Experiences and lessons learnt in Dutch dairy farming

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DUTCH FARM EXPERIENCE

Uganda visitors
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Personal intro

Dutch veterinarian with extensive dairy experience world wide.

Director Dutch Farm Experience

International coordinator Natural Livestock Farming (NLF) network

Special experience in the Netherlands, South America, India, Ethiopia, Uganda

Background Dutch dairy farming

- Cold climate 6 months/year
- Around 17.500 dairy farmers
- Average 85 cows per farm
- Total milk production per year = 14.000.000.000 kg milk
- Average production 33 kg milk per cow per day
  (8.700 kg total over 260 days lactation)
- 80% in cooperative members
- Export of 75% of the dairy products (mainly cheese)
- Agriculture provides over 50% of GDP

Only 60 years ago …agriculture in the Netherlands was low input and labor intensive

Manure from livestock was used for crops on the same farm

In the 1960's – EU policies changed

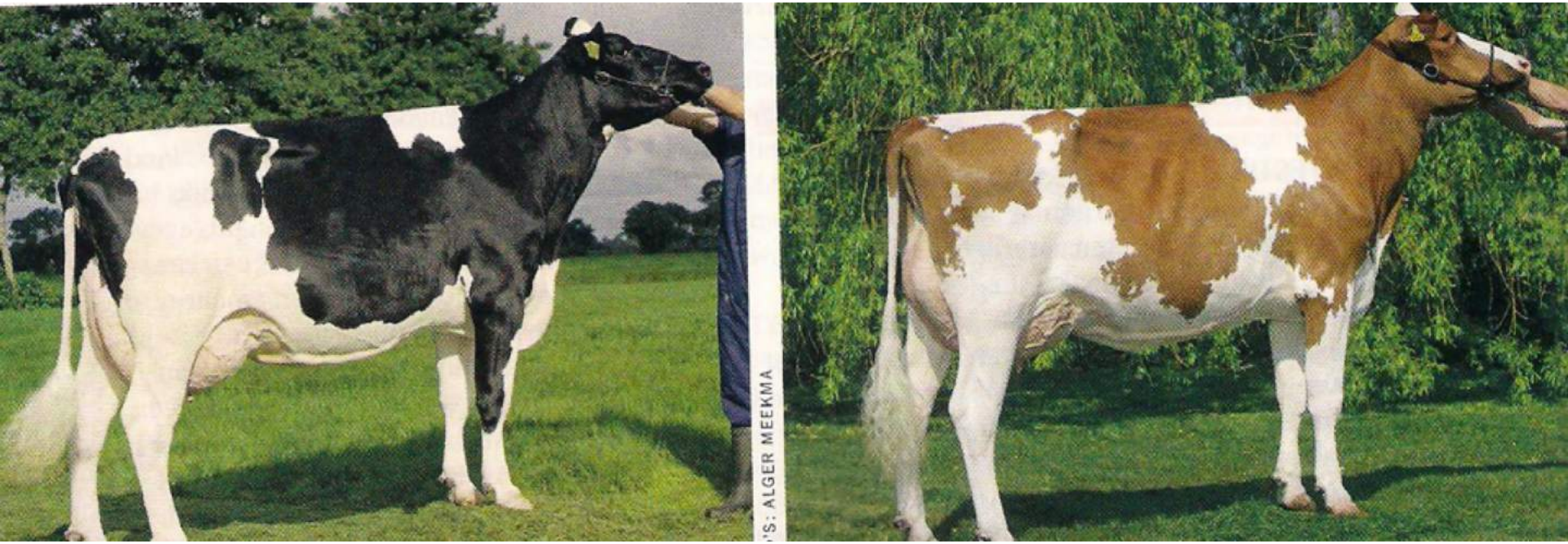
Milk tank oblidged
in every farm

Construction of free
roaming stables

Conducive policies in agriculture 1950-1960's

- Market protection - fixed prices
- Easy access to credit for farmers
- Support to education-extension-research
- Rigorous disease control programs
- Subsidies for chemicals/artificial fertilizer
- Farmers organization in co-operatives

Artificial insemination & breeding policies



Replacement of smaller Friesian dual purpose cow (meat and milk) by Holstein-Friesian cow specialized only in milk production

Gaining land by making more ‘polders’ & enlarging existing plots for mechanization

Resulting in:

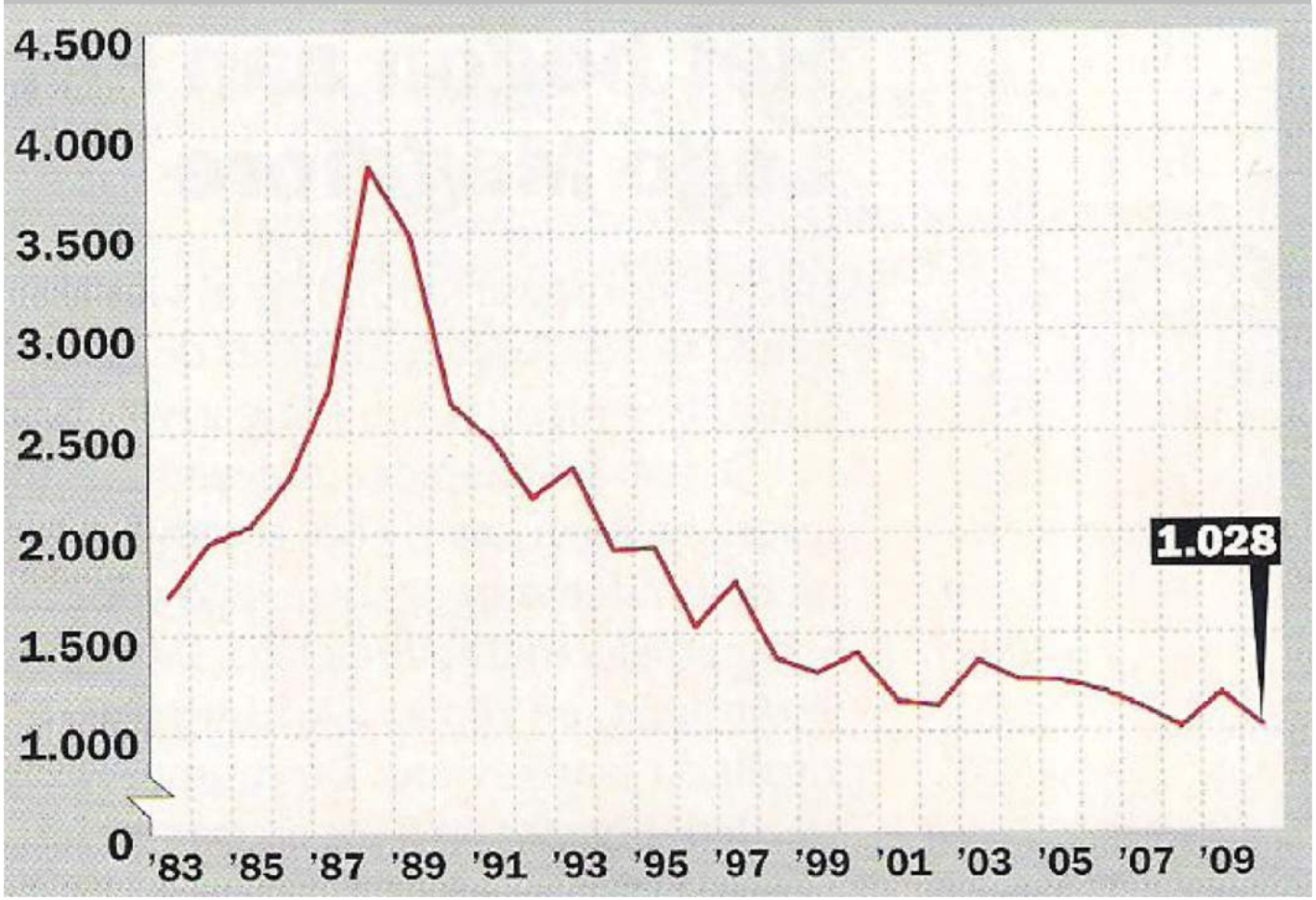
Impressive increase in milk and labour productivity and..loss of 90% of family dairy farms in 50 years

	1960	1975	1985	1995	2005	2007	2017
Dairy farms	180.000	91.500	58.000	37.500	23.500	21.300	17.500
Total milkproduction (x1000)	6.721	10.286	12.525	11.280	10.827	11.134	14.100
Dairy cows (x1000)	1.628	2.218	2.367	1.708	1.433	1.413	1.690
# of dairy cows per farm	9	24	41	45.5	61	66	97
Milkproduction/farm (x1000)	37	112.5	216	301	460	522	806
Milkproduction (kg/cow/year)	4.200	4.650	5.300	6.610	7.550	7.880	8.706
Milkproduction (kg/ha/year)	5.500	8.864	12.512	12.018	12.560	12.980	17.000
Labor productivity (kg milk/hour)	8	37	72	89	128	141	280

2018: 17.500 dairy farms
a loss of another 70% is predicted

(Info: WUR-LEI, 2010
info 2017: RABO, NZO, ALFA)

GLB income Netherlands – rural development excluded – x € million.
(nominal amounts, not corrected for inflation) Source: LEI



EU subsidies to Dutch agriculture

(in millions of Euros per year)

High subsidies in 1980's due to over-production of milk
Even today one billion per year – for around 40.000 farmers

Dependence on subsidies

Farm income, add on subsidies and % subsidies – average 2010-2015 (in Euros)

	Farm income	Income added	% subsidies
Dairy farms	49.533	29.517	60
Veal calves	55.000	50.700	92
Pig farms	14.800	5.533	37
Laying hens	25.800	7.733	30
Broiler chicken	66.700	11.683	18
Crops	68.917	31.250	45
Potatoes	81.650	59.650	73
Flower bulbs	135.750	5.883	4
Greenhouse production	174.850	24.083	14
Fruits	46.700	5.233	11

contractbasis bron: Ministerie van Economische Zaken, LEI Wageningen UR

Major changes in cattle feed:

maize-grass silage

soy beans in concentrates

➔ higher protein %

➔ lower fibre

Resulting in changes in the stomach system and in manure quality

- ➔ More liquid
- ➔ Rotting process in manure tanks
- ➔ More ammonia (NH3) release
- ➔ Undigested parts

Change of fertilizer:
change in quallity of organic manure
+ large amounts of artificial fertilizer

Resulting in environmental problems

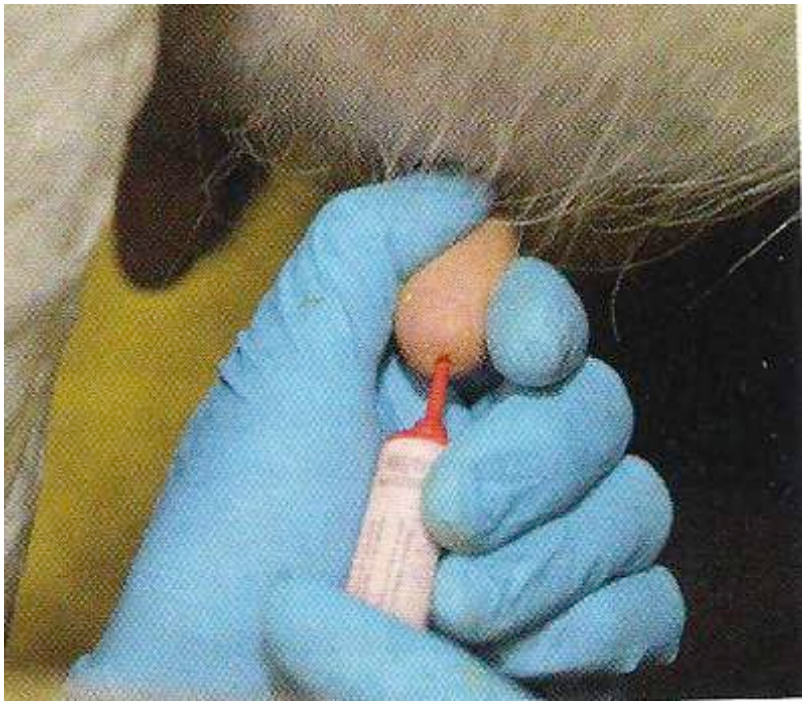
(reduced soil fertility + water quality due to nitrification)

Leading to higher productivity/year ….
but also animal disease and shorter life span

Average life span of milking cows
is 2,5 lactations (4.7 years of age)

High loss and mortality during 1st lactation

Excessive use of antibiotics to control disease



In 2012 the livestock sector was oblidged to reduce antibiotic use by 70% by 2016 compared to 2009

To reduce risk of multi-resistant microbes for human health

Dutch (and EU) farmers are in trouble: their income is low and insecure

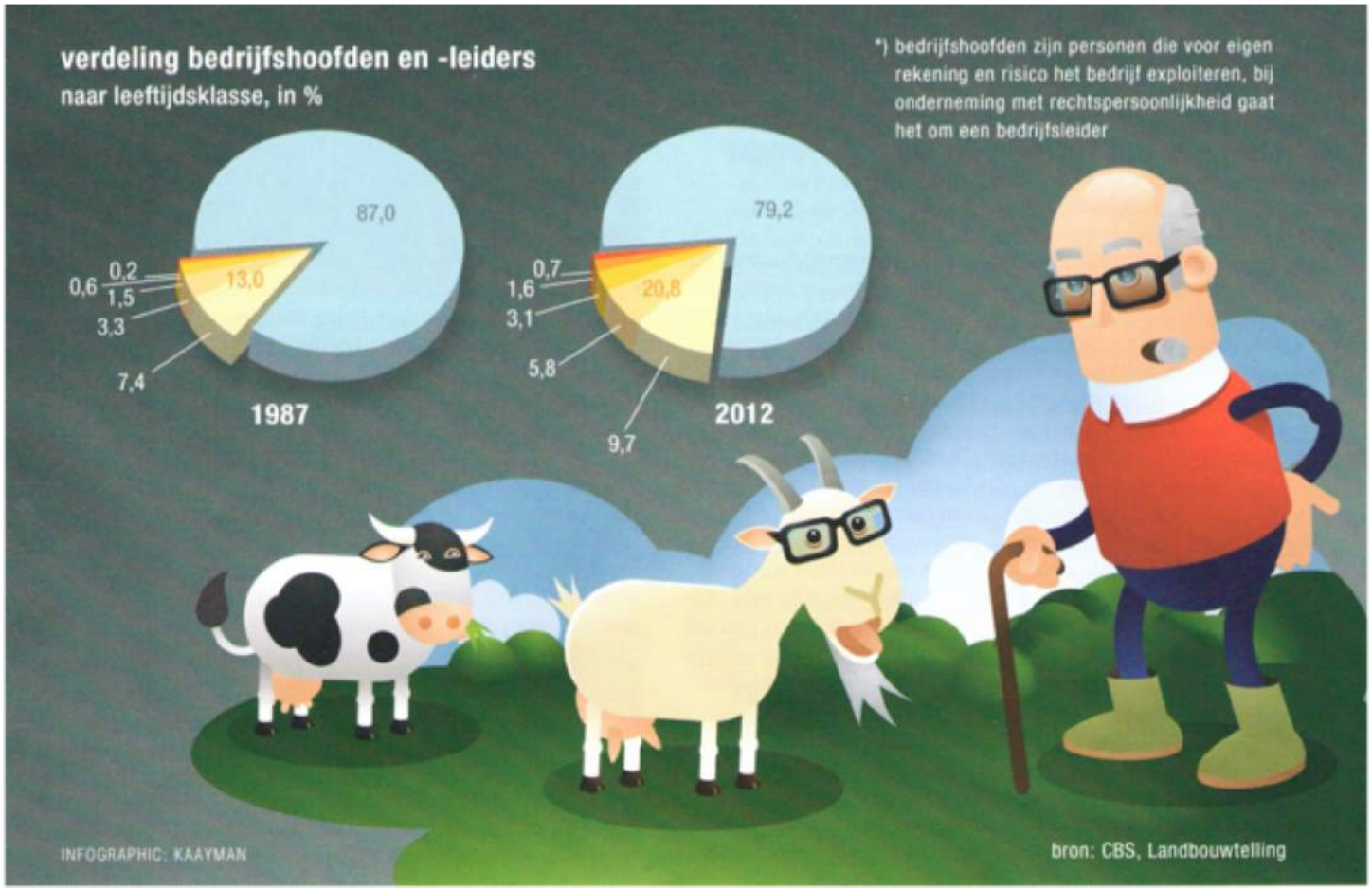
Production increases (in blue)

but… income decreases (in red)

High production costs + dependence on world market prices

Young people reluctant to take over

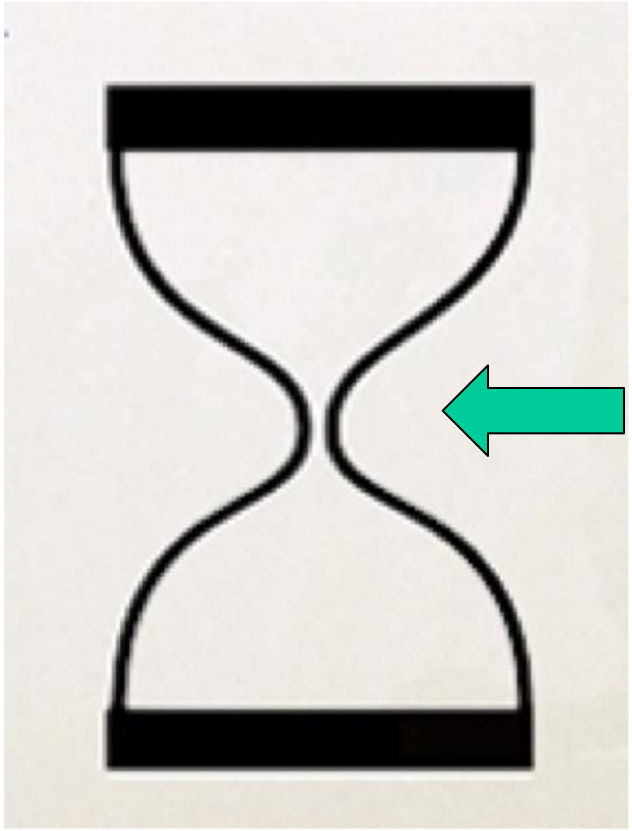
68% of farmers over 50 has no successor…



and 20% of farmers is over 65 years of age

Income insecure due to dependence on:

- EU subsidies
- Fluctuating world market prices
- Supermarkets

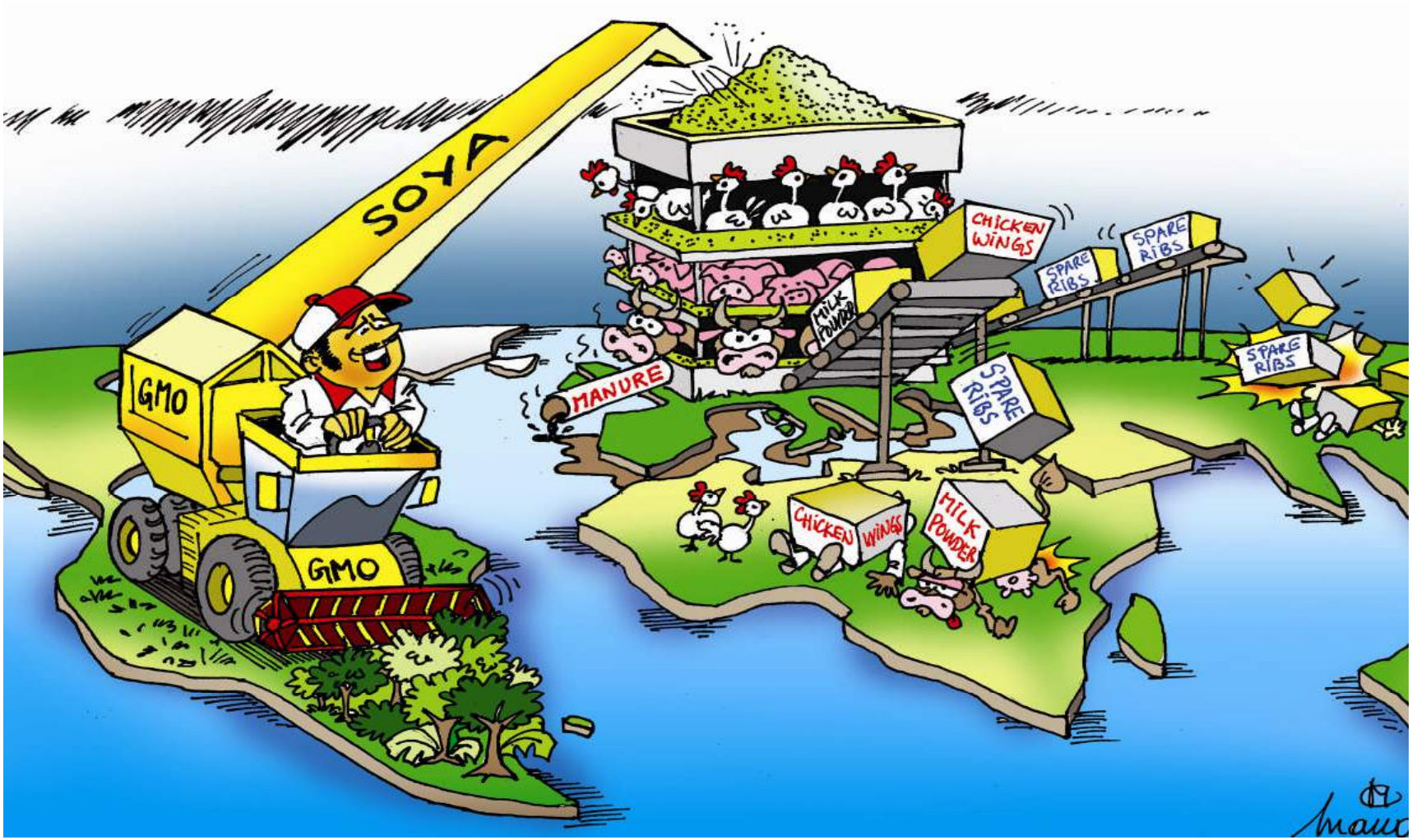


Producers (17.500)

Supermarket chains (4)

Consumers (17.5 million)

+ International dependency and lack of balance



Soy from South America to feed animals in the Netherlands – cheap animal products are then being exported again


So you see a lovely farm:
green fields, big stables and
high producing animals…

…but the overall picture of Dutch dairy also includes:

- Loss of employment - over 90% of dairy farms has stopped since 1960's
- Uncertainty about income and future
- Dependence on EU subsidies
- Problems with manure, soil and water quality
- Problems with animal health – short life span
- Problems with antibiotic use & microbe resistance
- Effects on other countries
- Criticism of general public – especially related to animal wellbeing

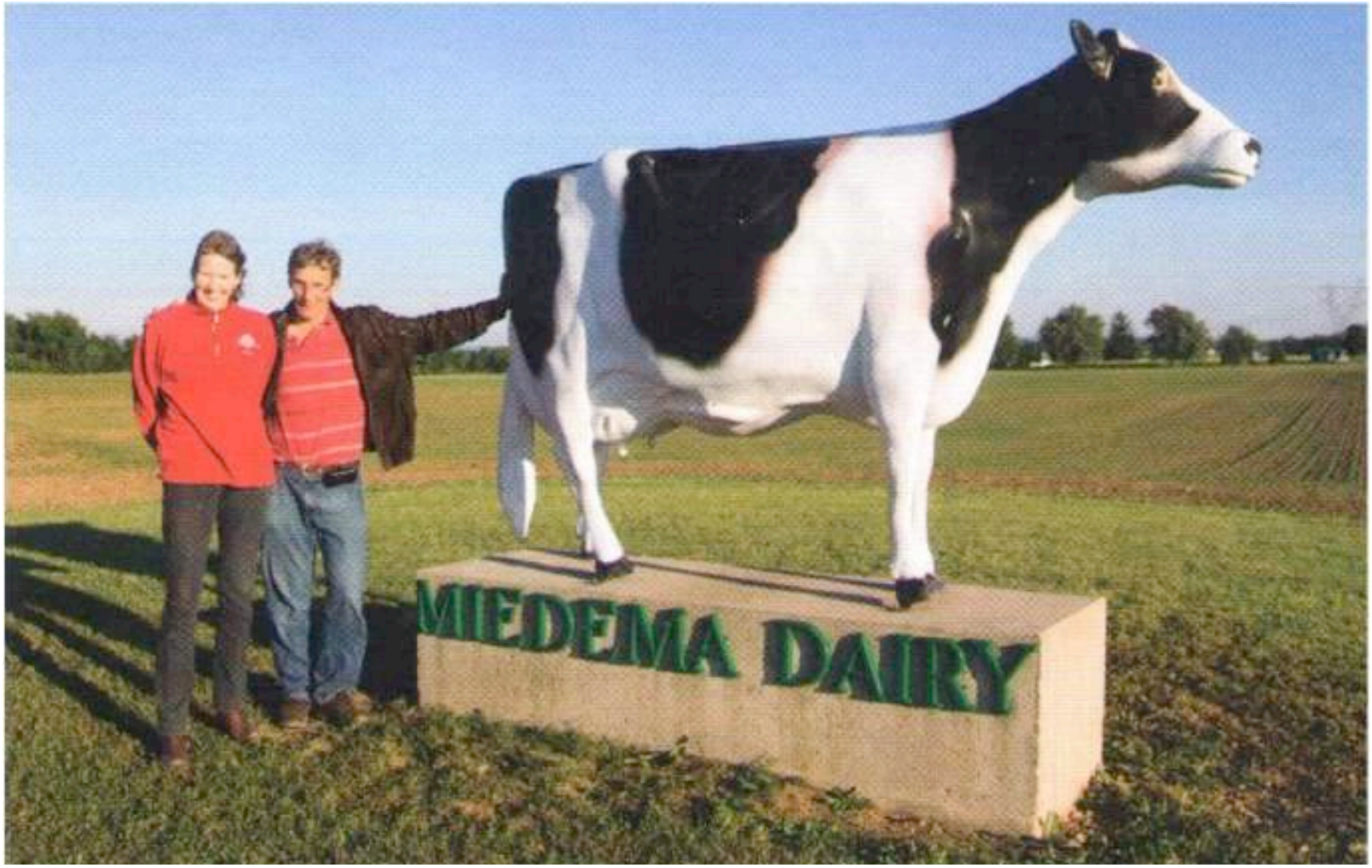
Way out for farmers #1

Stop farming

7 farms stop every day

Way out for farmers #2

Start farming abroad



Way out for farmers #3
further scale enlargement:

Latest technologies require higher levels of investment

Milkrobot

Greenhouse gas curtains + floors

Way out for farmers #4
diversification of income

Tourist activities

Care on the farm

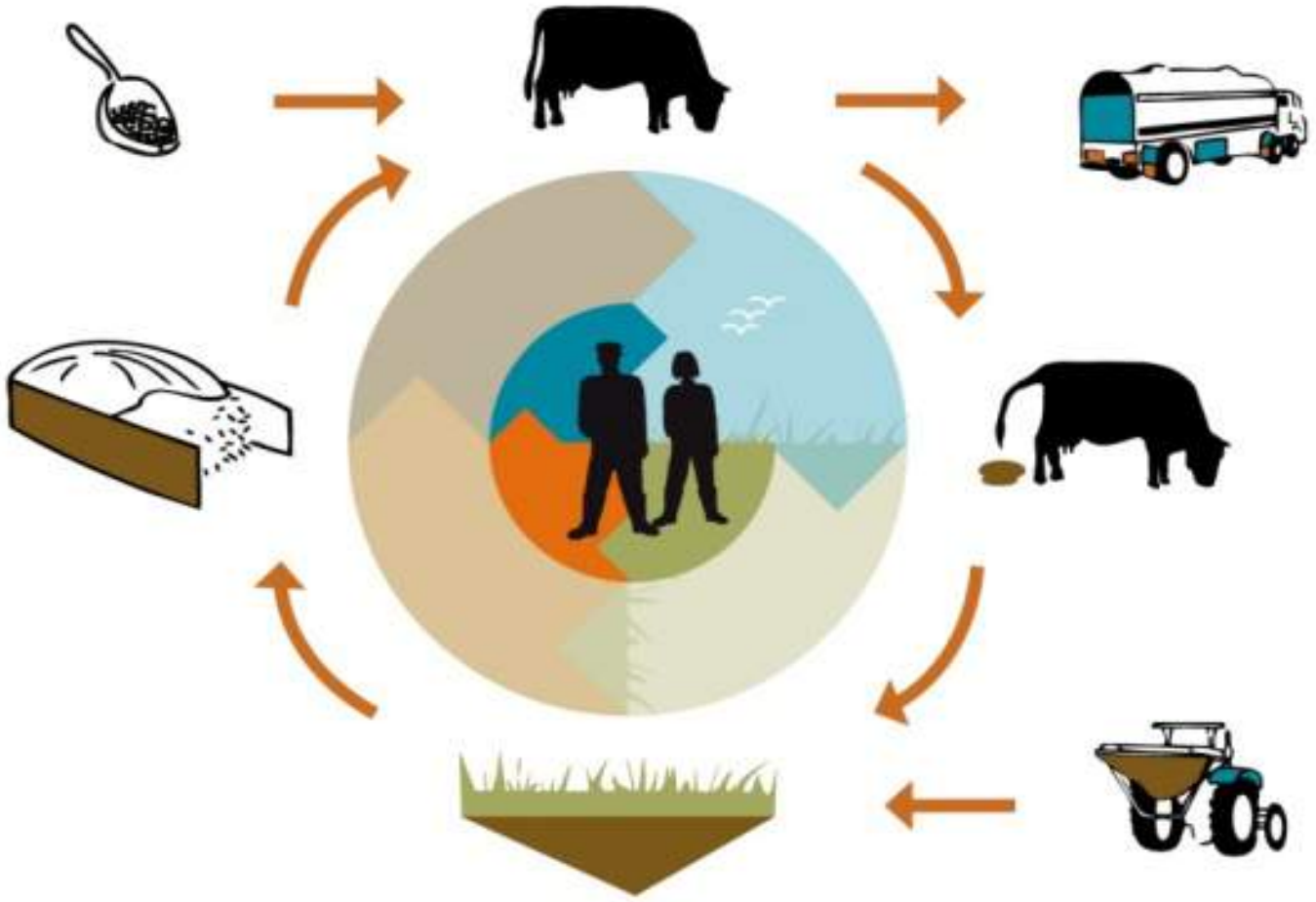
Farm shop selling local produce

Way out for farmers #5

Cycle farming: increasing soil fertility & reducing costs

Farmer study groups learning from each other how to improve soil fertility and to reduce costs

They are re-establishing the natural cycle



Less artificial fertilizer and concentrates

producing more milk on basis of fodder

Lessons learnt (1):

Build on farmers' knowledge and experience

+

supported by research

Lessons learnt (2):

Restoring soil fertility and soil organic matter is highest priority for efficient farming

Lessons learnt (3):
Optimization rather than maximization

Focus on high total animal life-production –
rather than on maximum milk production/animal/year

Lessons learnt (4):

Focus on reducing mortality rather than productivity

Lessons learnt (5):

Diversifying farmer's work and income reduces economic vulnerability

Lessons learnt (6):

Stronger links between farm and natural environment

Protecting wild birds and natural biodiversity

Lessons learnt (7):

Growing trend of direct marketing (10% of farmers)

Making efficient use of internet

Lessons learnt (8)

Re-value local and dual-purpose breeds / strategic crossbreeding

Lakenvelder cow

Blaarkop cow (Whitehead)

Friesian cow

Lessons learnt (9)

'Traditional' animal management practices re-valued

- Cows in field
- Keep horns
- Calf with cow

Lessons learnt (10)

Herbs and medicinal plants are re-valued

WAGENINGEN UR
For quality of life

To improve health and reduce antibiotic use stablebooks for farmers have been elaborated

Lessons learnt (11)

Importance of farmers' organization for joint learning

Farmer study groups and marketing cooperatives
+
representation at political level

Lessons learnt (12)

High investments and big farms do not necessarily lead to high incomes

Future of Dutch dairy farming?

Scale enlargement

+ higher inputs

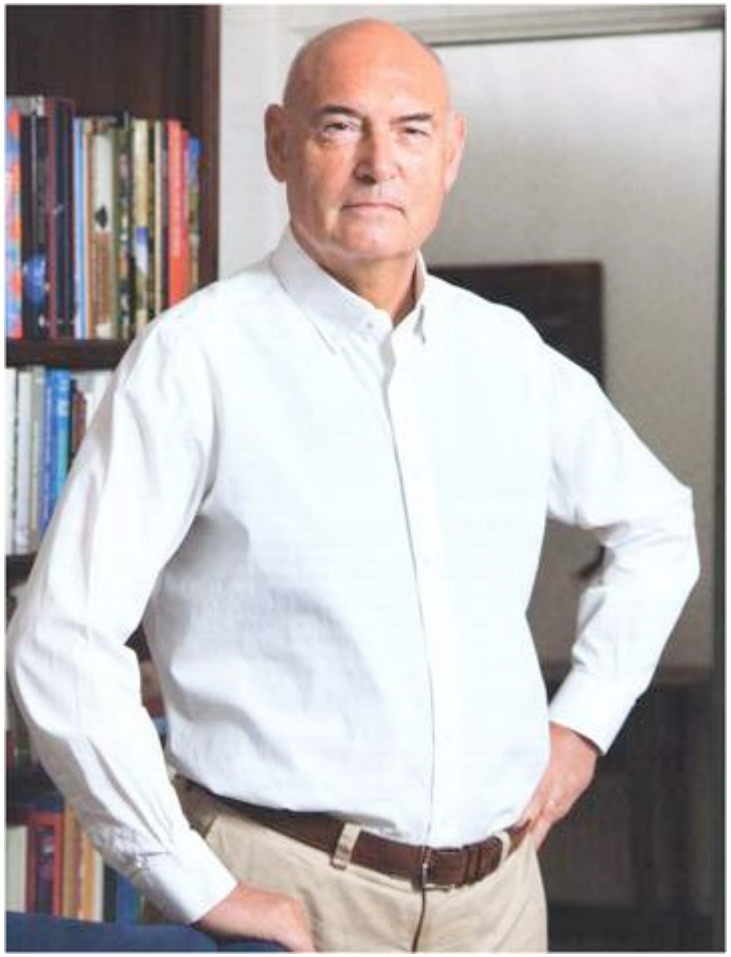
Closing nutrient cycles

+ less inputs

Major debate on the best way forward in agriculture

Opinion of (ex) dean of Wageningen University:

Intensification with scale enlargement - or hunger?



Opinion of ex-director of RABO Bank :

Radical change is needed towards
closing nutrient cycles and shortened marketing chains

2018 - interviews amongst 2000 Dutch farmers indicates:

57 % of farmers: Export model with scale enlargement is not sustainable on the long term

80% of farmers: motivated to change to nature-inclusive farming methods – if supermarkets and consumers pay more

Direct farmer-consumer sales

September 2018:

New strategy minister of agriculture:

Radical change towards closing nutrient cycles and shortened marketing chains

DUTCH FARM EXPERIENCE

Copy the lessons learnt in Dutch dairy

–

not the problems!

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