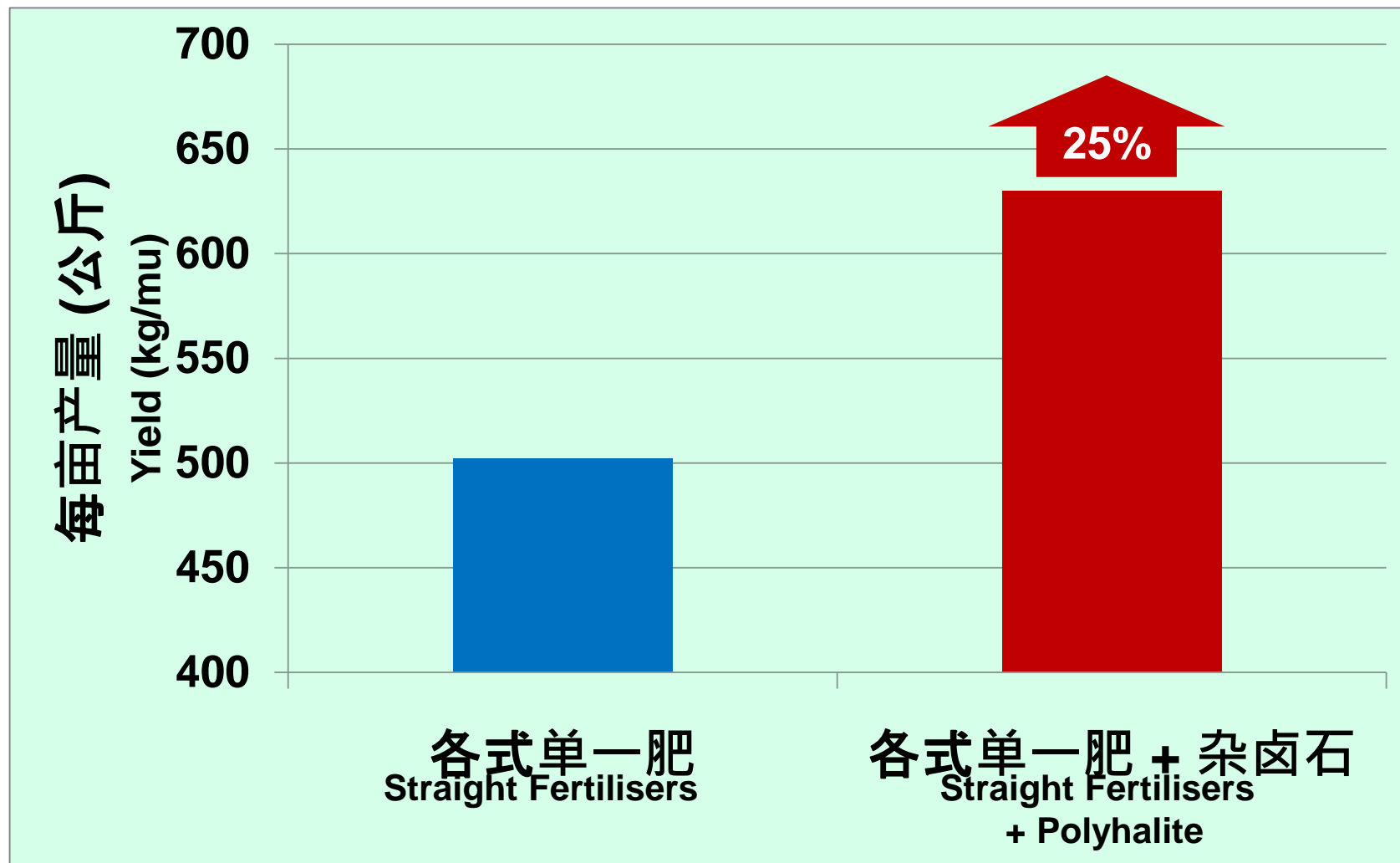
较少缺钾症状，  
较多与较饱满的谷粒  
Less symptom of K deficiency, more  
number of grain per tiller & bigger grain





施用杂卤石后，谷粒更大更饱满，产量显著增加  
After apply Polyhalite, the grains are bigger, yield increased







多个榴莲试验已在马来西亚进行长达一年，  
所有农民对杂卤石的功效赞不绝口  
Few Durian field trials are going on in Malaysia,  
growers are satisfied with the performance of Polyhalite





在马来西亚榴莲园，杂卤石可持续释放养分长达2个月  
In Durian farm of Malaysia,  
Polyhalite is able to provide continuous nutrients up to 2 months



**复合肥**  
**Compound Fertiliser**

**复合肥 + 杂卤石**  
**Compound Fertiliser + Polyhalite**

口感与香味一般, 较多裂果  
Normal texture & aroma, more cracking

口感较好与香味浓厚, 较少裂果  
Better texture & aroma, less cracking





黄瓜  
Cucumber



番石榴  
Guava



辣椒  
Chilli



苦瓜  
Bitter gourd



西红柿  
Tomato



叶菜  
Leafy Vegetables



香蕉  
Banana

# 为什么杂卤石在 马来西亚广受欢迎？

Why Malaysian growers  
like Polyhalite?

杂卤石提高农作物  
的质量与产量

Polyhalite improves  
yield and quality







相辅  
相成

Complement  
each other



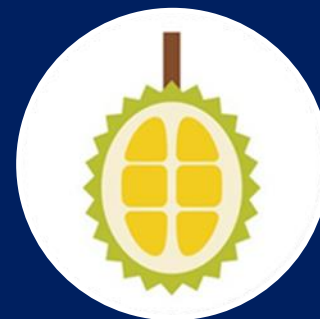
缓慢  
释放

Prolong  
release



有机  
认证

Organic  
certified



提色  
增香

Improves  
colour &  
flavour



微量元素 :

Fe, Zn, Cu, Mn,  
Al, B, Mo & Cl

中量元素 :

S, Ca & Mg

大量元素 :

N, P & K

14%  
K<sub>2</sub>O

**钾(K):** 增加产量  
Increases yield

48%  
SO<sub>3</sub>

**硫(S):** 提高氨基酸  
Improves amino acid

6%  
MgO

**镁(Mg):** 提高光合作  
Improves photosynthesis

17%  
CaO

**钙(Ca):** 增强细胞外层  
Strengthens cell wall





连续养分，匹配需求，减少流失与浪费

Continuous nutrient supply, matching to demand, reduces wastage



适用于  
有机耕种

Approved  
for organic  
agriculture



无有  
害物质

Completely  
natural



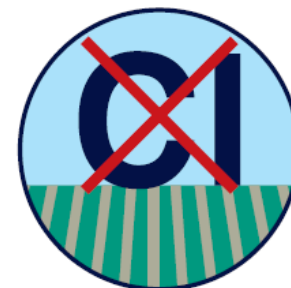
环保

Environ-  
mental  
friendly



全溶性

Fully  
soluble



pH7、低  
氯和低盐

pH7, low Cl  
& low sodium





硫提高果实的硫醇(Thiol)与酯 (Ester)

Sulphur increases the Thiol & Ester in fruit

达到提色增香的效果

Improves the colour & flavour

榴莲、芒果、西红柿等果实需要比其它农作物更高的硫

Some fruiting crops likes durian, mango & tomato require more Sulphur than other crops



Malaysia Musang King Durian  
馬來西亞山王榴槤

DD/MM/YY

PACKED ON

UNIT PRICE/100g

NET CONTENT (g)

日/月/年  
20.02.17

36.0

1718



Store in cool dry place

PLU 2550 8

\$618.5

city'ssuper

Packed by

8/F, Wharf T...  
7 Canton Road, Hong Kong





The Chemistry of

# DURIAN

榴莲飘香...



但可以肯定的是榴莲不愧是水果之王

Poly  $\text{S}$   $\text{K}$   $\text{Mg}$   $\text{Ca}$ ®  
sulphate

谢谢 Thank You

△ICL