Dutch farmers in distress
a case of exceeding environmental boundaries

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Personal intro

Dutch veterinarian with dairy experience worldwide

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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
### Dairy cows per farm and milk production in The Netherlands (1960-2020)

<table>
<thead>
<tr>
<th>Year</th>
<th>Dairy farms</th>
<th>Total milk production (x1000)</th>
<th>Dairy cows (x1000)</th>
<th># of dairy cows per farm</th>
<th>Milk production/farm (x1000)</th>
<th>Milk production (kg/cow/year)</th>
<th>Milk production (kg/ha/year)</th>
<th>Labor productivity (kg/milk/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>180,000</td>
<td>6,721</td>
<td>1,628</td>
<td>9</td>
<td>37</td>
<td>4,200</td>
<td>5,500</td>
<td>8</td>
</tr>
<tr>
<td>1975</td>
<td>91,500</td>
<td>10,286</td>
<td>2,218</td>
<td>24</td>
<td>112.5</td>
<td>4.650</td>
<td>8.864</td>
<td>37</td>
</tr>
<tr>
<td>1985</td>
<td>58,000</td>
<td>12,525</td>
<td>2,367</td>
<td>41</td>
<td>216</td>
<td>5.300</td>
<td>12.512</td>
<td>72</td>
</tr>
<tr>
<td>1995</td>
<td>37,500</td>
<td>11,280</td>
<td>1,708</td>
<td>45.5</td>
<td>301</td>
<td>6.610</td>
<td>12.018</td>
<td>89</td>
</tr>
<tr>
<td>2005</td>
<td>23,500</td>
<td>10,827</td>
<td>1,433</td>
<td>61</td>
<td>460</td>
<td>7.550</td>
<td>12.560</td>
<td>128</td>
</tr>
<tr>
<td>2007</td>
<td>21,300</td>
<td>14,200</td>
<td>1,413</td>
<td>66</td>
<td>522</td>
<td>7.880</td>
<td>12.980</td>
<td>141</td>
</tr>
<tr>
<td>2020</td>
<td>15,731</td>
<td>14,200</td>
<td>1,593</td>
<td>101</td>
<td>902</td>
<td>8.904</td>
<td>19.000</td>
<td>240</td>
</tr>
</tbody>
</table>

Resulting in:

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

A future loss of another 70% is predicted.

info 2020: Zuivel NL, ALFA accountants)
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

- Soy beans in concentrates / balanced feed
- Maize & grass silage

- 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 - NH3) 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
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
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.
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 (untill 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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