

**FERRERO**

# Palm oil sustainability and 3MCPD + GE mitigation

Symposium on MCPD esters and Glycidyl esters  
20 – 21 June 2017 in Berlin/Germany

Dr. G. Neuberger



**40,721** GROUP COLLABORATORS

**53** COUNTRIES IN WHICH WE ARE PRESENT

**10,326,000**  
(€/000)

CONSOLIDATED NET TURNOVER

**1,781,339 tonnes**  
AGRICULTURAL/PACKAGING RAW MATERIALS USED

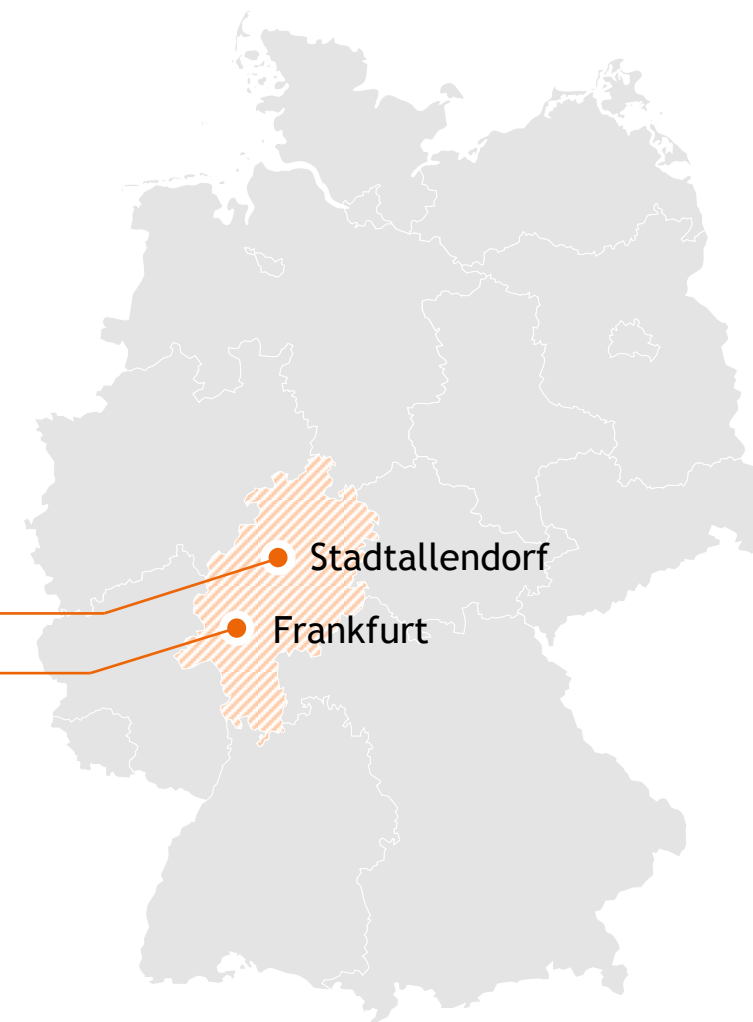
22 MANUFACTURING  
PLANTS IN  
5 CONTINENTS

**4.500**  
Employees

First FERRERO company outside Italy

**Market Leader**  
with 28 brands

**2** Locations since the beginning:  
Factory in **Stadtallendorf**  
Headquarter in **Frankfurt**





Wide spectrum  
of usage



Nearly in every 2nd product  
in the supermarket



Production  
worldwide



Ferrero Share



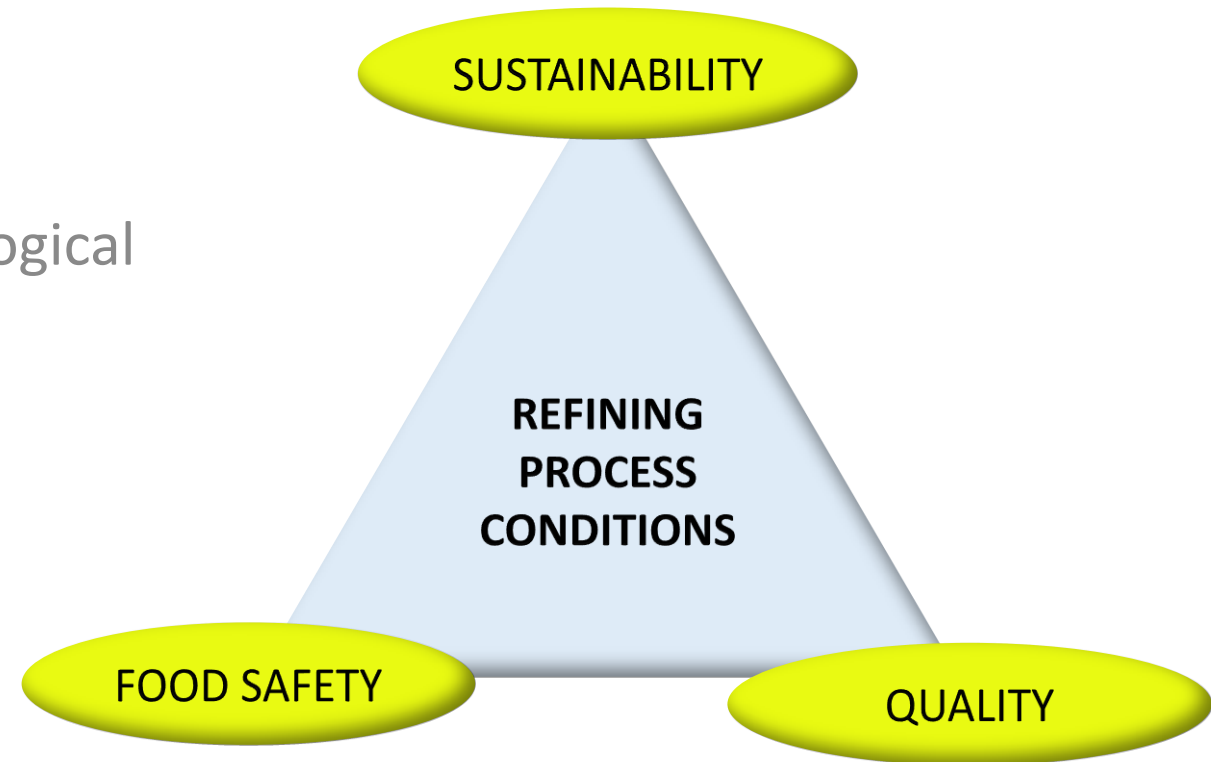
**100%**  
of the **FERRERO Palm Oil** is  
as sustainable certified  
segregated **RSPO-Palmöl**

- Heat-induced contaminants in edible oils, are not present in crude oils but are formed during refining process, as a consequence of high temperature treatments.
- The formation of these process contaminants depends upon quality and freshness of raw material, oil composition and process conditions.
- October, 2006 (Zelinkova and al., 2006): First Scientific publication about presence of 3-MCPD Esters/GE in edible oils.

**FERRERO FROM THE BEGINNING OF APPEARANCE OF SCIENTIFIC EVIDENCES  
STARTED TO WORK ON THERMAL CONTAMINANT MITIGATION**

## Adopting modified refining processes that guarantee:

- SUSTAINABILITY of raw material
- HIGH FOOD SAFETY ingredient
- BEST QUALITY product, sensorial and technological





The underlying principles of sustainability :

- traceability
- straight control of supply chain
- reduced number of selected sub-supplier

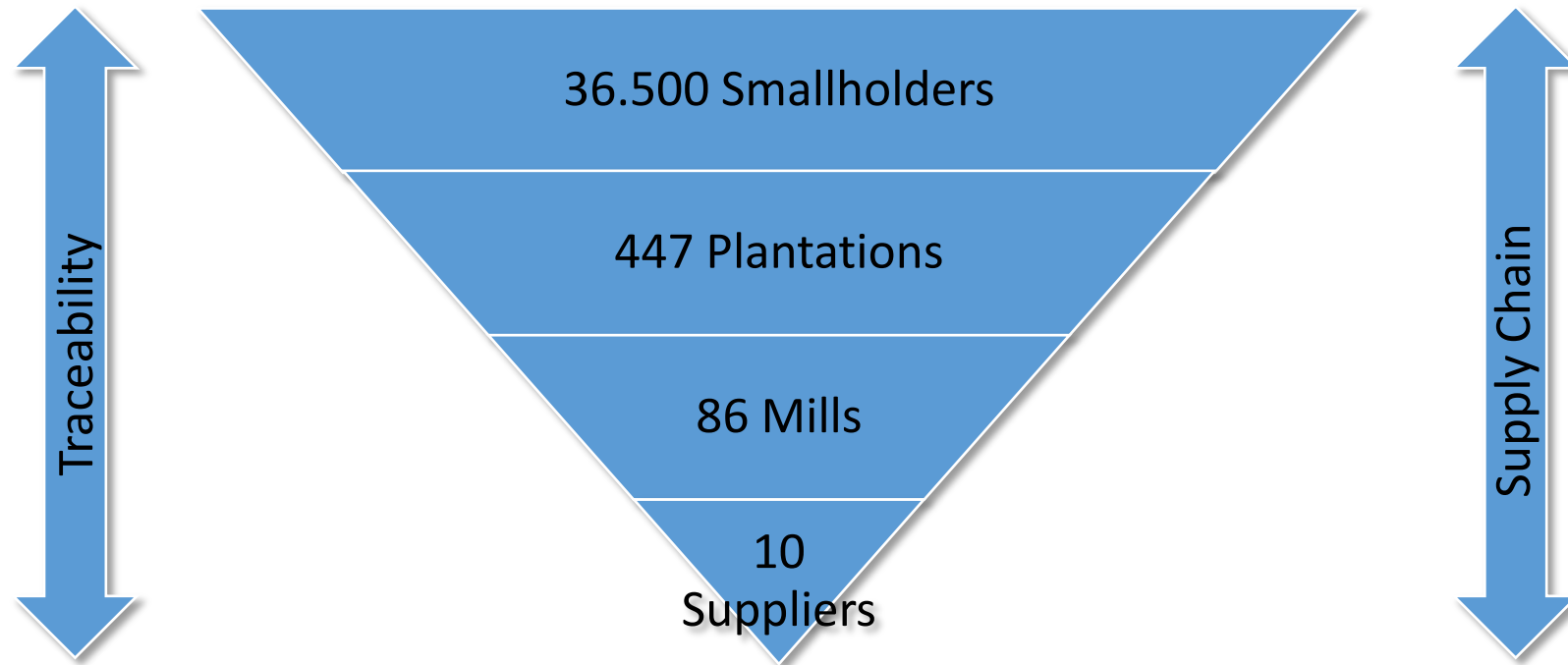
facilitate the application of processes, able to mitigate the thermal contaminants levels and assuring, at the same time, the best sensory and technological quality characteristics.





# SUSTAINABILITY

- Since 2015 Ferrero is 100% RSPO SG certified -> traceability back to the mill
- Extending traceability to plantation -> “full visibility” back to origin of the fruits
- Regular up-date every 6 month; following data referring to period Jan-Dec ‘16



Deep knowledge of our supply chain allowed Ferrero to work simultaneously on Quality and Food Safety as well as on Traceability and Sustainability with support of only 10 direct suppliers from 9 different countries; <https://www.ferrerocrs.com/>



# 3-MCPDE/GE MITIGATION INVOLVES DIFFERENT STEPS ALL ALONG PRODUCTION FLOW

(e.g. BLL-TOOL BOX)



## Plant

- Breeding
- Cultivation
- Harvest
- Storage and Transport



## Mill

- Crude Oil Production
- Storage and Transport



## Refinery

- Modified «Soft» Physical Refining
- Alkaline Refining

## WHERE CONTAMINANTS ARE FORMED

- 3-MCPDE level principally depend on the treatment of the CPO, as e.g. a soft physical refining process
- GE level can be controlled during final deodorization step (optimized temperature profile)



## 3-MCPD

Reference

TDI (1)  
micg/die/kg b.w.

FAO/WHO JECFA – 2004, PMTDI

2

EFSA CONTAM – March, 2016

0,8

FAO/WHO JECFA – November, 2016 PMTDI

4

## GE

ALARA principle to be applied

## Limits on discussion at EU level on oils and fats

3-mcpd

2 ppm (in stand by, within 2018 ?)

GE

1 ppm (September, 2017 ?)

**Ferrero Specifications are fully congruent with above limits**

- Long term relationship with supplier
- Only sustainable and completely traceable vegetable oils
- Audit and technical meetings with suppliers
- Stringent specifications agreed with suppliers
- Analytical methods defined with authoritative reference laboratories
- Internal and external controls all along the supply chain

**More than 2500 controls on raw materials and finished products in 2016**