LUPINE'S SITUATION AND POTENTIAL

SITUACION Y POTENCIAL DEL LUPINO

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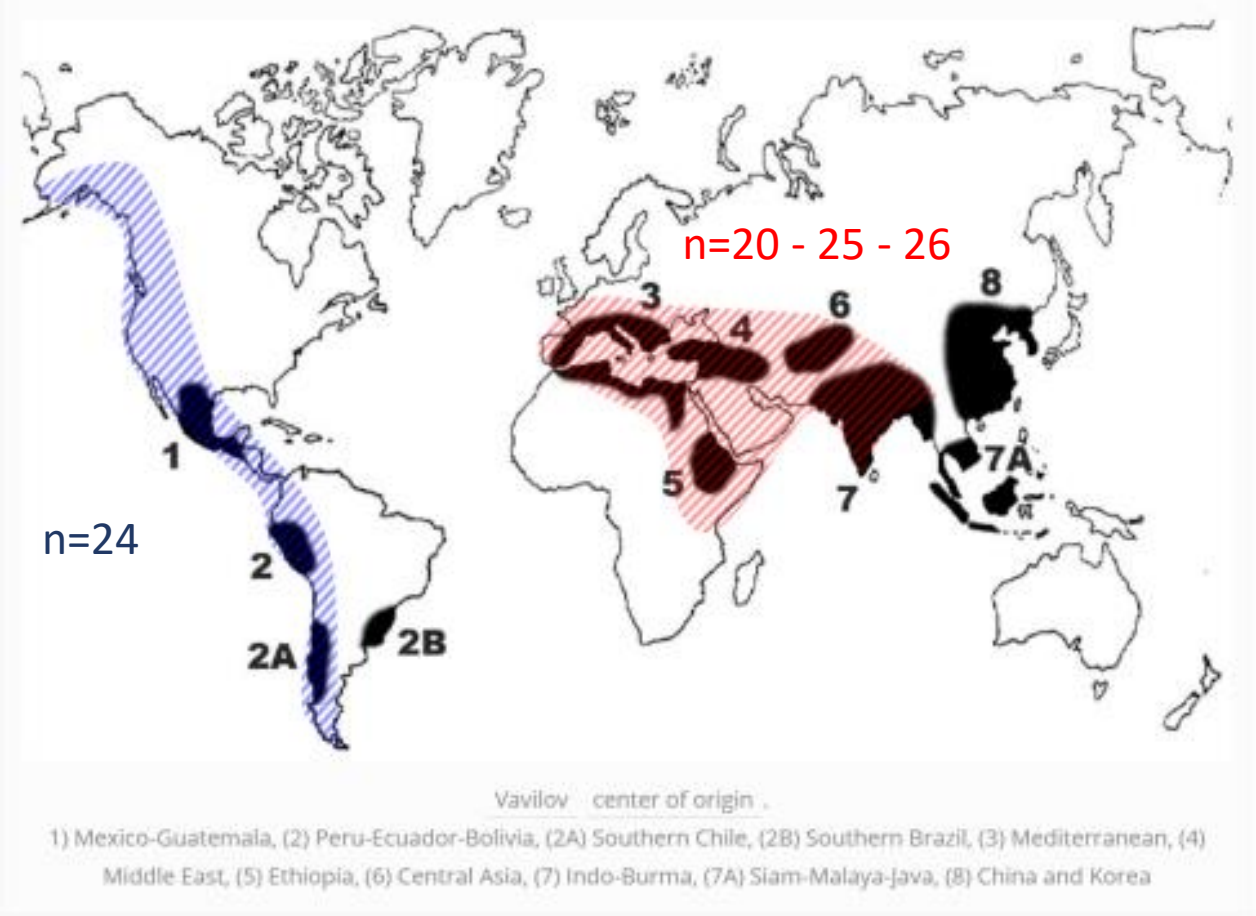
The numerous species of Lupine have a wide range of adaptation.



This permits a high potential area of cultivated varieties.

lupinus nootkatensis (n=24) in Iceland

Lupinus albus (n=25) in Egypt

Lupinus albus (n=25) in Portugal

Lupinus angustifolius (n=20) in Germany

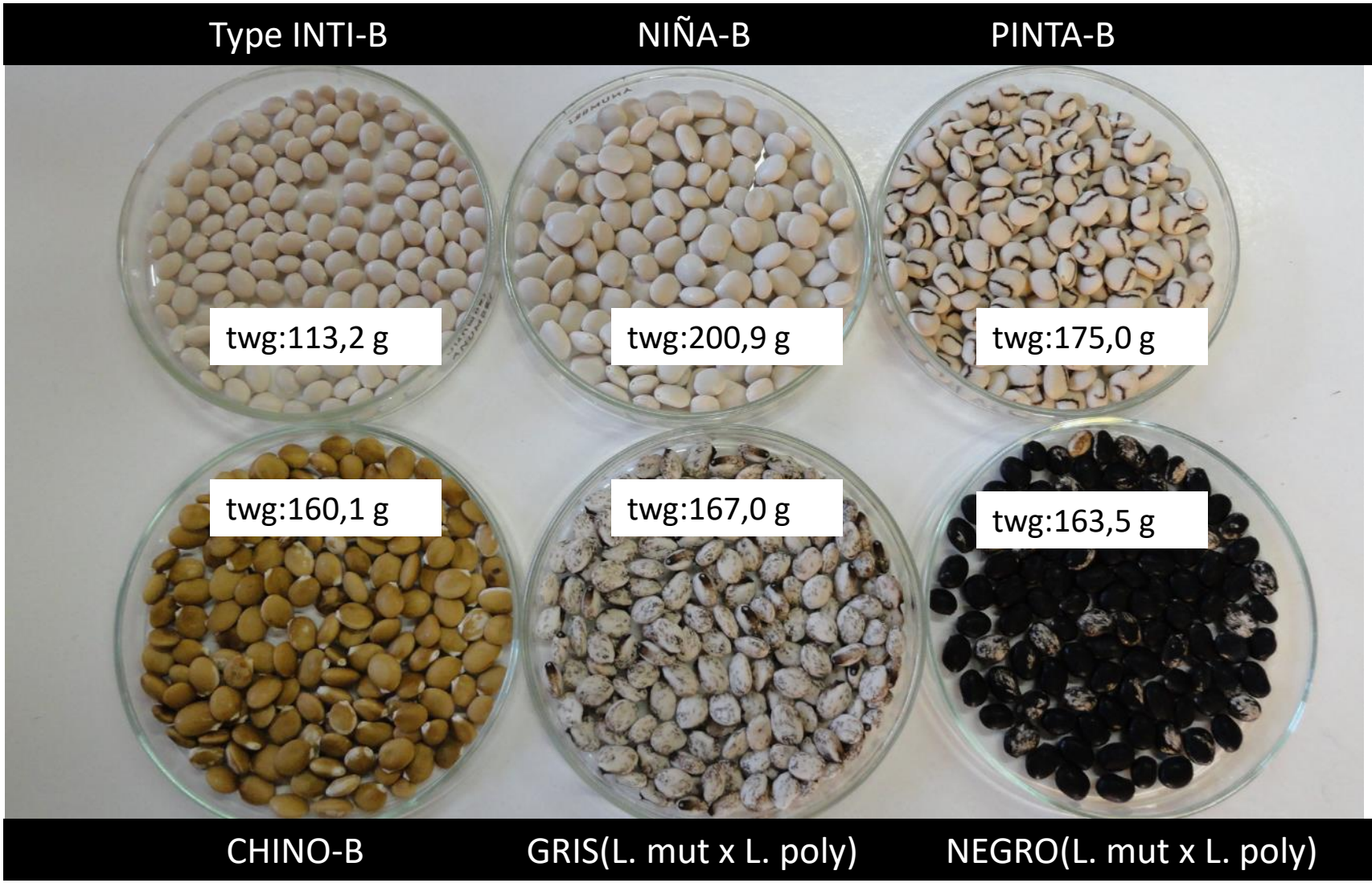
Lupinus mutabilis (n=24) in Mantaro (Age of Tiahuanaco)

High variability is achieved with crosses and mutations

L. polyphyllus (n=24)

There is enormous potential for new world lupines.

(L. mutabilis x L. elegans) L. polyphyllus



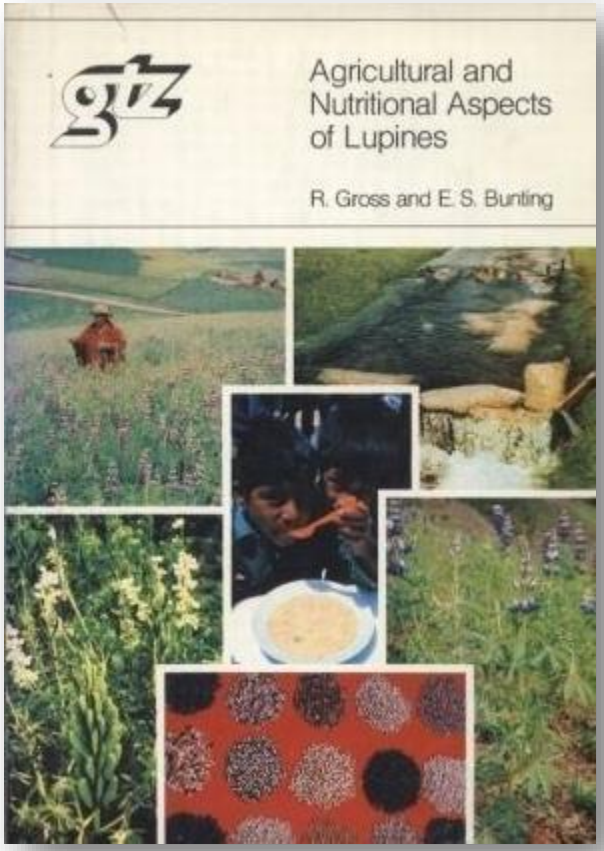
Samples from Genpool

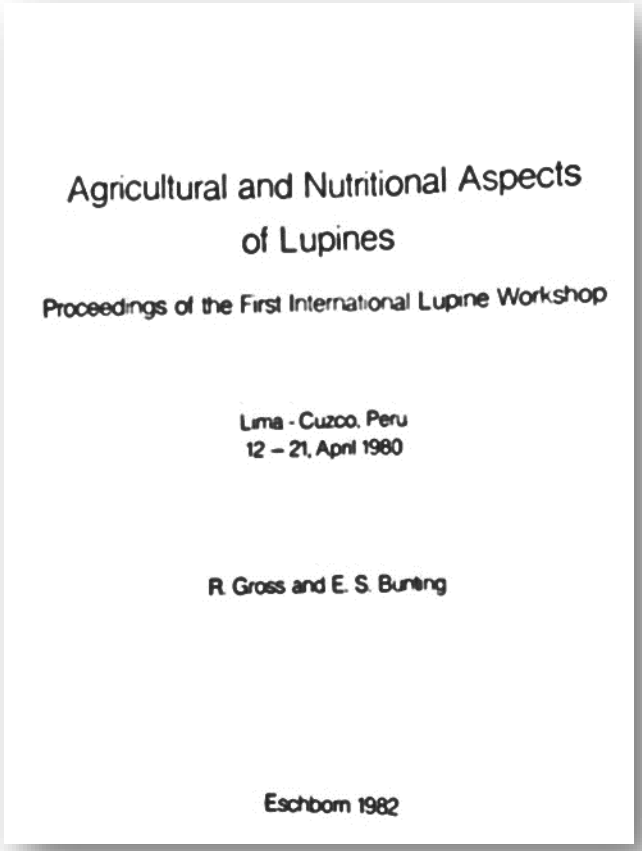
Potential Profit by species.

Species	Protein content DM	Oil content DM	Ton value	Ton/ha. DM	US/ha.
L. albus	41%	10,60%			
Yield per %	451	169,6	620	2.592	1,607
L. mutabilis	47,80%	15,10%			
Yield per %	525,8	241,6	767,4	3.051	2,341
L.angustifolius	31,70%	7,80%			
Yield per %	348,7	124,8	473,5	4.185	1,981

*It is considered 10% moisture average.

We reported in 2008 in Australia the first results of exact trials of different promising sweet lines which were higher in protein and oil yield per surface than *L.angustifolius*.





Where are we? Where do we now go? Has increased demand and production been on accumulated knowledge?

The answer:

Is that only where demand has been created production has followed.

In contrast, the soybean originating in China, when introduced to the USA...

It became the most cultivated oilseed in the world.

Its industrialization, created a great demand, of its oil for human consumption and its soybean meal for animal feed.

Its limitation: Industrially controlled growth inhibitors

In the case of lupines, sweet forms were achieved, but made them sensitive to attack by herbivores.

Insect attack on sweet Andean Lupine

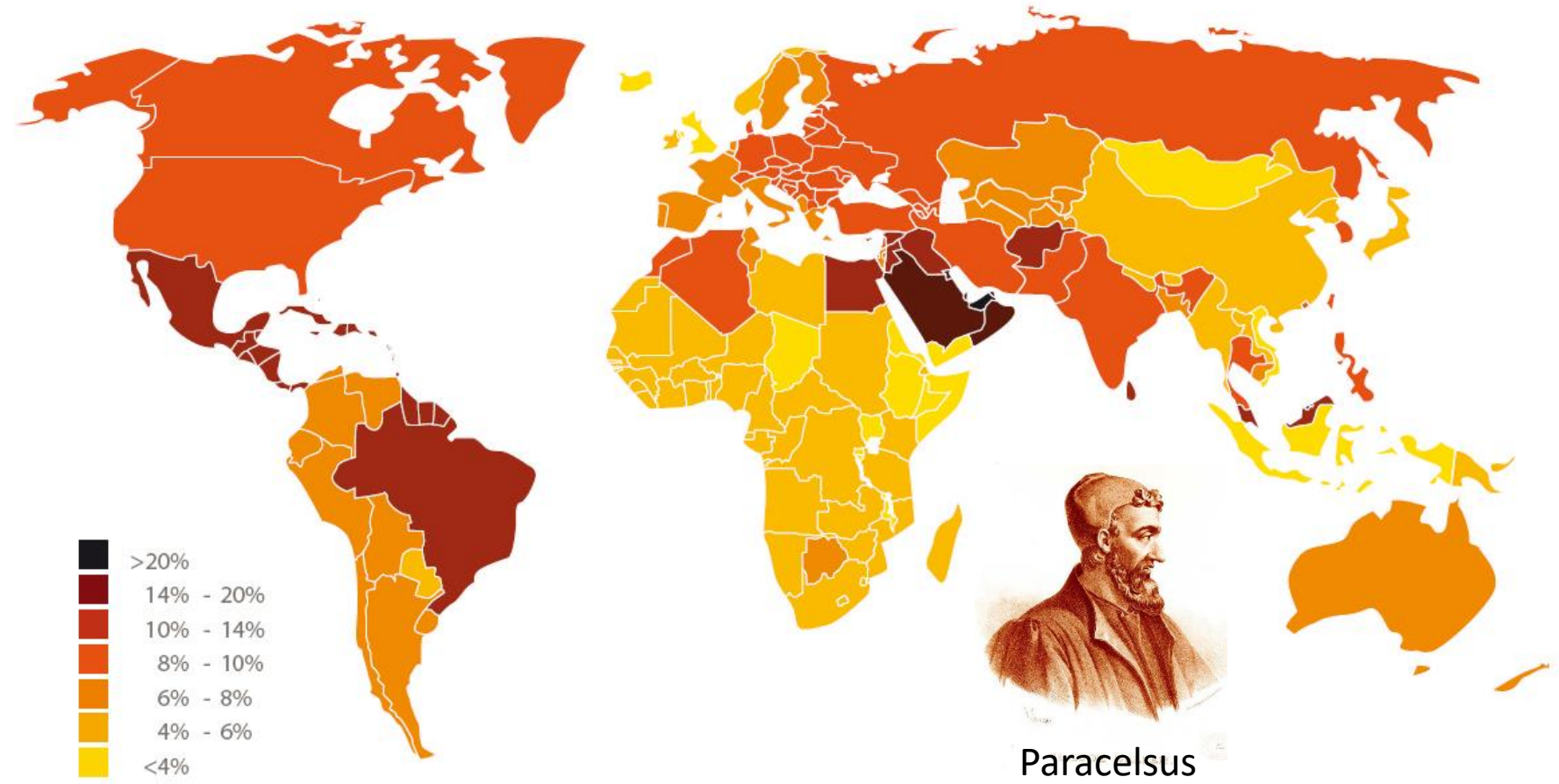
Another limitation has been the attack of disease.

Anthracnose attack in Australia

In Europe…

Sweet lupine is cultivated, but a factory requires at least 25 thousand tons to change its formulization (animal feed factory) in Germany.

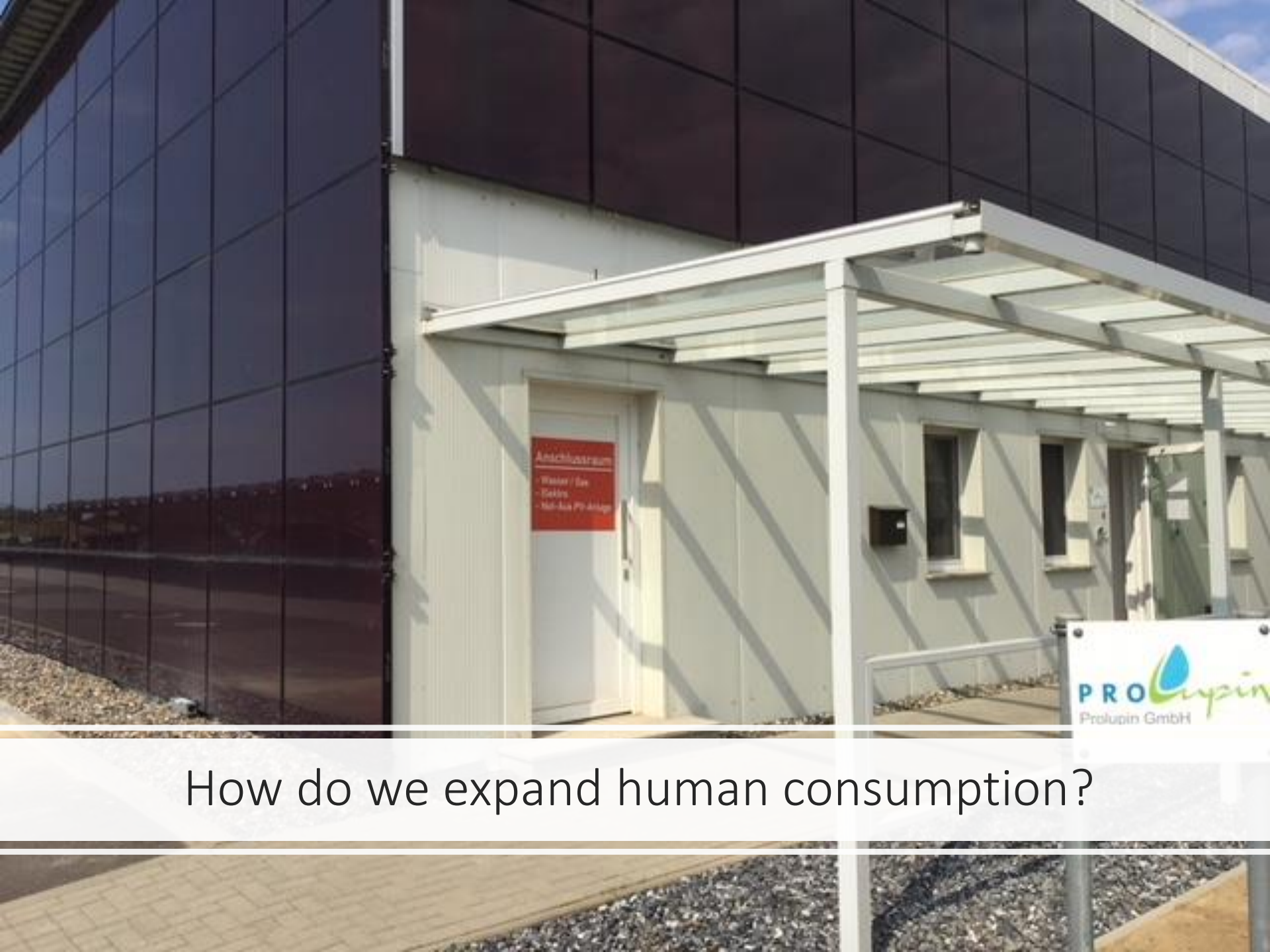
Prevalence estimates of diabetes, 2025



Paracelsus

SOURCE: *DIABETES ATLAS THIRD EDITION*, © INTERNATIONAL DIABETES FEDERATION, 2006

Paracelsus, highlights lupine as a food against diabetes. However, demand for human consumption remains limited.

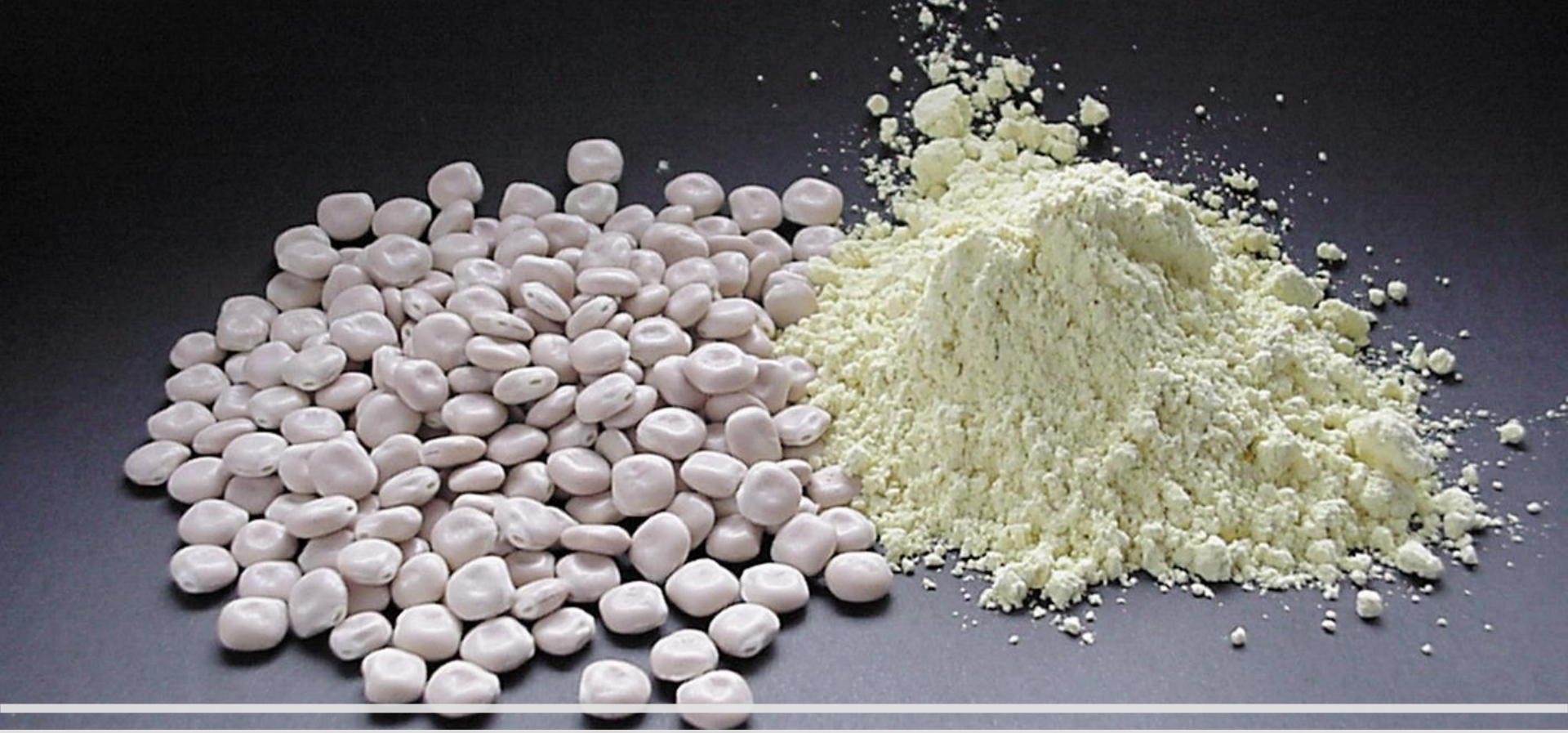


How do we expand human consumption?

The announcement at ILA Poland 2011, was that in 10 years soybean production will go to India and China. This soybean will mainly be trangenic.

Will this happen?

Australia is currently the largest producer of Lupinus angustifolius & L. albus, and has made an excellent promotion of its production.



We create demand and satisfy it with constant, growing production and controlled quality. Our world is not the past, buy it’s tomorrow’s! It’s not just the publication; it’s the application of innovation.

IF THE MARKET DOES NOT EXIST, LET'S CREATE THEM!

Salmon's production in Chile.