

# *How to obtain higher yield ?*

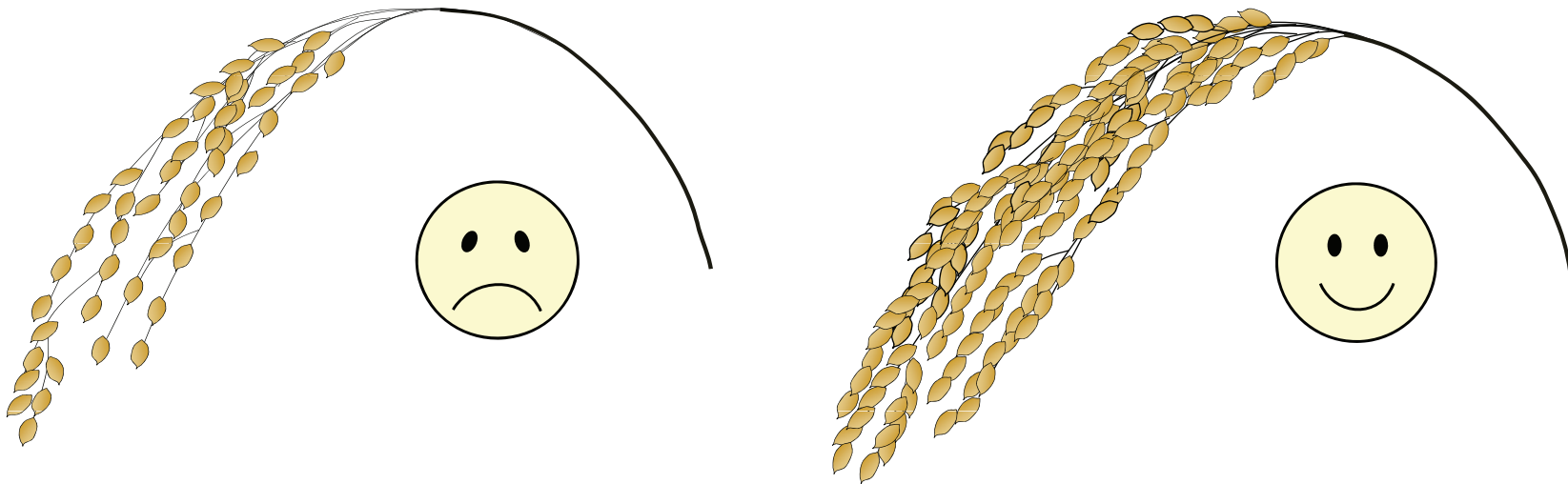
There are four panicles in the left field, while right field has 10 panicles.

Which field, do you think, could get more production?



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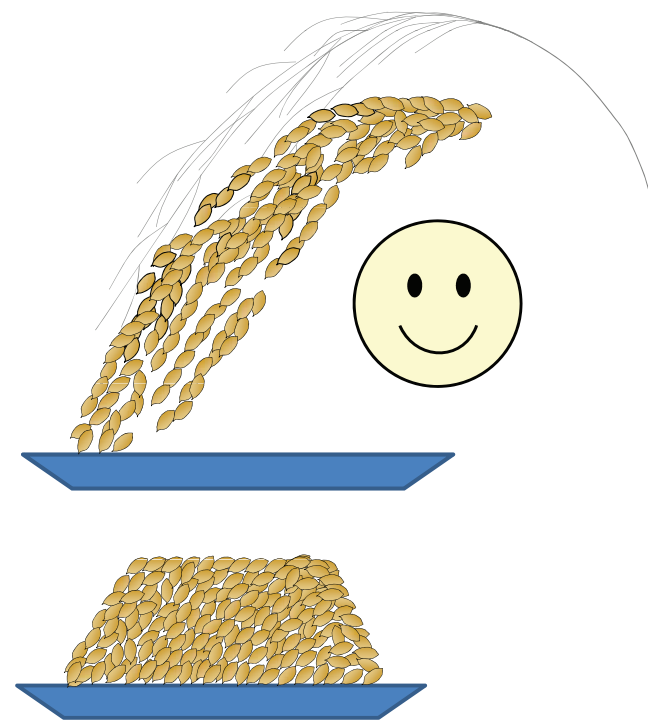
There are small number of grains with the left panicle, while many grains with the right. Which panicle could get more production?



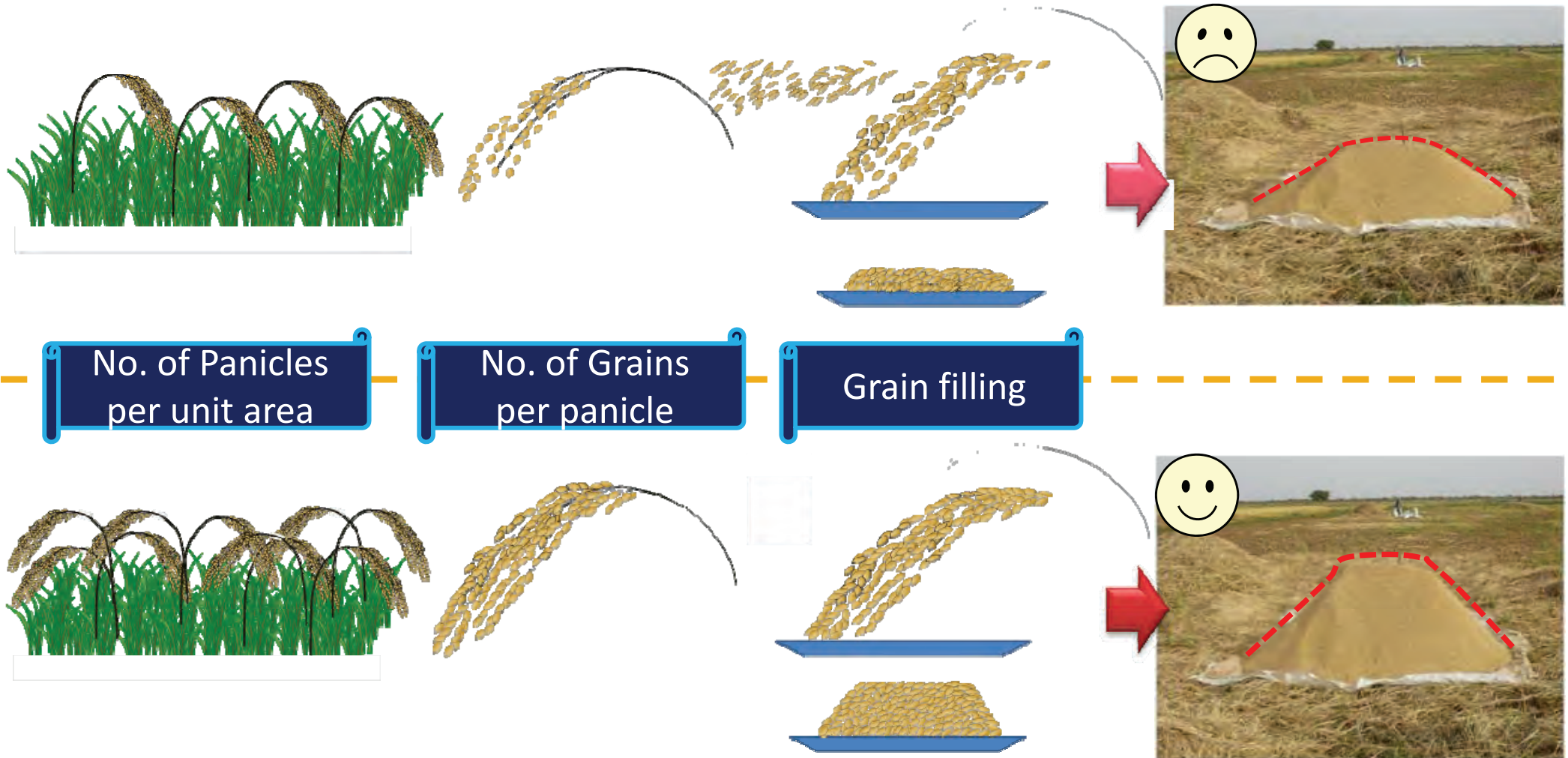
# *How to obtain higher yield ?*

There are many empty grains with the left panicle, while many filled grains with the right.

Which panicle could get more production?



# Getting more grains



# Yield calculation using yield components

**Formula**

$$\text{Yield} = \left( \begin{array}{l} \text{Number of} \\ \text{hills per} \\ \text{unit area} \end{array} \right) \times \left( \begin{array}{l} \text{Number of} \\ \text{panicles} \\ \text{per hill} \end{array} \right) \times \left( \begin{array}{l} \text{Number of} \\ \text{grains per} \\ \text{panicle} \end{array} \right) \times \left( \begin{array}{l} \text{Rate of} \\ \text{filled} \\ \text{grains} \end{array} \right) \times \left( \begin{array}{l} \text{1000-grain} \\ \text{weight} \end{array} \right)$$

Variable Constant

$$= \left( \begin{array}{l} \text{Number of panicles per} \\ \text{unit area} \end{array} \right) \times \left( \begin{array}{l} \text{Number of filled grains} \\ \text{per panicle} \end{array} \right) \times \left( \begin{array}{l} \text{1000-grain} \\ \text{weight} \end{array} \right)$$

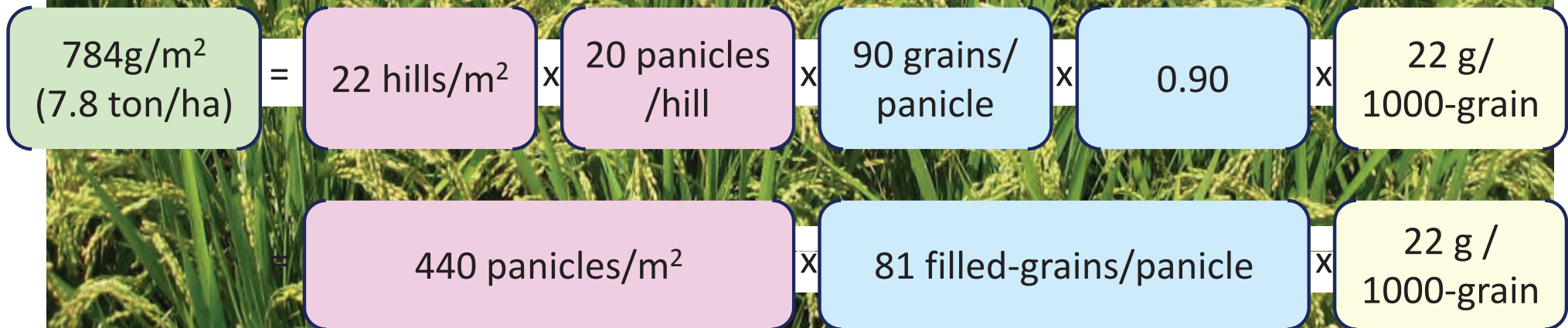
**Example**

$$\left( \begin{array}{l} 300 \text{ g/m}^2 \\ (3.0 \text{ ton/ha}) \end{array} \right) = \left( \begin{array}{l} 25 \text{ hills/m}^2 \end{array} \right) \times \left( \begin{array}{l} 6 \text{ panicles} \\ \text{/hill} \end{array} \right) \times \left( \begin{array}{l} 100 \text{ grains/} \\ \text{panicle} \end{array} \right) \times \left( \begin{array}{l} 0.80 \end{array} \right) \times \left( \begin{array}{l} 25 \text{ g/} \\ \text{1000-grain} \end{array} \right)$$

$$= \left( \begin{array}{l} 150 \text{ panicles/m}^2 \end{array} \right) \times \left( \begin{array}{l} 80 \text{ filled-grains/panicle} \end{array} \right) \times \left( \begin{array}{l} 25 \text{ g/} \\ \text{1000-grain} \end{array} \right)$$



Example of yield components in a high yielding rice field in Japan



## Main rice varieties in Kambia

Variety	Growth Duration	Remarks
NERICA L19	4 months (120 days / 17 weeks)	
Pa Kiamp	4.5 months (135 days / 19 weeks)	For both lowland and upland conditions
ROK 5	4.5 months (135 days / 19 weeks)	For IVS and mangrove swamp
ROK 10	6 month (180 days / 26 weeks)	For IVS, boliland and mangrove swamp. Photosensitive
ROK 24	5 months (145 days / 21 weeks)	Tolerant to iron toxicity
Butter Cup	3 - 3.5 months (95-105 days / 13-14 weeks)	
<i>= Others =</i>		<i>To collect information from the participants from districts</i>