

A photograph of a palm tree plantation. The trees are arranged in rows, and a dirt path leads through them. The ground is covered with green moss or algae. The text is overlaid on the image.

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OIL PALM PLANTED HECTARAGE IN MALAYSIA

2015: 5.64 MILLION HA



2014: 5.39 MILLION HA

PRODUCTION OF CRUDE PALM OIL (Million tonnes in Malaysia)

	2011	2012	2013	2014	2015
CPO	18.91	18.79	19.22	19.67	19.96

Source: MPOB, 2015

WHY DO WE NEED TO PROTECT?

**5% OF MALAYSIA'S
EXPORT IN 2015 IS
FROM CPO &
RELATED PRODUCTS**

WHY DO WE NEED TO PROTECT?

**31.9% OF WORLD
CPO PRODUCTION
COME FROM
MALAYSIA**

WHY DO WE NEED TO PROTECT?

**39% OF TOTAL OIL
PALM PLANTED IN
MALAYSIA ARE
SMALLHOLDERS**

WHY DO WE NEED TO PROTECT?

**1 MILLION MALAYSIAN
EARN THEIR LIVING
FROM THE OIL PALM
INDUSTRY**

**THE OIL PALM INDUSTRY
GENERATES BILLIONS OF
RINGGIT IN REVENUE FOR THE
COUNTRY.**



WHY DO WE NEED TO PROTECT?

**OIL PALM INDUSTRY IN
MALAYSIA WILL BE 100
YEARS NEXT YEAR.**

WHY DO WE NEED TO PROTECT?

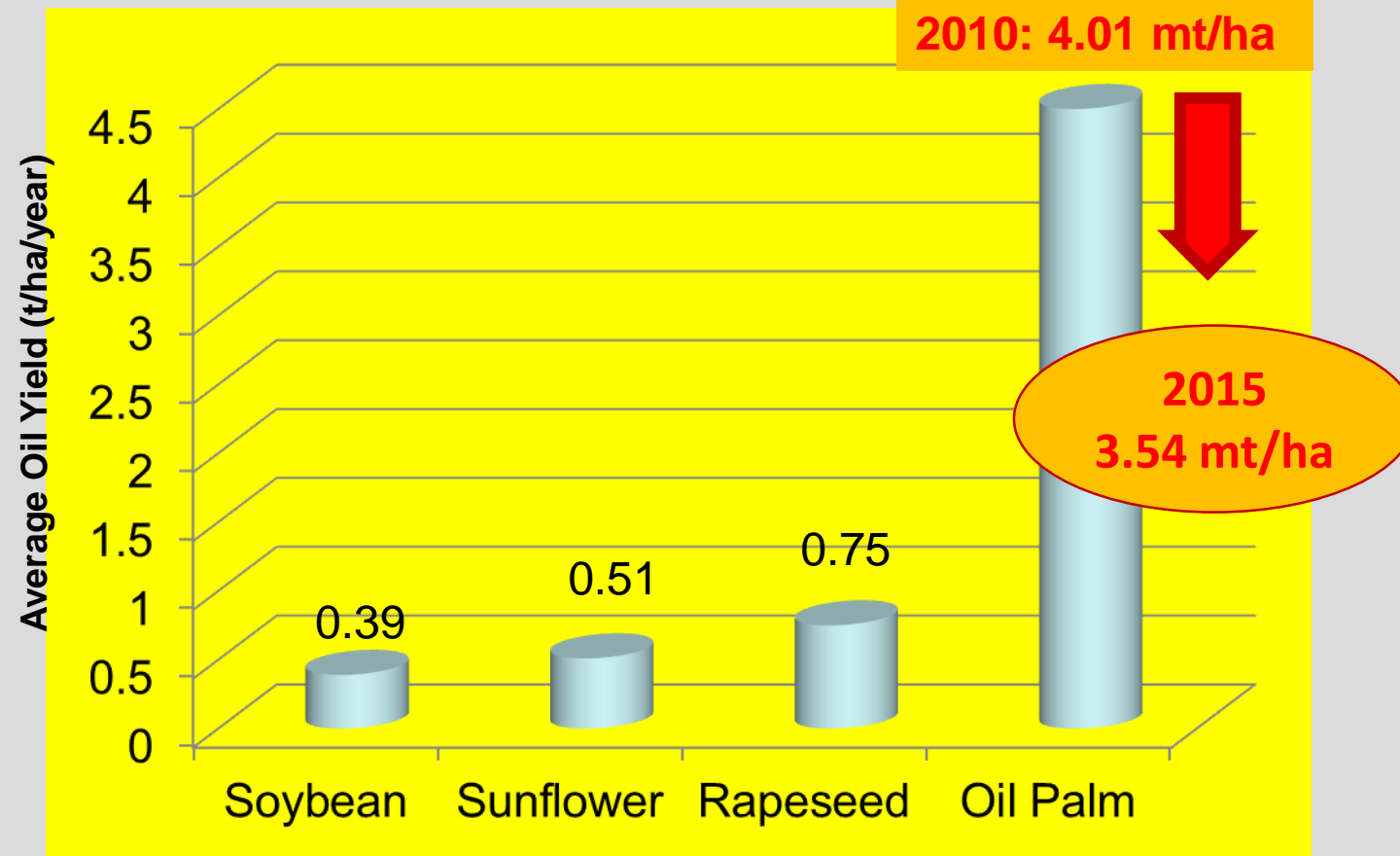
**ARE WE STILL
COMPETITIVE?
OR WE ARE SLIDING
DOWN?**

YIELD (TONNES/HECTARE) NATIONAL AVERAGE

	2011	2012	2013	2014	2015
FFB	19.69	18.89	19.02	18.63	18.48
CPO	4.01	3.84	3.85	3.84	3.54

**NATIONAL AVERAGE IS
DECLINING!!!!**

PALM OIL VS OTHER MAJOR OIL CROPS



WHY DO WE NEED TO PROTECT?

- **NEED TO BE MANY STEPS AHEAD OF COMPETING BUSINESS.**

**WHAT HAVE WE
DONE?**

WHY DO WE NEED TO PROTECT?

- **NEED TO BE MANY STEPS AHEAD OF COMPETING BUSINESS.**

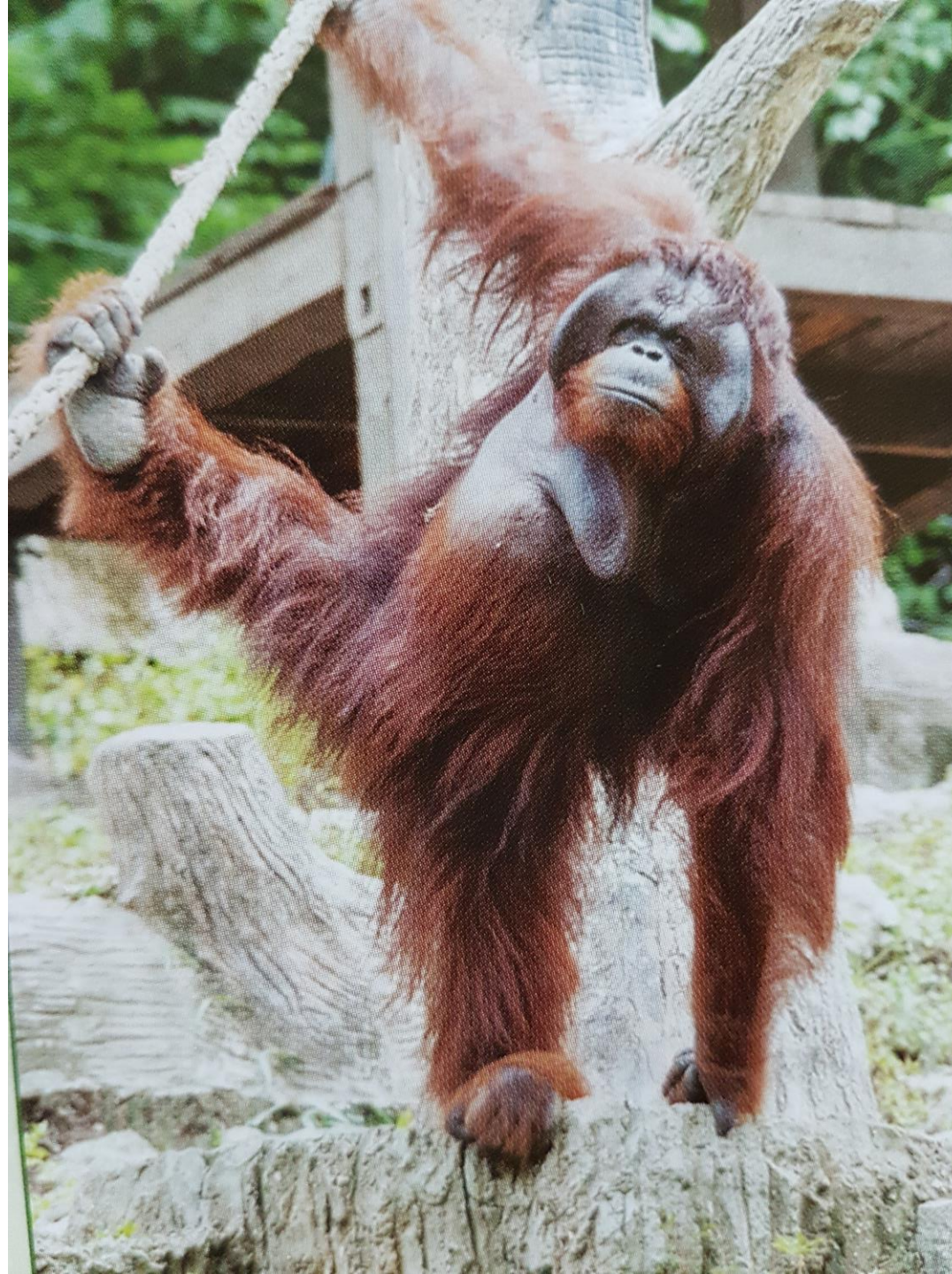
**CAN WE COMPETE IN THE
CHALLENGING GLOBAL
ENVIRONMENT?**

WHY DO WE NEED TO PROTECT?

- **NEED TO BE MANY STEPS AHEAD OF TO PROTECT OUR ENVIRONMENT.**

**WHAT HAVE DONE TO PROTECT THE
INDUSTRY FROM NGO
ENVIRONMENTAL GROUP
PRESSURE?**

**WE NEED TO
PROTECT
THE WILD
LIFE IN
ORDER TO
PROTECT
OUR
INDUSTRY,**



**WE MUST BE
SEEN TO
PROTECT
THE WILD
LIFE AND
WITH
EVIDENCE.**

HILLY AREAS — SLOPING LAND ABOVE 25° IS NOT RECOMMENDED TO BE DEVELOPED UNDER SLOPING LAND DEVELOPMENT GUIDELINES (CONSIDERED AS HILL LAND UNDER LAND CONSERVATION ACT 1960)

WE MUST PROTECT OUR FOREST AND SENSITIVE CONSERVATION AREAS.



HILLY AREAS BEING BE LEFT UNPLANTED FOR WILDLIFE AND BIODIVERSITY CONSERVATION.

WE MUST SHOW EVIDENCE THAT WE PROTECT OUR FOREST AND SENSITIVE CONSERVATION AREAS.

RIPARIAN RESERVE ALONG THE RIVER

**WE MUST
PROTECT
THE RIVER
SYSTEM**



**WE MUST
PROTECT
THE RIVER
RIPARIAN
AREAS.**

ZERO BURNING REPLANTING TECHNIQUE



**PROTECT THE ENVIRONMENT
FROM AIR POLLUTION &
CONSERVE THE SOIL
MICROBIOLOGICAL SYSTEM.**

WHY DO WE NEED TO PROTECT?

- **NEED TO BE MANY STEPS AHEAD OF COMPETING BUSINESS.**

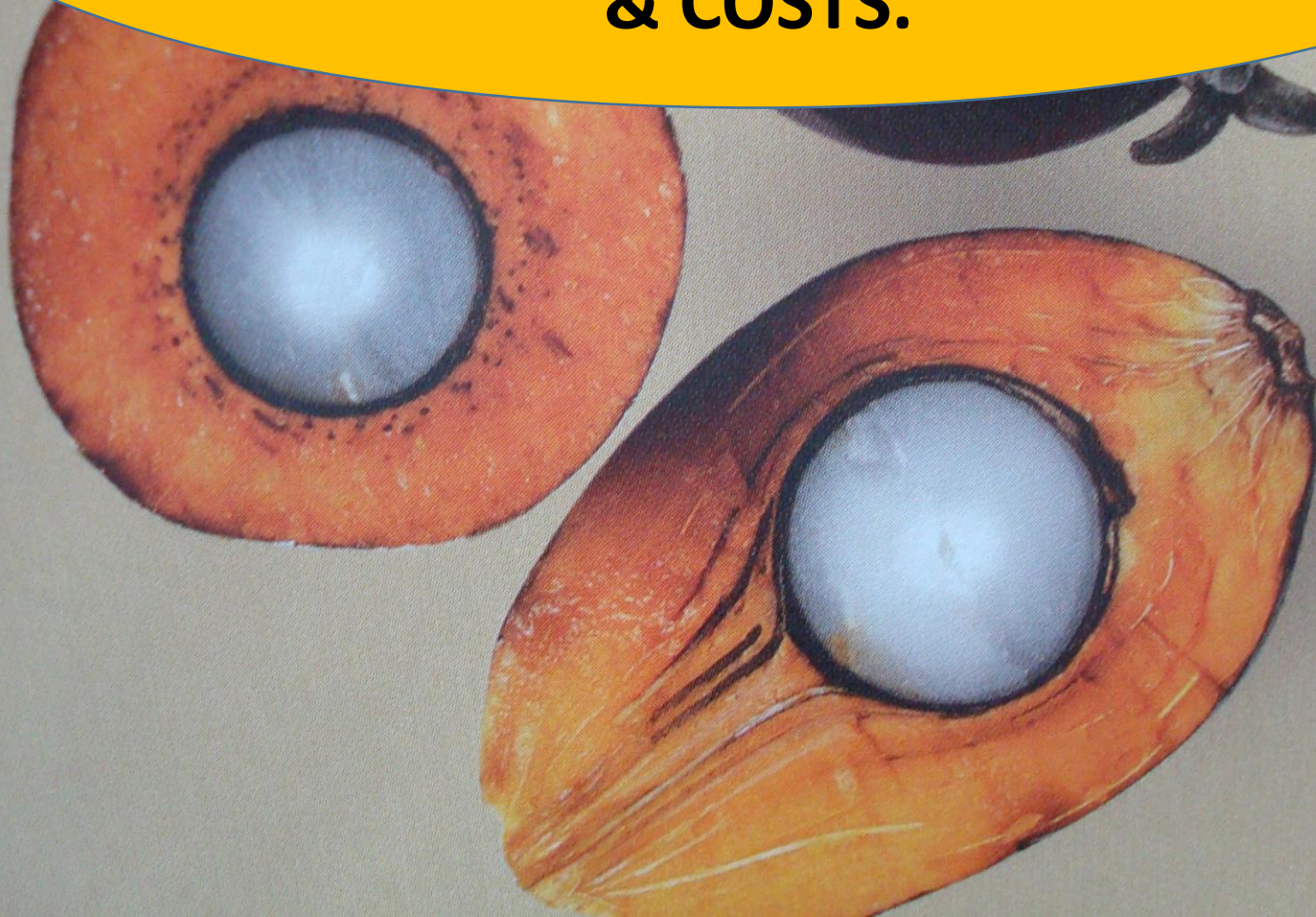
**WHAT IS OUR LEVEL
OF
COMPETITIVENESS?**

WHY DO WE NEED TO PROTECT?

- **NEED TO BE MANY STEPS AHEAD OF COMPETING BUSINESS.**

**HAVE WE EMBARKED
ON INNOVATION TO
COMPETE GLOBALLY?**

**OIL PALM CULTIVATION IS OUR
BUSINESS AND IT MUST BE
PROTECTED AT WHATEVER MEANS
& COSTS.**



**BUT, ARE WE
PROTECTING OUR
BUSINESS?**

CEOs concerned about high labour costs, stagnant yields

14/10/16

?

KUALA LUMPUR: The palm oil industry faces major hurdles in light of a tougher operating environment, as well as the uncertain outlook on crude palm oil (CPO) in the immediate term, according to the country's top planters.

During a roundtable discussion and "Opportunities and Challenges in the Palm Oil Industry" at the Malaysia Palm Oil Roundtable and Seminar here, industry leaders highlighted their major concerns.

Among them is the increasingly high labour costs. IOI Corp Bhd's chief executive officer Lee Yeow Chor said that companies in the industry were doing their utmost in their struggle, particularly given the environmental organizations' pressure. He is not sure how to have a dialogue to the stakeholders.

Meanwhile, Sime Darby Plantation managing director Datuk Franki Anthony Da

**NO.
OUR YIELD IS GOING
DOWN!!!!**

YIELD (TONNES/HECTARE) NATIONAL AVERAGE

	2011	2012	2013	2014	2015
FFB	19.69	18.89	19.02	18.63	18.48
CPO	4.01	3.84	3.85	3.84	3.54



**THE HARD FACT SHOWS
FFB & OIL YIELDS ARE
GOING DOWN.**

PROTECT & GROW STRATEGY

**LET'S TAKE A HARD LOOK AT
WHAT ARE THE ISSUES AND GAPS
IN PRODUCTIVITY AND HOW TO
ADDRESS THEM.**

PROTECT & GROW STRATEGY

**THE ADVANCEMENT OF OIL PALM
INDUSTRY SINCE EARLY 1900s
WAS LARGELY SUPPORTED BY
EXTENSIVE RESEARCH &
DEVELOPMENT IN INDONESIA,
AFRICA, EUROPE AND MALAYSIA.**

PROTECT & GROW STRATEGY

**EXISTING OIL PALM PLANTED
AREAS HAVE BEEN CULTIVATED
FOR 2 – 3 GENERATIONS; SOME
AREAS HAVE BEEN CULTIVATED
FOR ALMOST 100 YEARS.**

PROTECT & GROW STRATEGY

**NOW AFTER NEARLY 100 YEARS,
WE NEED ANOTHER LEAP IN
RESEARCH & DEVELOPMENT
EFFORT.**

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

OVER THESE YEARS, SOIL PHYSICAL & CHEMICAL STATUS AND ITS FERTILITY WOULD HAVE BEEN DEGRADED.

A photograph showing a cross-section of a soil bank that has been severely eroded. The soil is a reddish-brown color and appears loose and crumbly. The top edge of the bank is uneven and shows signs of being undercut. In the background, there is dense tropical vegetation, including palm trees and other green plants. The sky is overcast. Two text boxes are overlaid on the image: a yellow one at the top and an orange one at the bottom.

LAND DEGRADATION

SEVERE SOIL EROSION



LAND DEGRADATION

SEVERE SOIL EROSION



LAND DEGRADATION

SEVERE SOIL EROSION

PROTECT & GROW STRATEGY

**SOIL IS THE MOTHER OF ALL
HUMAN ACTIVITIES.**

**“THE NATION THAT DESTROYS
ITS SOIL DESTROYS ITSELF”
(FRANKLIN D. ROOSEVELT).**

A photograph of a palm tree plantation, likely a coconut grove, with rows of trees stretching into the distance. The ground is covered with fallen palm fronds and debris. A large yellow oval is superimposed over the lower half of the image, containing bold black text.

**IN NEW EXPANSION,
WE HAVE MOVED
INTO PEATLAND AREAS**

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

OIL PALM CULTIVATION IS NOW MOVING INTO MARGINAL AREAS. HOW DO WE AMELIORATE THESE MARGINAL LAND TO BECOME PRODUCTIVE?



**PROBLEMATIC PEAT
AREAS**



SEVERE SOIL EROSION

**HOW DO WE ADDRESS
THESE PROBLEMATIC
AREAS?**

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

**OVER THESE YEARS, DISEASES
MAY HAVE DEVELOPED TO A
CRITICAL POINT. NEW DISEASES
MAY HAVE APPEARED.**



DISEASE CONTROL

GANODERMA INFECTION

GANODERMA
FRUITING BODIES





GANODERMA
FRUITING BODIES

A photograph of an oil palm plantation. In the center, a tall palm tree trunk is visible, surrounded by dense green fronds. To the left, a cluster of palm fronds appears wilted and yellowish, contrasting with the healthy green trees on the right. The image has a halftone or dithered texture.

**THE MOST
SERIOUS DISEASE
OF OIL PALM**

**FUSARIUM WILT OF OIL PALM
(*Fusarium oxysporium*).**



**FUSARIUM WILT ATTACKS
OIL PALM AT ALL STAGES**

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

**OVER THESE YEARS, PESTS
ATTACKS MAY HAVE DEVELOPED
TO A CRITICAL POINT. NEW PESTS
MAY HAVE APPEARED.**

PROTECT & GROW STRATEGY

PESTS

RATS:

RICE FIELD RATS (*Rattus argentiventer*)

THE WOOD OR MALAYSIAN FIELD RATS (*Rattus tiomanicus*)

MALAYSIAN HOUSE RATS (*Rattus rattus diardii*)







**ANOTHER RAT
SPECIES AS A NEW
THREAT**

**SWAMP
GIANT RAT
(*Sundamys
muelleri*)**

**MALE: 210 – 412 g
FEMALE: 206 – 441 g**

PEST OF COCONUT

**THIS WEEVIL MAY ATTACK OIL PALM AND COULD POSE
SERIOUS THREAT TO OIL PALM INDUSTRY.**

RED PALM WEEVIL
(Rhynchophorus ferrugineus)

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

OVER THESE YEARS, WEED PROBLEMS MAY HAVE DEVELOPED TO A CRITICAL POINT. NEW WEEDS MAY HAVE APPEARED.

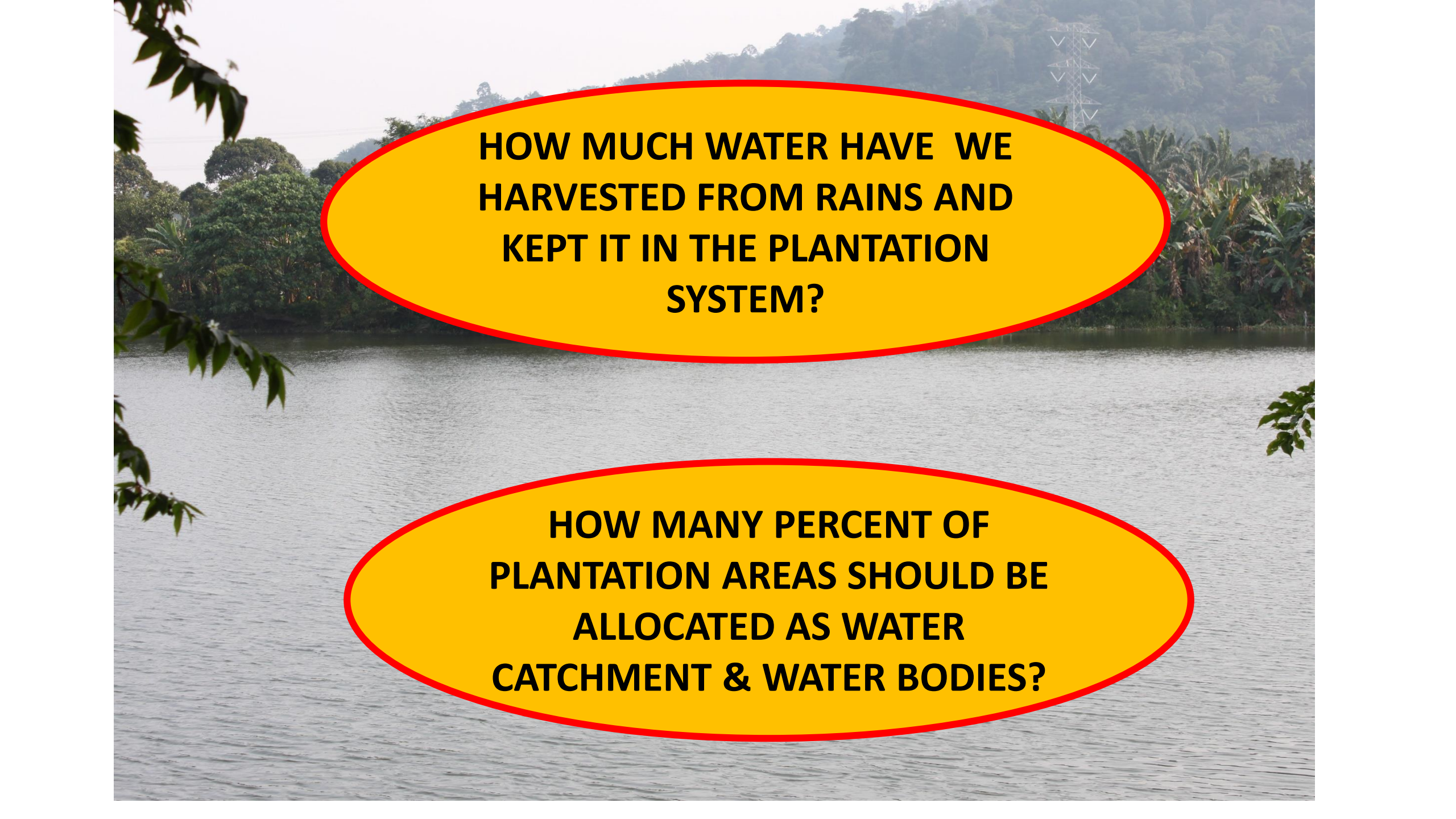
**VERY NOXIOUS
WEED:
*Parthenium
hysterophorus***



PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

OVER THESE YEARS, WEATHER PATTERN MAY HAVE CHANGED. MORE PROLONGED DRY PERIODS IS NOW A COMMON FEATURE IN SOME AREAS.



**HOW MUCH WATER HAVE WE
HARVESTED FROM RAINS AND
KEPT IT IN THE PLANTATION
SYSTEM?**

**HOW MANY PERCENT OF
PLANTATION AREAS SHOULD BE
ALLOCATED AS WATER
CATCHMENT & WATER BODIES?**



**HOW MUCH TIME, MONEY
AND EXPERT RESOURCES
ARE ALLOCATED TO WATER
MANAGEMENT RESEARCH?**



BIG DRAIN AS WATER BODY

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

PROLONGED DRY PERIOD IS NOW A COMMON FEATURE, DO WE NEED PLANTING MATERIALS THAT CAN TOLERATE SUCH CONDITION? THUS THE NEED FOR INTENSIVE BREEDING RESEARCH TO DEVELOP MATERIALS TO BE PLANTED IN THESE AREAS.

PROTECT & GROW STRATEGY

**SO HAVE WE DEVELOPED OIL
PALM PLANTING MATERIALS
THAT CAN WITHSTAND
PROLONGED DRY PERIODS?**

PROTECT & GROW STRATEGY

**FIELD APPLIED RESEARCH NEEDS TO BE
INTENSIFIED.**

**HOW MUCH APPLIED RESEARCH
IS BEING CARRIED OUT NOW
AND BY WHO?**

PROTECT & GROW STRATEGY

HUMAN CAPITAL

**DO WE HAVE SUFFICIENT
PROFESSIONAL & EXPERT
IN THE INDUSTRY?**

PROTECT & GROW STRATEGY

HUMAN CAPITAL IN UPSTREAM SECTOR

DO WE HAVE ENOUGH?

**SOIL SCIENTIST, SOIL FERTILITY SCIENTIST,
HYDROLOGIST, PLANT BREEDER, CROP
PHYSIOLOGIST, ECOLOGIST, ENTOMOLOGIST, PLANT
PATHOLOGIST, WEED SCIENTIST, PLANT
NUTRITIONIST, AGRONOMIST, ENVIRONMENTAL
SCIENTIST, MECHANISATION ENGINEERS, etc.**

PROTECT & GROW STRATEGY

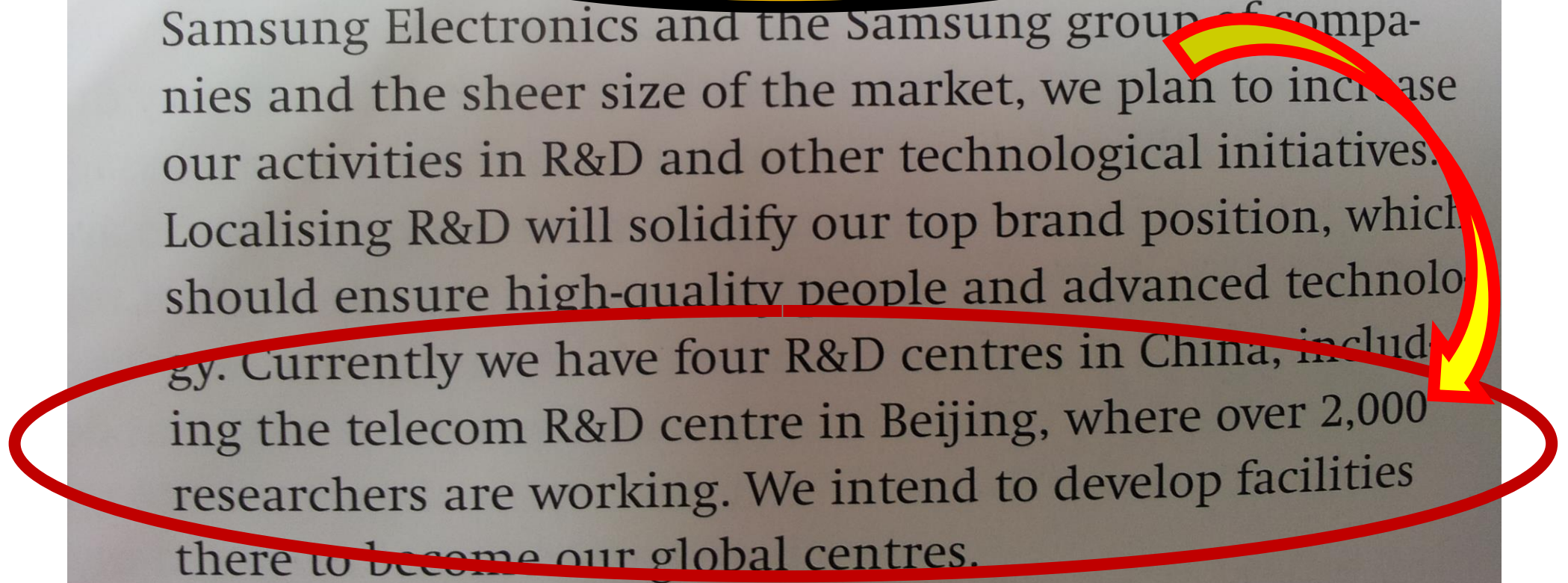
FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

**WE NEED TO HAVE A REGISTER
OF ALL THE SCIENTISTS &
EXPERTS IN THE OIL PALM
INDUSTRY.**

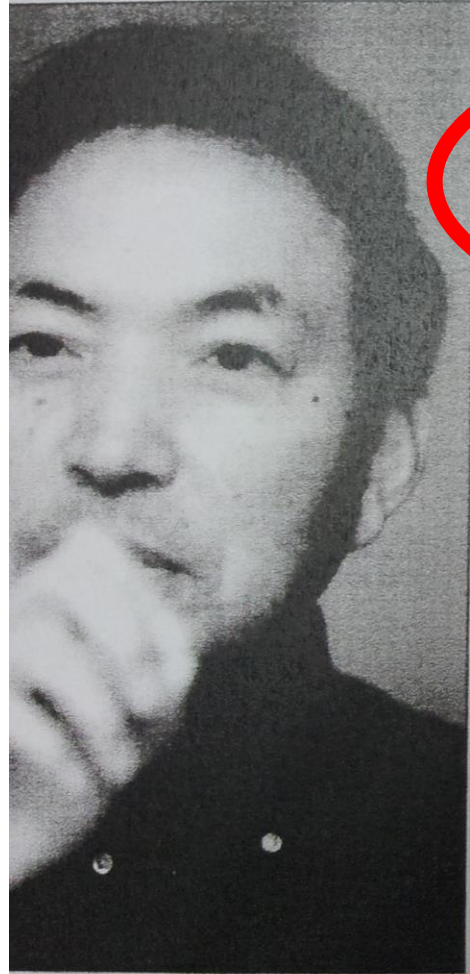
three markets, along with the US and Europe. Our semiconductor business is a vast and rapidly developing market. The semiconductor industry is a vast and rapidly developing market. The semiconductor industry is a vast and rapidly developing market. The semiconductor industry is a vast and rapidly developing market.

**ELECTRONIC INDUSTRY
VS
OIL PALM INDUSTRY**

Samsung Electronics and the Samsung group of companies and the sheer size of the market, we plan to increase our activities in R&D and other technological initiatives. Localising R&D will solidify our top brand position, which should ensure high-quality people and advanced technology. Currently we have four R&D centres in China, including the telecom R&D centre in Beijing, where over 2,000 researchers are working. We intend to develop facilities there to become our global centres.



better companies to satisfy our customers. We simply cannot produce world number-one products with second-tier parts. This rule applies even more strictly to our sister companies and the Samsung group of companies.



Arthur D. Little: Samsung Electronics invested US\$ 4.6 billion (about 8.3 percent of revenue) in R&D last year and plans to further increase R&D investment. What are the reasons for these aggressive investments?

Lee: Top global companies are equipped with core technologies. Technology value management is not an issue of choice but of survival. Technological innovation is like sushi. Technology, such as mobile phones, not innovated or managed timely could quickly become obsolete, like sushi not managed properly by a chef. We call it speed management. For Samsung, the issue is whether we become the best global company in the near future or lose out to the competition. Our current cash-generating businesses might disappear in five years. We need to constantly develop new growth engines. Therefore, speed

need our partners
suppliers to

through continuous technological innova-

PROTECT & GROW STRATEGY

FIELD APPLIED RESEARCH NEEDS TO BE INTENSIFIED.

**OUR OIL PALM INDUSTRY:
HOW MUCH DO WE SPEND ON
RESEARCH?**

OIL PALM AREA EXPANSION IN MALAYSIA

**AREA EXPANSION WILL BE LIMITED
TO 6.0 -6.5 MILLION HECTARES**



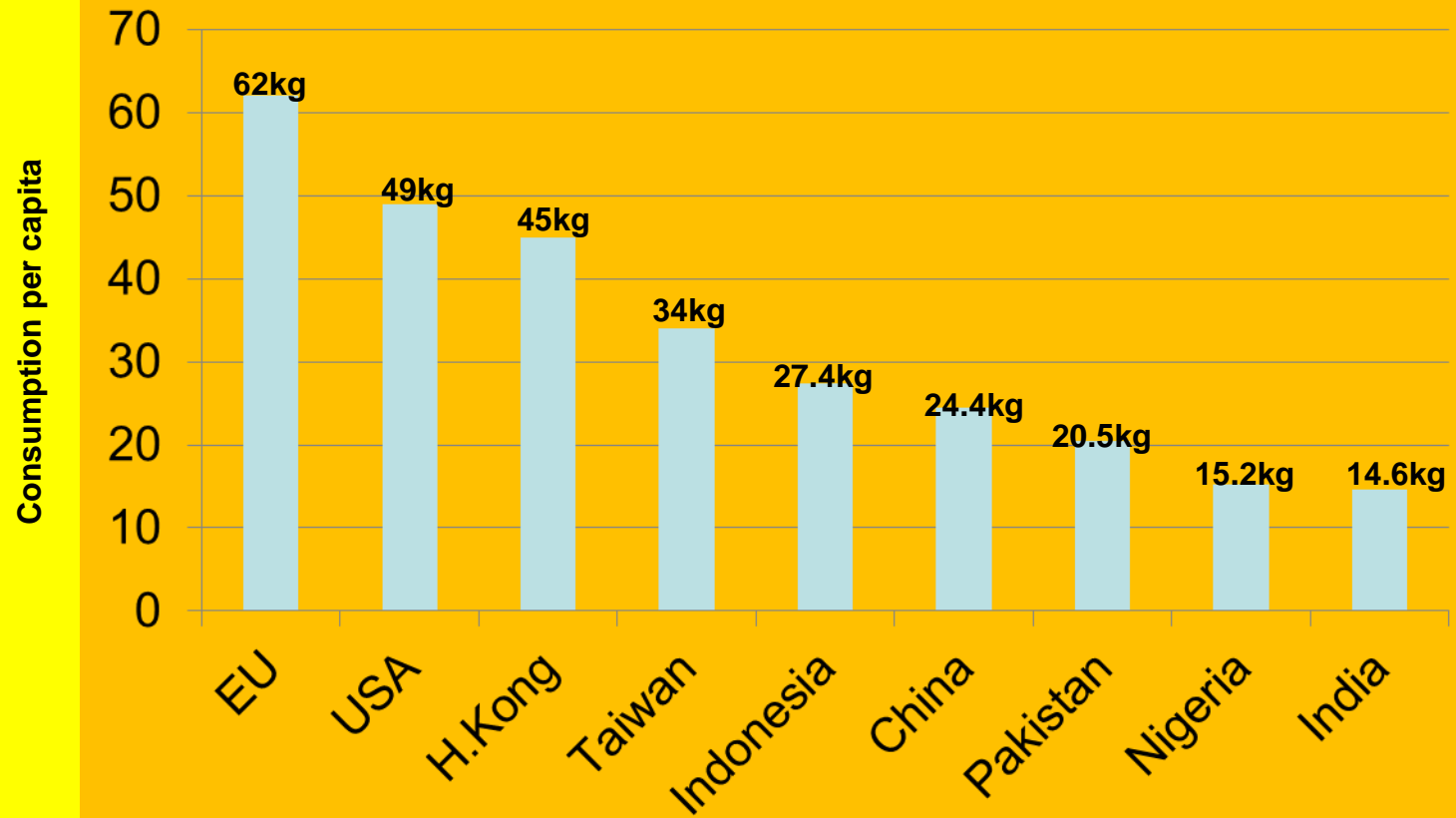
2015: 5.64 MILLION HA

WHY DO WE NEED TO GROW?

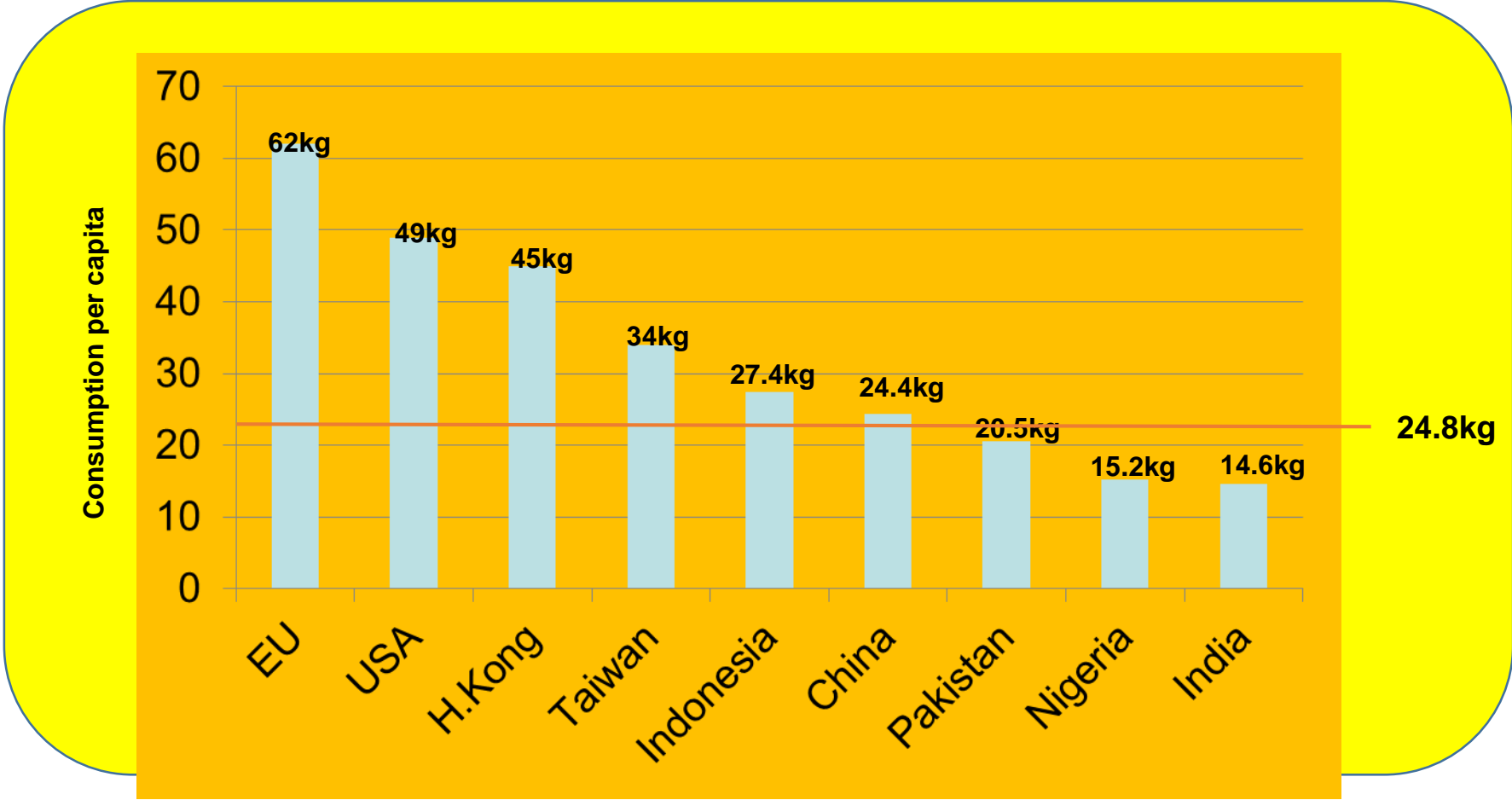
- **FOOD SECURITY.**

**WORLD
POPULATION IN
2050:
9 BILLIONS PEOPLE**

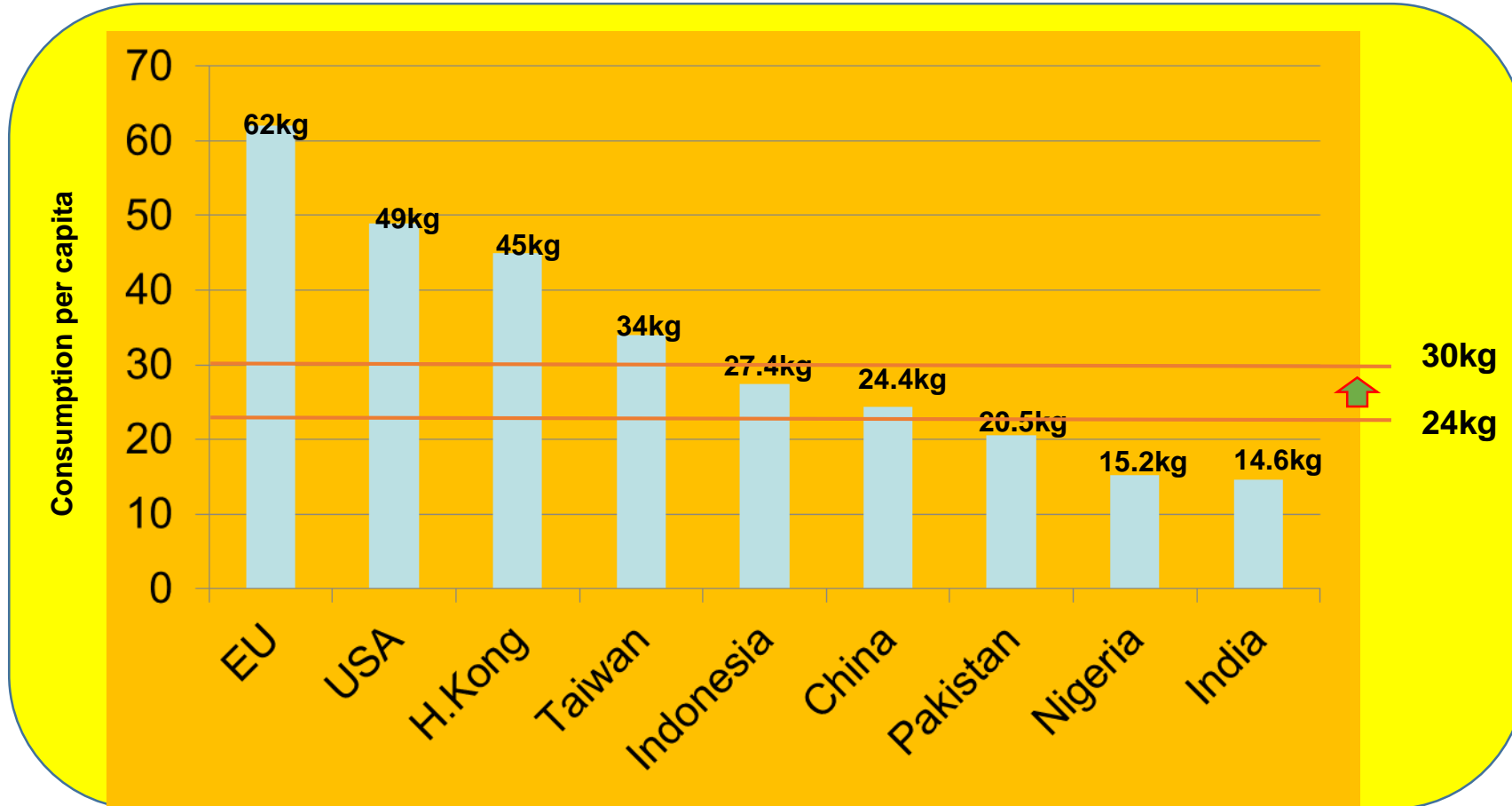
AVERAGE OILS & FATS CONSUMPTION



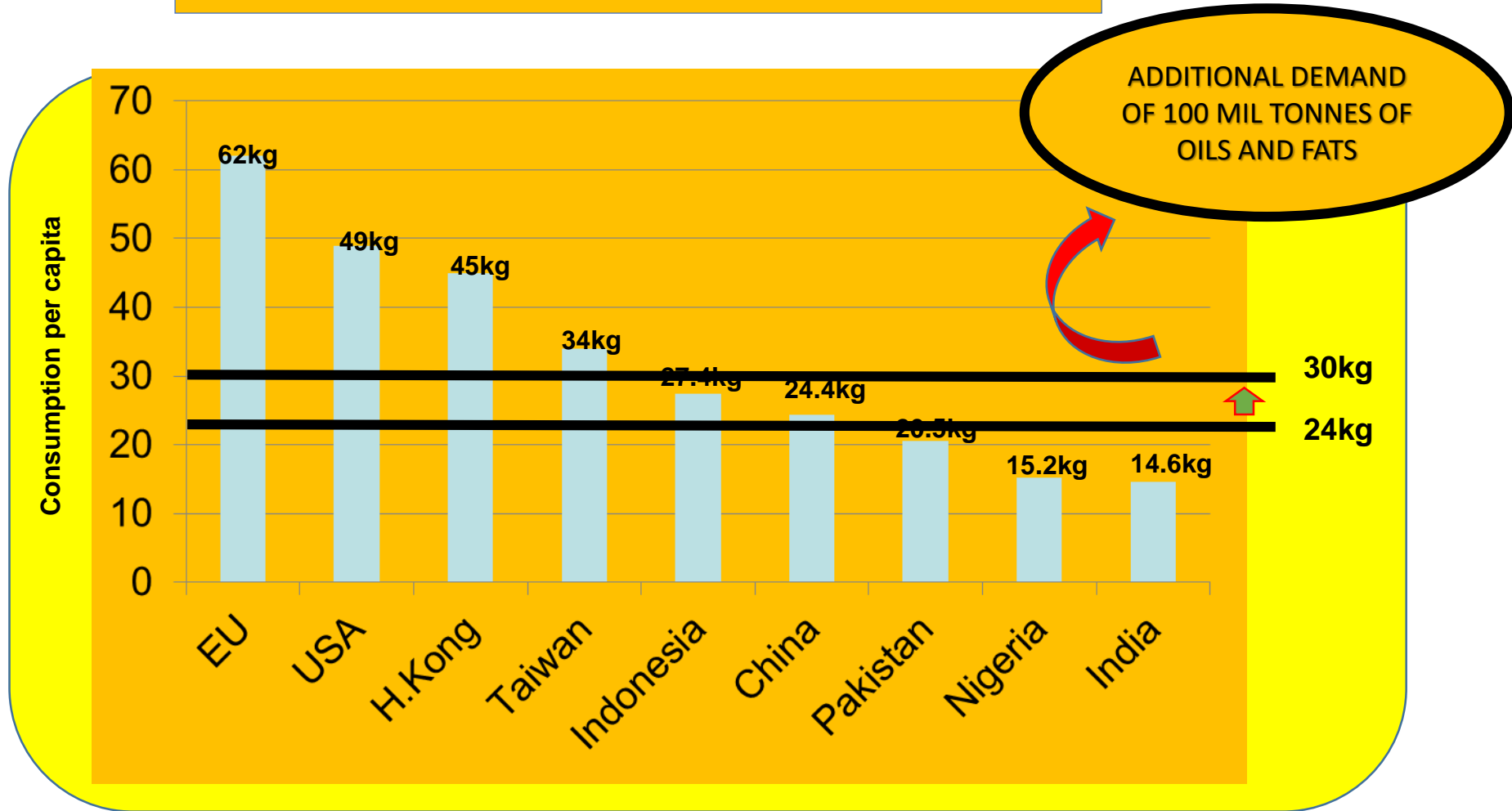
AVERAGE OILS & FATS CONSUMPTION



POTENTIAL INCREASE IN AVERAGE OILS & FATS CONSUMPTION



AVERAGE OILS & FATS CONSUMPTION



WHY DO WE NEED TO GROW?

- **GLOBAL DEMANDS.**

**THE WORLD NEEDS
AROUND 100 MILLION
TONNES OF EDIBLE OILS**

POTENTIAL AND ACTUAL OIL YIELD OF PALMS

POTENTIAL MAXIMUM YIELD (CORLEY, 1985)

17 -18 MT/HA

National Average (MPOB, 2015)

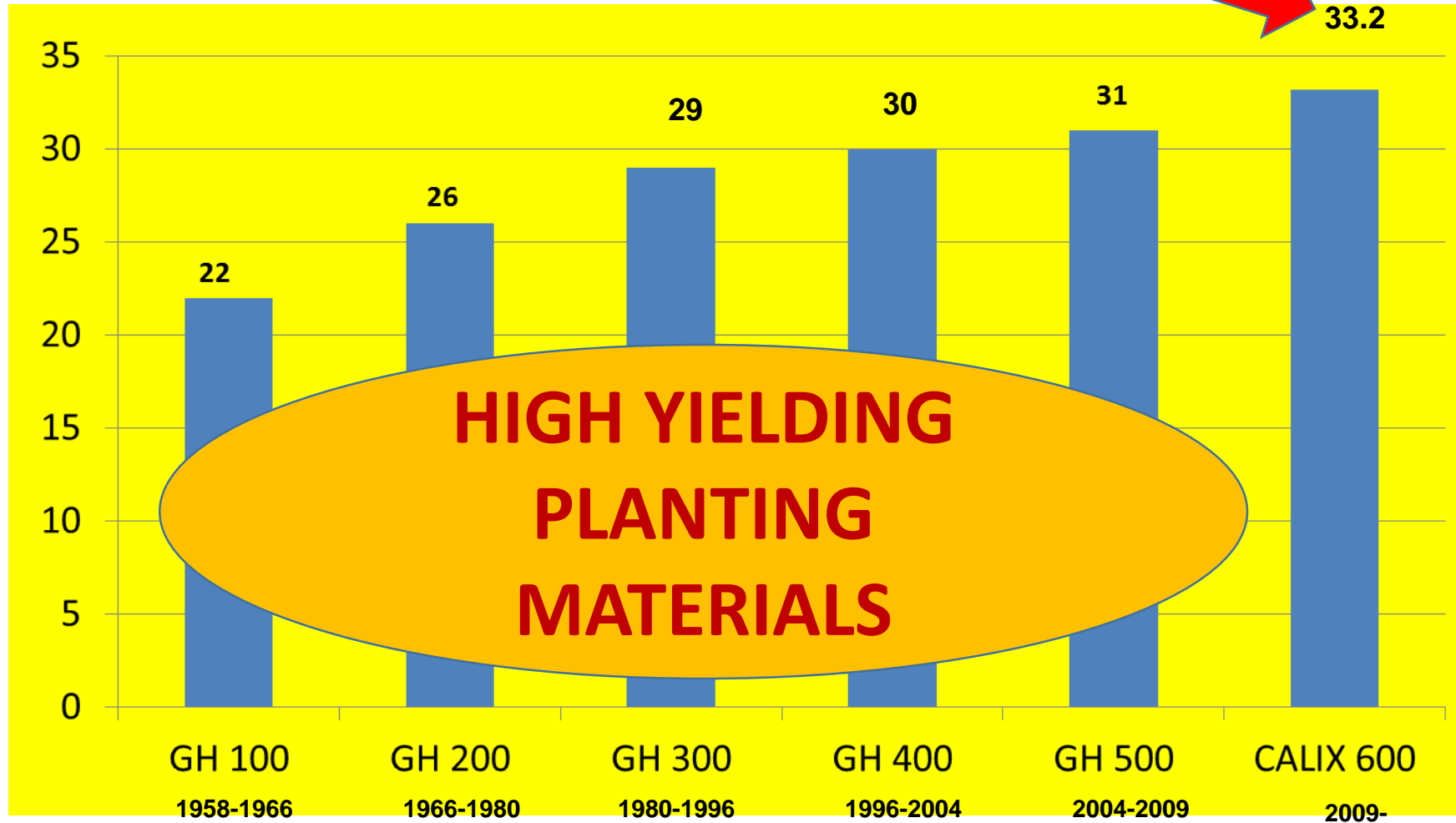
FFB : 18.48 MT/HA

CPO: 3.54 MT/HA

**COMMERCIALY RECORDED AT PRIME MATURITY IN SOME AREAS:
ABOUT 45-46 MT FFB/HA**

COMMERCIAL DXP PLANTING MATERIALS

OIL TO BUNCH %



Source: Sime Darby Seeds & Agriculture Services Sdn Bhd.



**FRESH FRUIT BUNCHES (FFB) AT
YOUNG STAGE**



**FRESH FRUIT BUNCHES (FFB) AT MATURED
STAGE**

GROWTH STRATEGY

**LET'S SHIFT OUR FOCUS FROM AREA
EXPANSION TO YIELD INTENSIFICATION.**

AVERAGE FFB YIELD

28 – 30 MT/HA

&

OIL YIELD 6.0 – 6.5 MT/HA

GROWTH STRATEGY

LET'S SHIFT OUR FOCUS FROM AREA EXPANSION TO YIELD INTENSIFICATION.

**AT OIL YIELD 6.0 – 6.5 MT/HA
AND CURRENT PLANTED AREA,
MALAYSIA CPO PRODUCTION
WILL TOUCH 33-36 MIL TONNES.**

POTENTIAL PALM OIL PRODUCTION GROWTH IN MALAYSIA

33-36 MILLION TONNES



2015: 19.96 MIL TONNES

PROTECT & GROW THE INDUSTRY



HIGH YIELDS

HIGH PRODUCTIVITY WILL ENSURE THE INDUSTRY TO:

- **REMAIN COMPETITIVE IN GLOBAL MARKET.**
 - **CONTINUE TO BE MOST COST-EFFICIENT PRODUCER OF OILS & FATS.**
- **BE SOURCE OF REVENUE TO THE COUNTRY.**
- **CONTINUE TO SUPPORT THE PEOPLE ASSOCIATED WITH THE INDUSTRY.**
 - **PROVIDE SOURCE OF FOOD SECURITY.**
 - **REMAIN IN BUSINESS.**

PROTECT & GROW THE INDUSTRY



**THANK
YOU**