

# Dutch farmers in distress

## a case of exceeding environmental boundaries



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## Personal intro



Dutch veterinarian  
with dairy experience  
world wide

Director Dutch Farm  
Experience



Executive Director  
Natural Livestock Farming Foundation (NLF)



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



Dutch dairy farming is the best  
in the world – isn't it!??



Why then are Dutch dairy  
farmers protesting?



## Background info Dutch livestock production

- Total number of farms: 50.000
- Around 15.200 dairy farms (2021)
- Organic dairy farms: 3%
- Average 108 cows per farm (2021)
- Total milk production per year = 14.200.000.000 kg milk
- Average production 33 kg milk per cow per day
- 80% farmers are cooperative members
- Export of 80% of the dairy products (mainly cheese)
- Abundant food available at low prices (max 10% of income)

# Only 70 years ago ...agriculture in the Netherlands was low input and labor intensive



Manure from livestock  
was used for crops on  
the same farm

Local dual purpose  
Friesian cattle



# In the 1960's EU policies changed: No more hunger!



Milk tank obliged  
in every farm

Specialization in  
crops or livestock



Construction of free  
roaming stables



## Conducive policies in agriculture 1950-1960's to support this system change

- Subsidies from EU started
- Market protection - fixed prices
- Easy access to credit for farmers
- Support to education-extension-research
- Rigorous disease control programs
- Farmers organization in co-operatives

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



## Artificial insemination & breeding policies



Replacement of Dutch Friesian dual purpose cow (meat and milk) by Holstein-Friesian cow bred in the US - specialized in milk production only

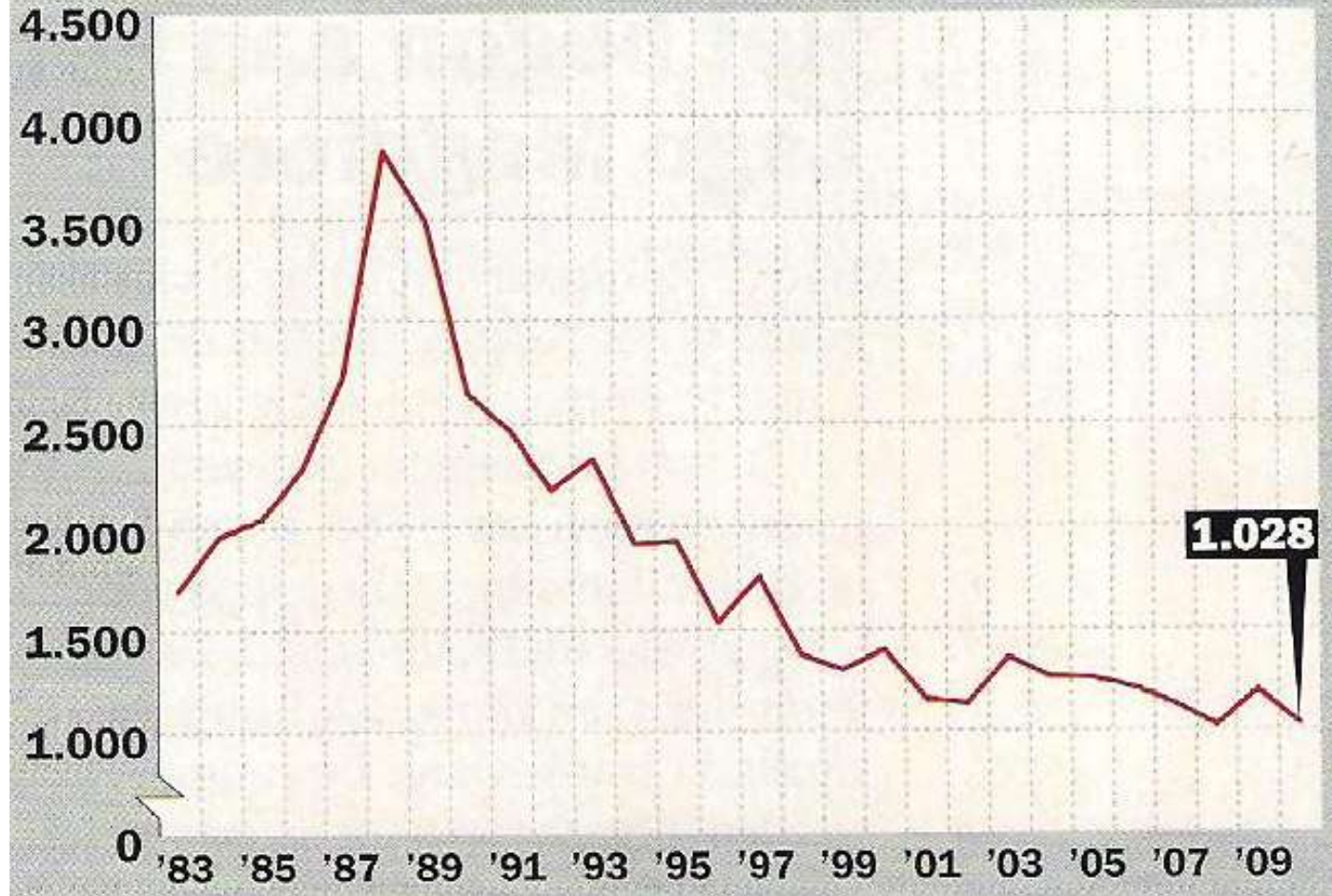
Resulting in:  
Impressive increase in milk and labour productivity  
and... loss of 93% of family dairy farms in 60 years

	1960	1975	1985	1995	2005	2007	2020
Dairy farms	180.000	91.500	58.000	37.500	23.500	21.300	15.731
Total milkproduction (x1000)	6.721	10.286	12.525	11.280	10.827	14.200	14.200
Dairy cows (x1000)	1.628	2.218	2.367	1.708	1.433	1.413	1.593
# of dairy cows per farm	9	24	41	45.5	61	66	101
Milkproduction/farm (x1000)	37	112.5	216	301	460	522	902
Milkproduction (kg/cow/year)	4.200	4.650	5.300	6.610	7.550	7.880	8.904
Milkproduction (kg/ha/year)	5.500	8.864	12.512	12.018	12.560	12.980	19.000
Labor productivity (kg/milk/hour)	8	37	72	89	128	141	240

(Info 1960-2007: WUR-LEI, 2010  
info 2020: Zuivel NL, ALFA accountants)

A future loss of another 70% is predicted

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 50.000 farmers

# Major changes in cattle feed & manure



Maize & grass silage



Soy beans in concentrates /  
balanced feed

- ➔ higher protein %
- ➔ lower fibre

## Leading to changes in the stomach system and manure quality



- ➔ More liquid
- ➔ Manure and urine come together in manure tanks
- ➔ High Nitrogen (ammonia -  $\text{NH}_3$ ) release
- ➔ Combined with high livestock density

Resulting in: higher productivity/year  
but also shortened life span



Average life span of milking cows is 2,5 lactations (5.3 years of age)  
High loss during 1st lactation

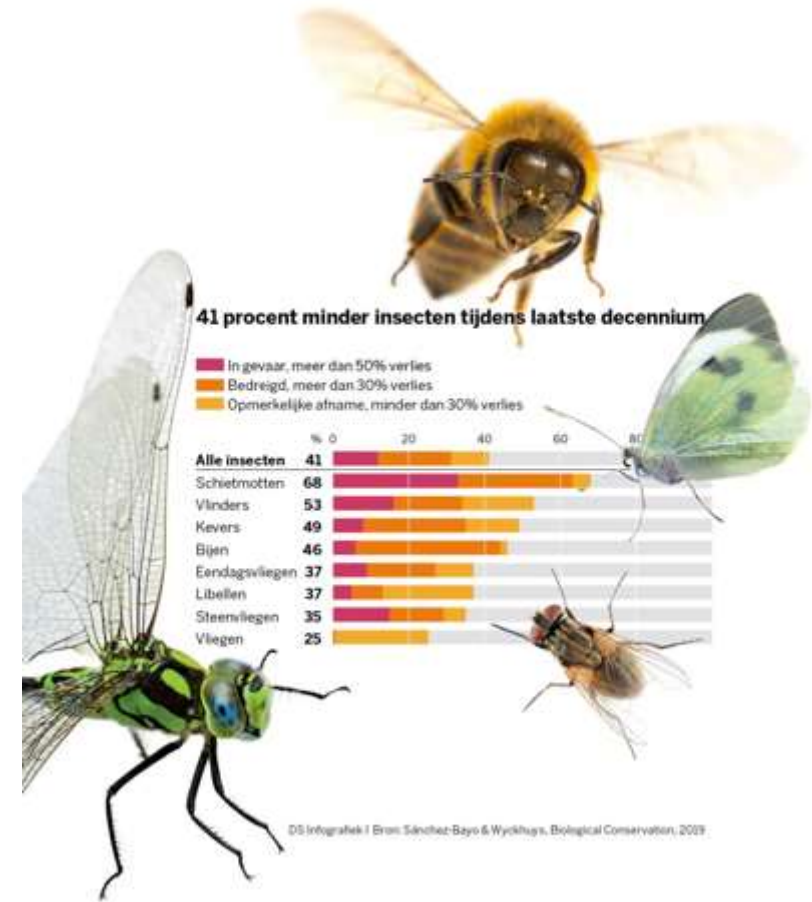
Also resulting in change of manure quality for grassland  
+ use of artificial fertilizer



Excess nitrogen (N) resulting in environmental problems  
Quality of soil, water and air severely affected



# Environmental effects: loss of biodiversity in monoculture grass land



Since 1989 over 75% of insects has been lost – and 40-60% reduction of meadow birds

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



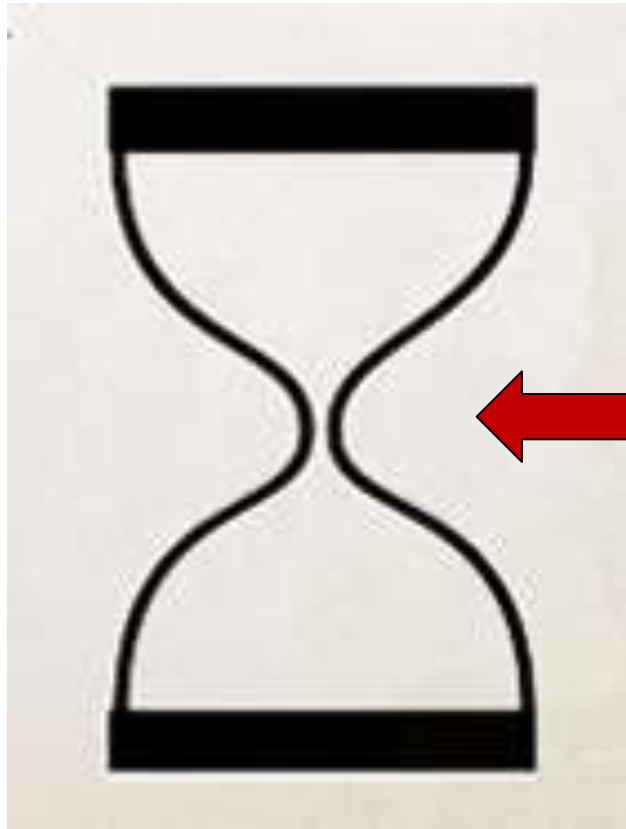
Production  
increases  
(in blue)

but...  
income  
decreases  
(in red)

High production costs + dependence on world market prices

## Income insecurity due to dependence on:

- EU subsidies
- Fluctuating world market prices
- Supermarkets



**Producers (17.500)**

**Supermarket chains (4)**

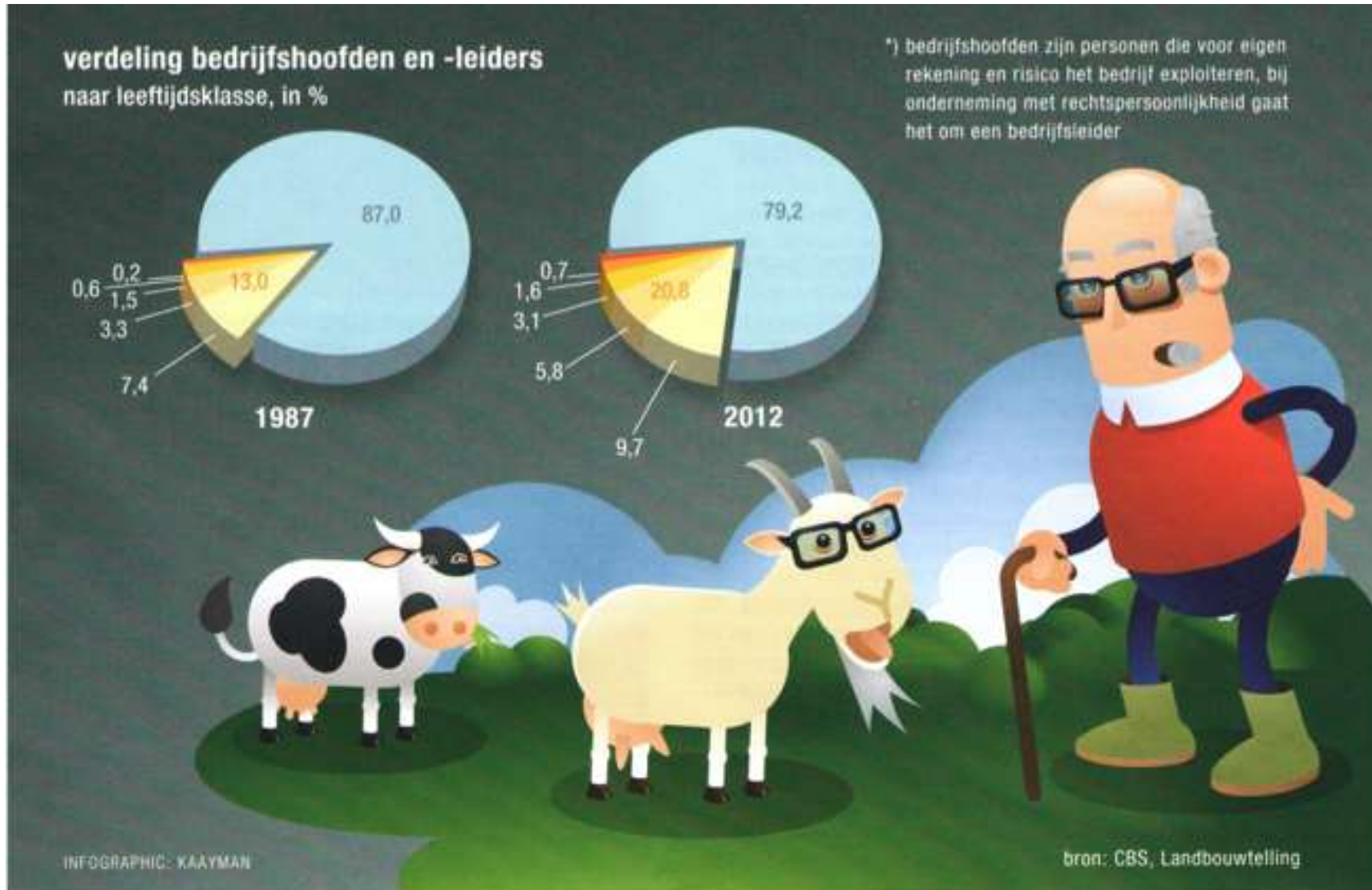
**Consumers (17.5 million)**



Banks and  
industries  
making profits

while milk  
prices for  
farmers remain  
low

# Young people reluctant to take over



68% of farmers over 50 has no successor...

and 20% of farmers is over 65 years of age

# International effect of Dutch livestock production



Soy from South America to feed animals in the Netherlands. cheap animal products exported: **Netherlands = excess manure heap!**

So we have very efficient farms, green fields,  
big stables, high producing animals  
+  
abundant safe and cheap food for consumers...



...but there is also another side of the coin!

### **Social:**

- Loss of farms - over 90% of dairy farms has stopped since 1960's
- Criticism of general public – especially related to animal wellbeing

### **Economic**

- Farmers uncertain about income – increasing costs/loans, low prices
- Dependency on subsidies
- Problems with animal health – short life span

### **Environmental**

- Problems with manure, soil and water quality (excess Nitrogen!)
- Loss of biodiversity
- Effects on other countries

## Option for farmers #1

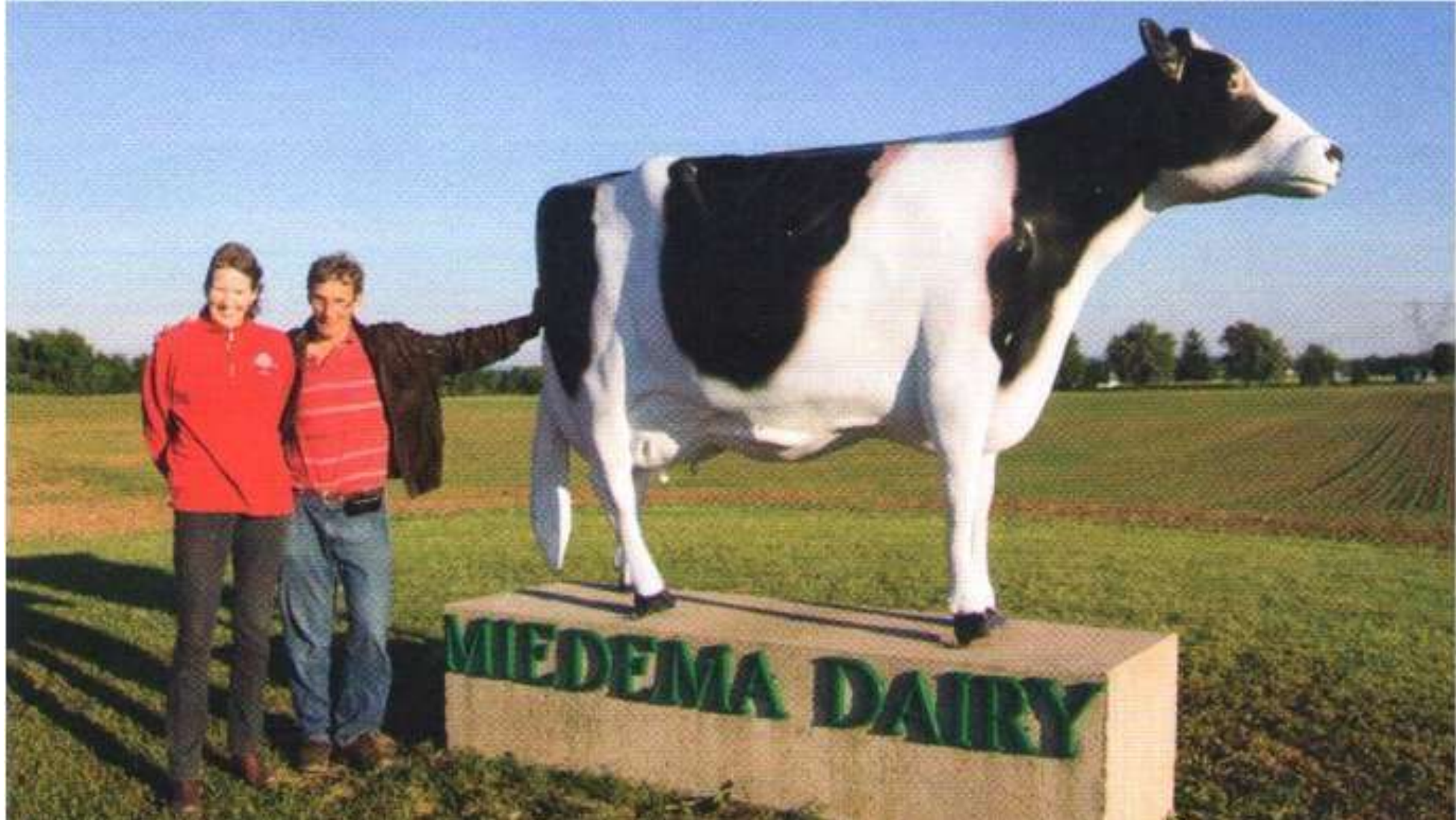
### Stop farming



3-4 farms  
stop every  
day

## Option for farmers #2

### Start farming abroad



Option for farmers #3

further scale enlargement and computerization (over 80%)



Latest technical innovations require higher levels of investment and new loans



Milkrobot



XXL milking parlour



Climate adapted stable floor

## Option for farmers #4 diversification of income

Tourist activities

Care on the farm



Farm shop selling local produce





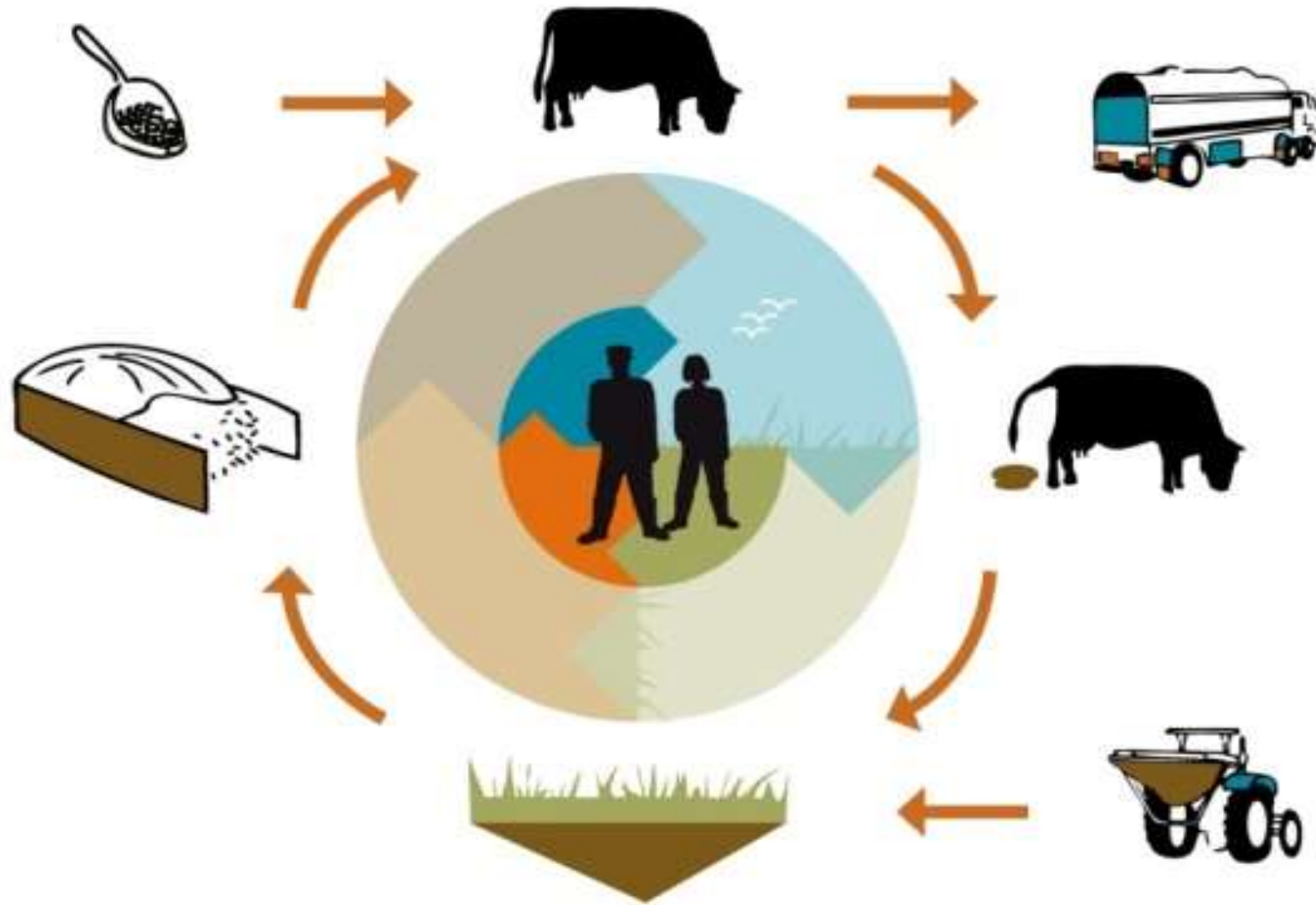
## Option for farmers #5

**Cycle farming: increasing soil fertility & reducing costs**

**Approach to reduce excess N since 1980's – adopted by minority**

Farmer study groups  
learning from each other

# Cycle farming: re-establishing the natural cycle



Less artificial fertilizer and concentrates

Produce milk on basis of fodder (but lower milk/cow/day)

Reduce costs

Reduce Nitrogen excess

Improving soil fertility

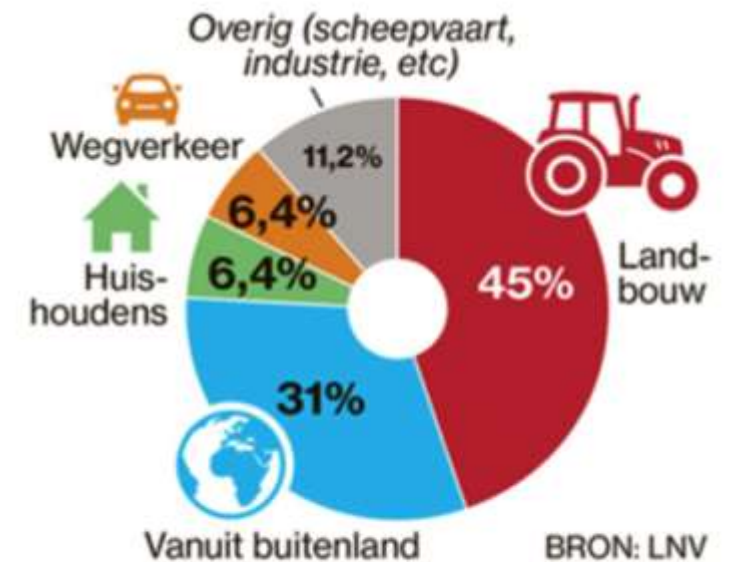
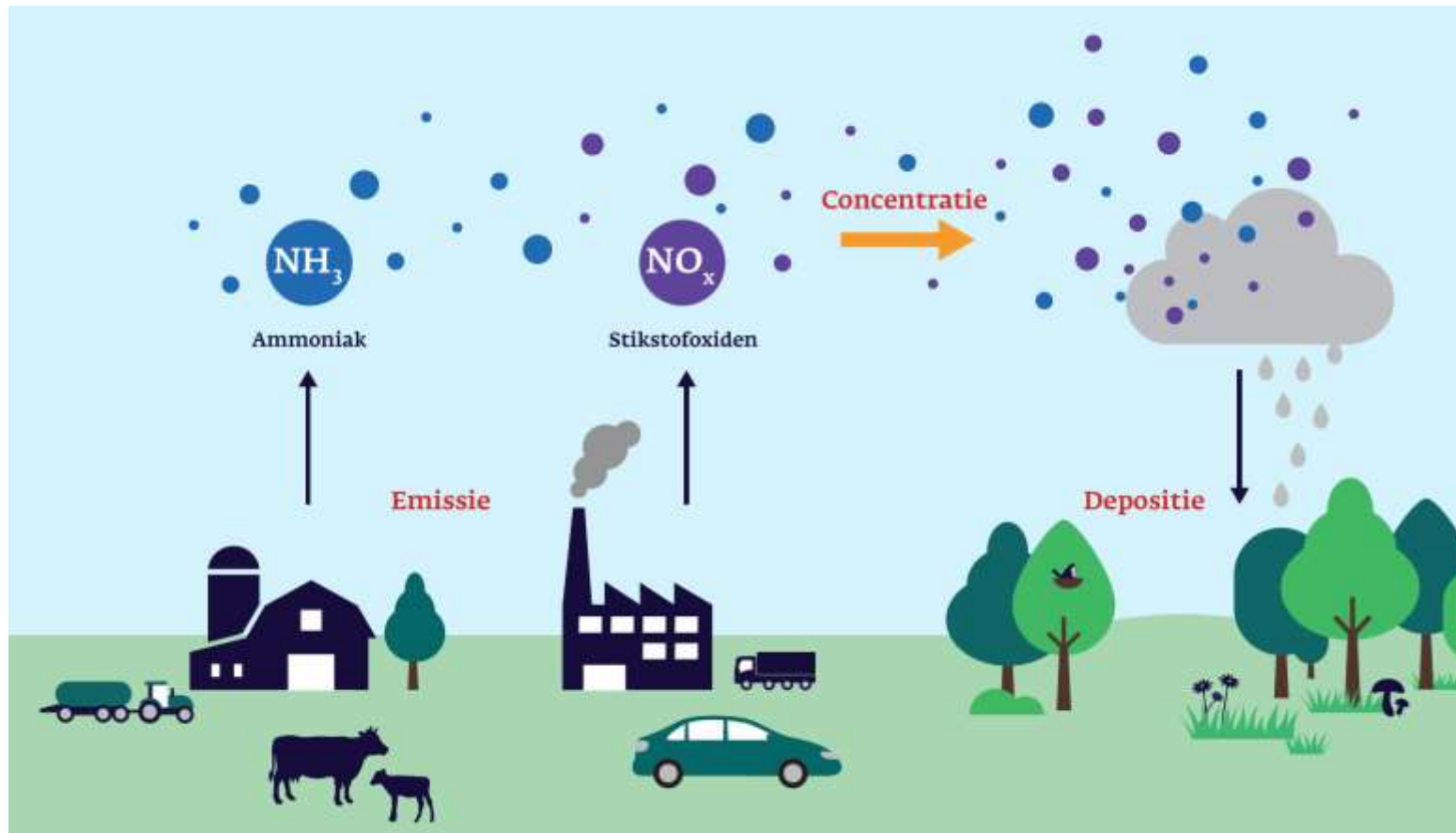


So why  
protests  
now?



Related to EU regulations and recent government  
plans on excess manure and Nitrogen effect on nature

Recent law-suits by environmental organizations forced government to enforce N-reduction - building activities have been blocked



## Richtinggevende emissiereductiedoelstellingen per gebied



Deze kaart geeft richtinggevende doelen per gebied weer om sturing te geven aan de gebiedsprocessen. Deze doelen zijn opgesteld op basis van een moddermatige berekening. Het kan gemiddeld van onder afgeleiden als uit de gebiedsprocessen (BML) dat een andere reductie mogelijk is. Dit kan in het kader van de bestelling van de reductie zijn. Wanneer sectorale doelen voor landbouw en industrie, vervoer, wonen en recreatie, en andere sectoren geïntegreerd worden, kan de reductie mogelijk zijn. Voor berekeningen geldt: elke landbouw- en natuurplanning van de landbouw, natuur- en natuurplanningen een voorwaarde zijn. De emissiereductiepercentages per gebied worden opgesteld tot het halen van de landbouwplanning voor 2020 (bijvoorbeeld 100%) en andere aspecten als op de benodigde reductie voor de doelstellingen 100% en 100% bij de moddermatige berekening is gebaseerd met een reductie van 100% tot 100% van de landbouwplanning. Waar dit effectief is, is er ruimte in de gebiedsprocessen voor maatregelen, bijvoorbeeld om doelstellingen voor de landbouwplanning te bereiken met andere sectoren zoals industrie.

\*Naarwege de beschikbaarheid van de BML-gegevens zal de benodigde reductie afhankelijk zijn van specifieke lokale omstandigheden in het gebied. Moddermatig is gebaseerd op de moddermatige berekening.

\*\*Natuur 2000-gebieden die zich kenmerken als: (1) grote wateren, zoals Waddenzee en IJsselmeer, zijn niet getuikelend op de kaart. De richtingsgebieden die zijn in het hoogste niveau toe op reductie van emissie afhankelijk van activiteiten op land. In deze gebieden is moddermatig gebaseerd met 100% reductie.

In BML en Natura 2000-gebieden kunnen (agrarische) activiteiten bewaard onderdeel zijn van bijvoorbeeld (agrarische) natuurbeheer, waar dat het geval is en ook in de toekomst pastend is, is ruimte om hiervan de gebiedsprocessen rekening te houden.

[1] Berekening van emissiereductie van BML-voorstellen in 100% voor 2020.



Government goal 2021: before 2030  
50% reduction of Nitrogen from  
agriculture (especially livestock)

April 2021: map of enforced N-reduction per area

- No clarification on HOW this is to be done
- What about the other sectors (traffic, industry)?
- 25 billion Euros tax money

Estimate: the end of around  
11.200 farms and 30-50% reduction of  
livestock numbers in 17.600 farms



## Dutch farmers in Distress:

- Imposed regulation without hearing farmers' voice
- Environmental problem with excess Nitrogen problem was known since 1980's – but ignored for economic reasons
- Young farmers educated in intensification and scale enlargement afraid they cannot take over
- Money-makers on farming (banks, feed industries, Friesland Campina etc) not willing to share the pain (until now)
- Government lacks a clear strategy on future of agriculture!

**MAJOR  
QUESTION:**  
What is the  
future of  
Dutch dairy?



**Innovation, scale enlargement &  
high input farming for world  
market  
(bulk farming – over 80%)**



**Focus on soil fertility & lower  
input farming for local and  
regional market  
(nature inclusive farming)**

## THE GOOD NEWS (recent poll):

80% of farmers would be willing to make the transition to more nature-inclusive farming with reduced environmental impact  
**IF a viable income would be guaranteed**



# What is required for this?

## Farm level changes

- Less cattle per hectare of land - less cows per farm
- Lower input farming (more milk from grass, less concentrates etc)
- Focus on soil fertility - reduced use of artificial fertilizer
- Old practices come back: herbs in grassland, use of local breeds, diversification of income strategies, direct marketing
- Farmers learning from each other on sustainable practices

## Economic changes

- Government support for farm transition required
- Support from banks and industries also required (willing?)
- Consumer support also required! (higher prices, willing?)
- Exports will be reduced (government willing?)



## Conclusions:

- Still unresolved – growing into a severe environmental and political crisis
- System change towards nature-inclusive farming is long overdue
- High-tech big farming does not necessarily lead to big farm income...
- Other countries: study Dutch farming – but do not copy the problems!
- Look at experiences in other countries too... (India for example)



**Thank you! Questions?**

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