



# Lecithin

The Natural and Powerful Substance

Speaker: Jens Heiser

# Where to find lecithin?

LECITHIN is found in every membrane of living cells.  
Some cell-membranes are especially rich in Lecithin



- Soya
- Sunflower
- Corn
- Rapeseed

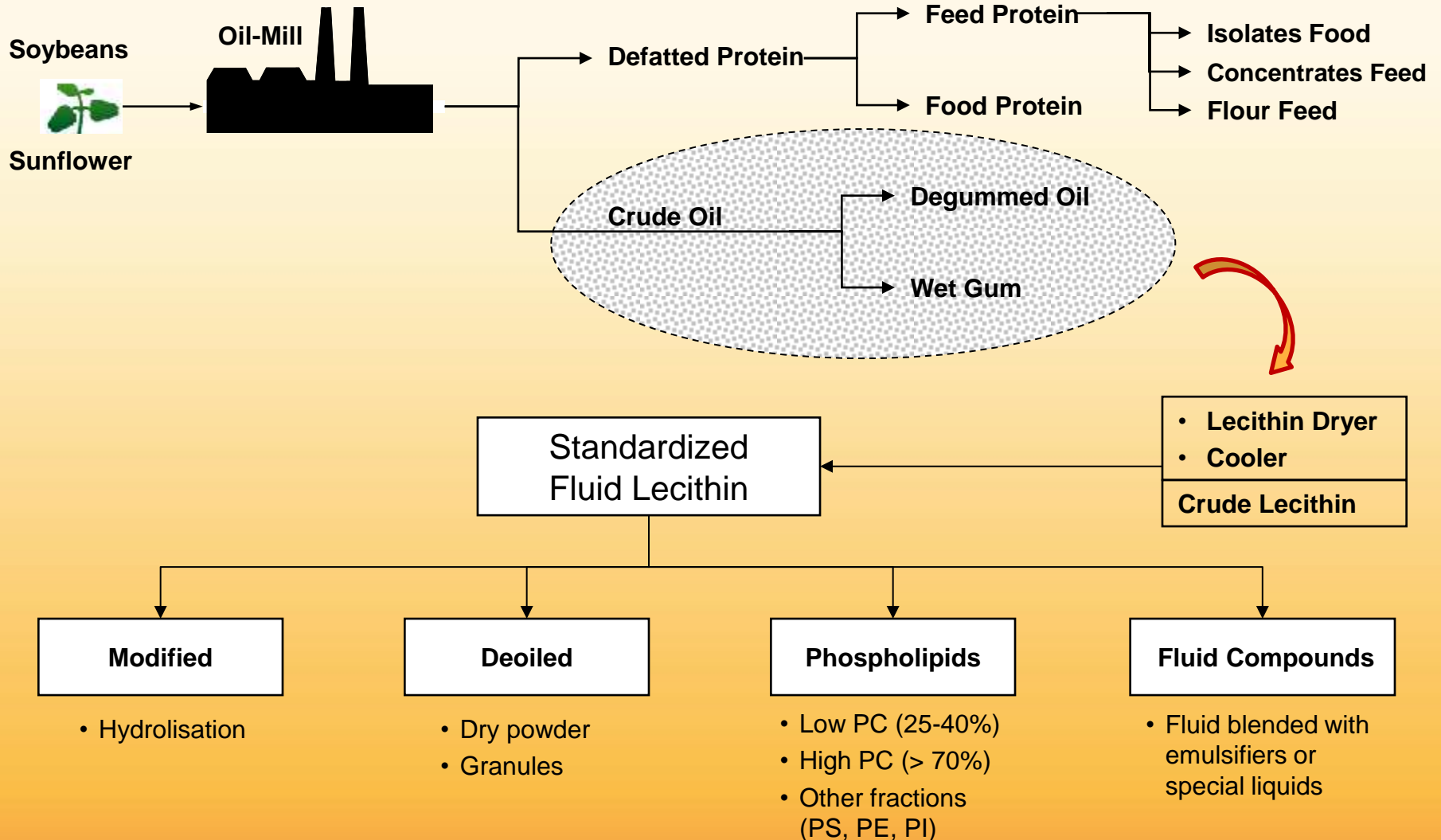


- Egg yolk
- Fish eggs
- Meat
- Milk



- Brain cells
- Liver cells
- Bone Marrow

# Lecithin Production and Process Flow

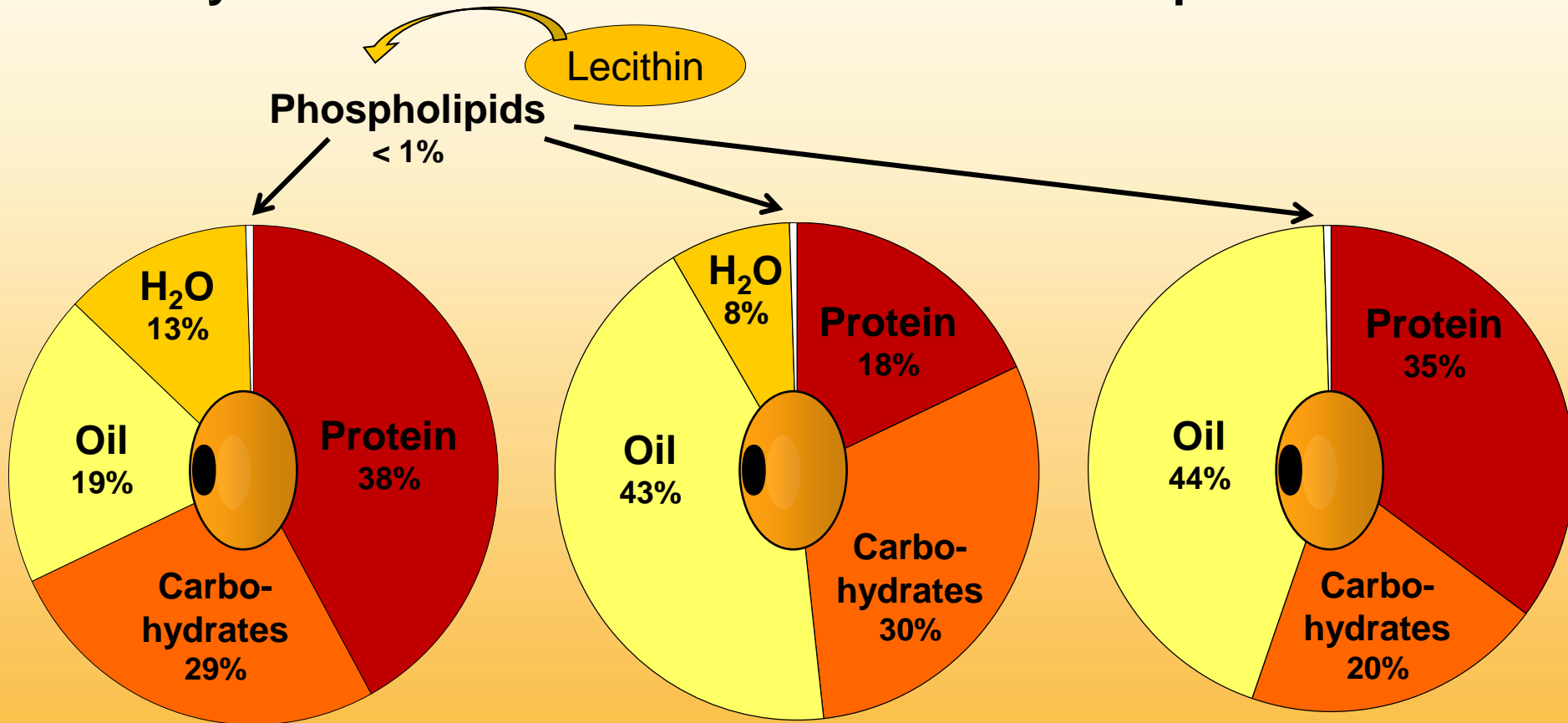


# Composition of Lecithin

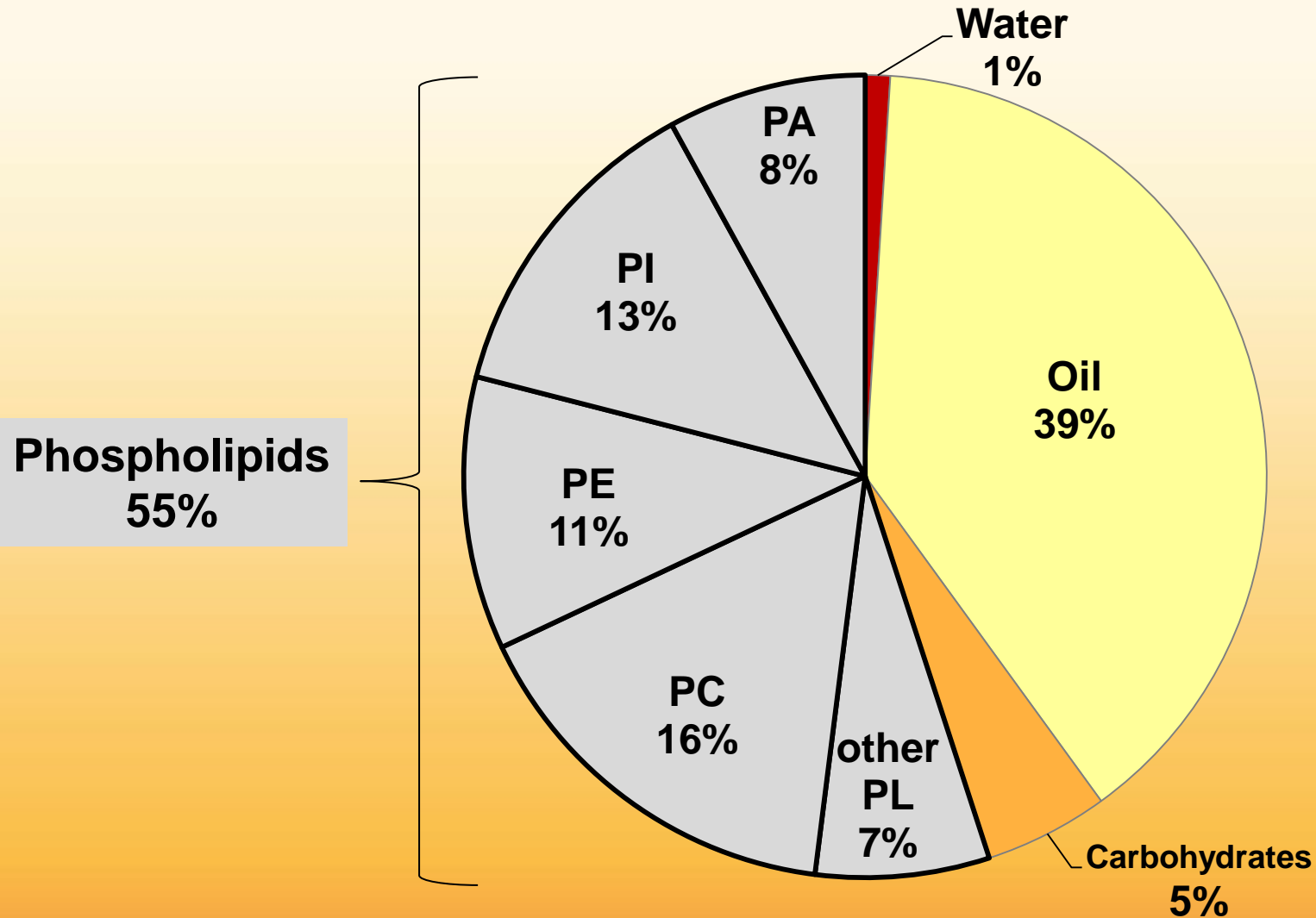
**Soyabean**

**Sunflower**

**Rapeseed/Canola**



# Composition of Fluid Lecithin



# Composition of Phospholipids in „Lecithin“

Soybeans  
0,6 – 0,8%

Sunflower  
0,2 %

Rape Seed  
0,2%

	<b>Soya</b>	<b>Sun</b>	<b>Canola/Rape</b>
PC	15%	16%	16%
PE	10%	8%	9%
PI	12%	14%	10%
PA	4%	3%	4%

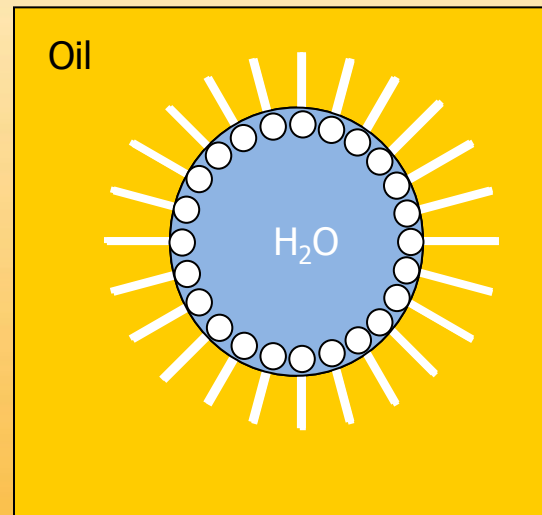
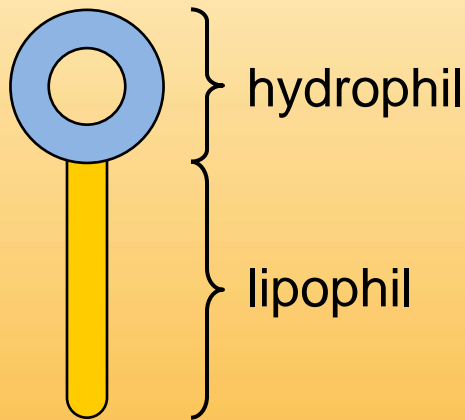
# Comparison Soya, Sunflower, Rapeseed/Canola



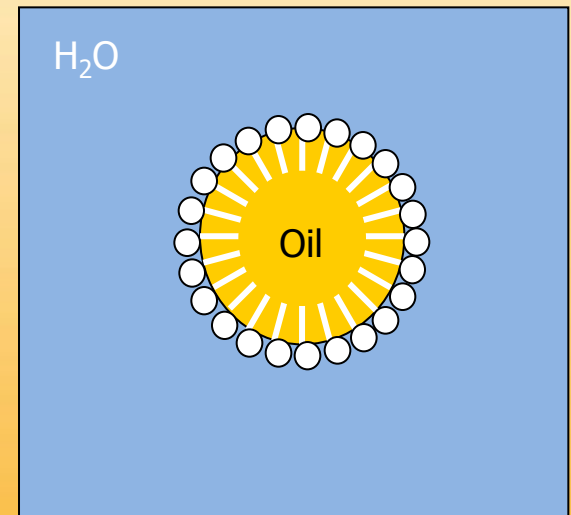
	Rapeseed Lecithin	Sunflower Lecithin	Soya Lecithin
<b>Allergen</b>	NO	NO	YES
<b>Functionality</b>	+++	wax ++	+++
<b>Availability</b>	+++	+	+++++
<b>NON-GMO</b>	YES	YES	YES

# How lecithin works

Lecithin has a lipophilic and a hydrophilic end and works as emulsifier.



Margarine



Dressing



# Lecithin in which industry

## Where does lecithin end up?

### Market

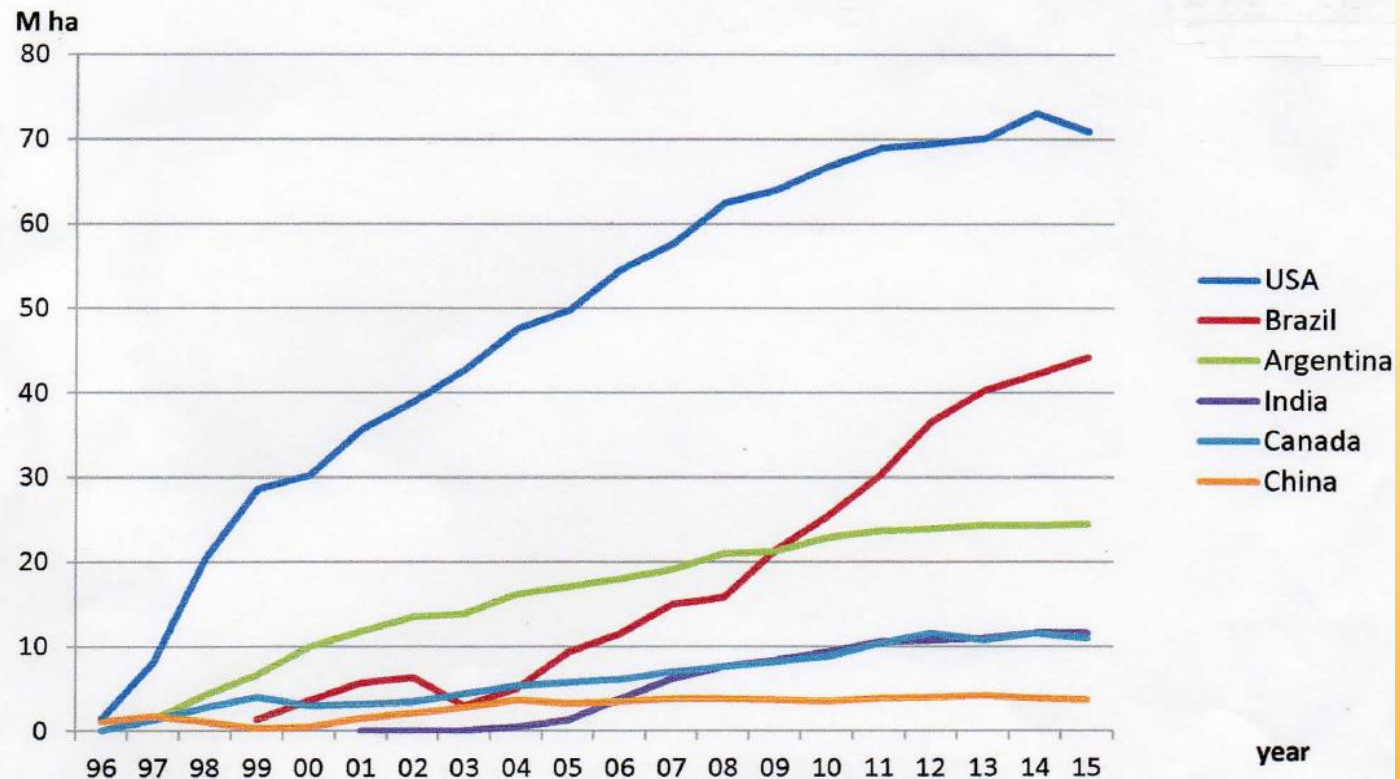
Food/Nutrition	Health / Pharma	Feed	Industrial
<ul style="list-style-type: none"><li>- Instant foods</li><li>- Baked goods</li><li>- Chocolate</li><li>- Confectionery</li><li>- Margarine</li><li>- Biscuits</li><li>- Dairy</li><li>- Others</li></ul>	<ul style="list-style-type: none"><li>- Food supplements</li><li>- Infant formulas↑</li><li>- Functional food (Nutraceuticals)</li><li>- Cosmetics↑</li><li>- Pharma↑</li></ul>	<ul style="list-style-type: none"><li>- Calf milk replacer</li><li>- Aquaculture↑</li><li>- Animal health (Pet food) ↑</li><li>- Micronutrient (Swine)</li><li>- Pork↑</li><li>- Poultry↑</li></ul>	<ul style="list-style-type: none"><li>- Paint / varnish</li><li>- Leather</li><li>- Textiles</li><li>- Herbicides</li></ul>

↑ = strong growth

# Genetically Modified Crops

## Commercial Planting of Genetically Modified Crops

### Important Growing Areas

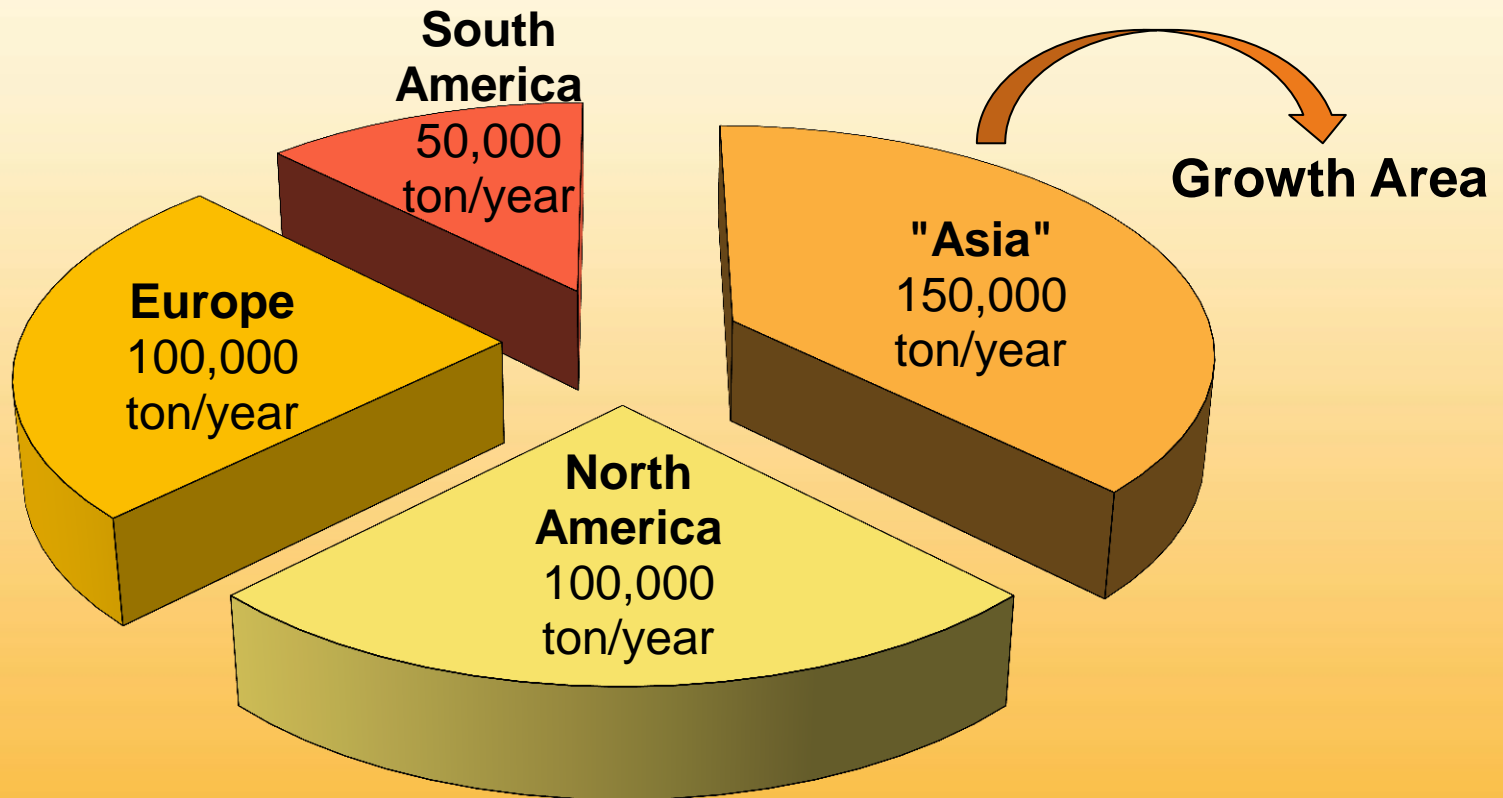


# GMO Planting

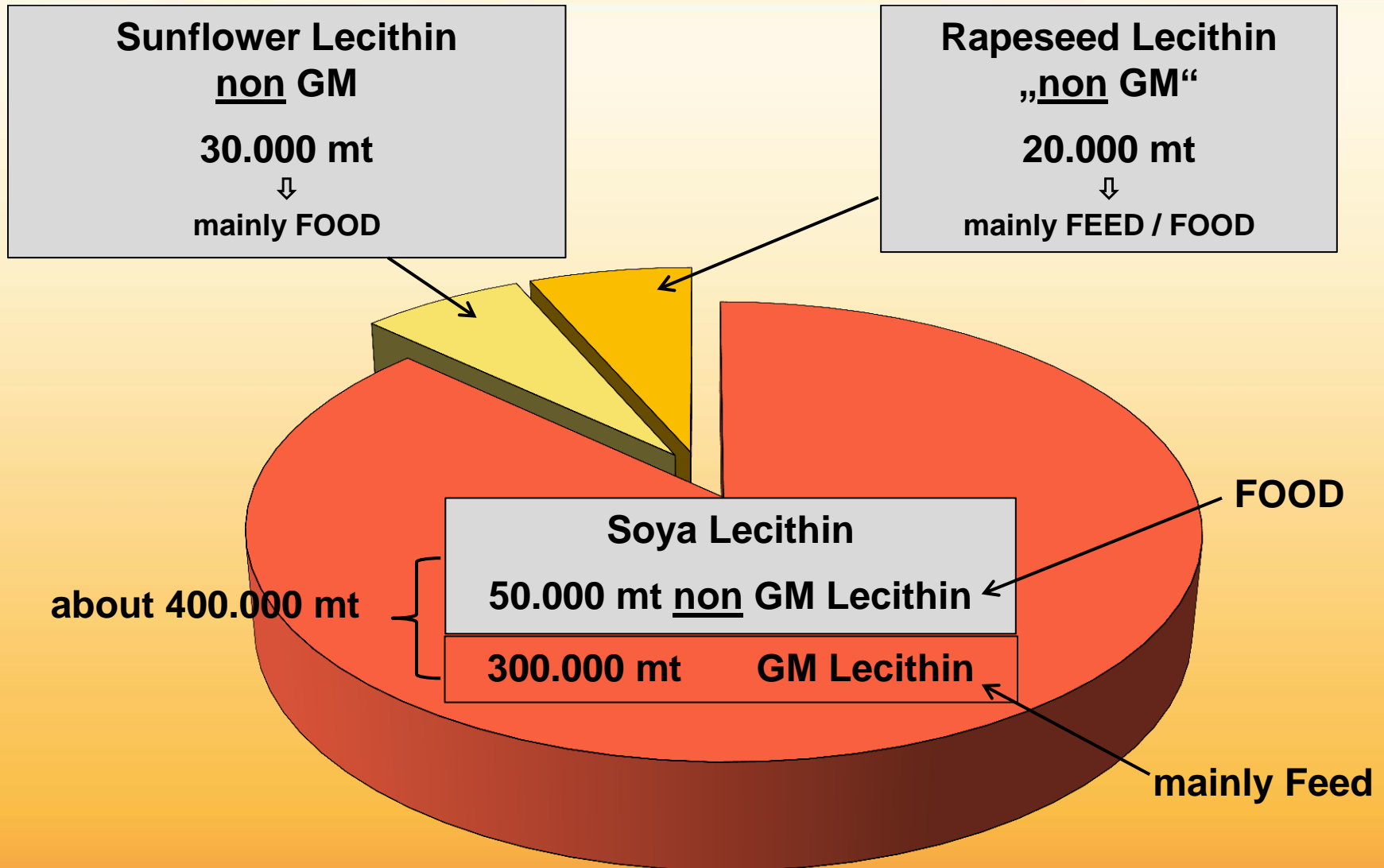
	Sunflower	Soya	Rapeseed
Genetic modification available	No	Yes	Yes
Worldwide planting of GMO`s	0 %	> 82 %	25 %
Major countries of GMO planting	-	USA	Canada
		Brazil	USA
		Argentina	Australia
		others	

# Breakdown of Global Lecithin Market

The Global Lecithin Demand by Geography is about 400 mt/year



# Breakdown of Global Market 2016 for Soya-, Sunflower & Rape/Canola Lecithin



# At the end....



**... if you have problems, we do  
our best to find a solution!**