



# The livestock industry and climate

– EU makes bad worse

Jens Holm & Toivo Jokkala

*English edition*



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# Preface

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Climate change is developing into the greatest threat ever to our world's survival. There is a relatively high awareness of and preparedness for some of the worst emissions, such as heavy industry and the transportation sector. But one of the most damaging contributors to climate change is, remarkably enough, conspicuous in its absence from the debate: the food industry.

What we eat accounts for approximately a third of the average Swedish family's impact on climate. The figures for the rest of Europe are about the same. Certain kinds of food cause many times more damage than others: meat, for example. Last autumn, the UN's Food and Agriculture Organization (FAO) presented *Livestock's Long Shadow*, a 400 page report on livestock raising and climate change. The meat industry and livestock raising contribute 18% of the total emissions of greenhouse gases. That is in fact a greater impact than that of all of the world's land transportation, reported FAO.

This report investigates the impact of the continually increasing consumption of meat on climate change, and the roll the EU plays in it. We also divulge how the Swedish government, on its home turf, gives the impression of working to abolish the hated export refund for meat products, while in Brussels giving its support for increases in the same.

Without claiming to have all the answers, we nevertheless offer our views in a discussion that, along with the greenhouse effect, is one of the most important questions for our future: What are we going to do with the world's grain and what is the optimal way to use the world's farmland? Climate change is expected to bring about an enormous demand for wheat, corn, and other grains for biofuel production. And that brings us right back to meat production.

Over a third of all grain harvested becomes fodder. Is that rational? Why not produce less meat and raise fewer animals on food crops, thereby freeing grain for feeding more people and even have a surplus for biofuel?

We conclude this report with some concrete demands that can be pursued on both the EU and national levels: Abolish meat subsidies, let meat bear its own environmental costs and work to make modern vegetarian food cheaper.

It is just as the researcher Annika Carlsson-Kanyama says in the report, “People need to understand that what we eat is an important environmental issue.” Exactly. Today’s wasteful meat production doesn’t bear its own environmental costs. Let us, therefore, build the foundation of an environmentally friendly and sustainable food consumption.

The struggle against climate change begins here and now, at the dinner table.

Stockholm, May 2007

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P.S. In a response from the European Commission to my interpellation (April 24, 2007, H-0198/07), the Commission acknowledges that meat production has a negative effect on climate change. That is positive. Unfortunately, the Commission does not consider that any special measures need to be taken. Continued pressure and development of public opinion are clearly necessary.

# Introduction

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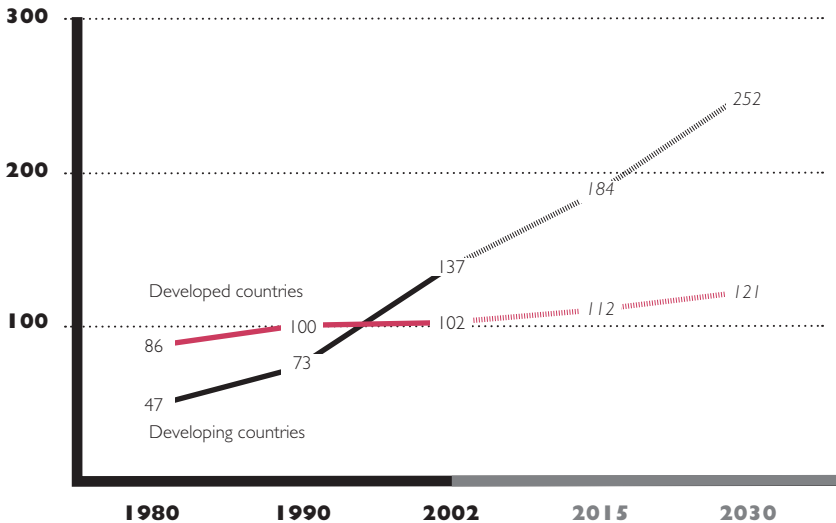
For the last year global warming has been on everyone's mind. Today few would deny that the greenhouse effect brought about by human activity is a reality. The average temperature of the earth's surface has been shown to have risen by 0.6°C since the end of the 1800s<sup>1</sup>. But in media coverage the greenhouse effect has almost exclusively been about factors such as exhaust emissions and industrial pollution. Very little has been said about the livestock industry's effect on the climate. But there is every reason to look more closely at how the use of animals in food production impacts on the environment and the use of resources in the world. With those influences as a starting point, there is also reason to look at what policy at the EU level does – versus what it should do – to change the situation.

# The global problems with the livestock industry

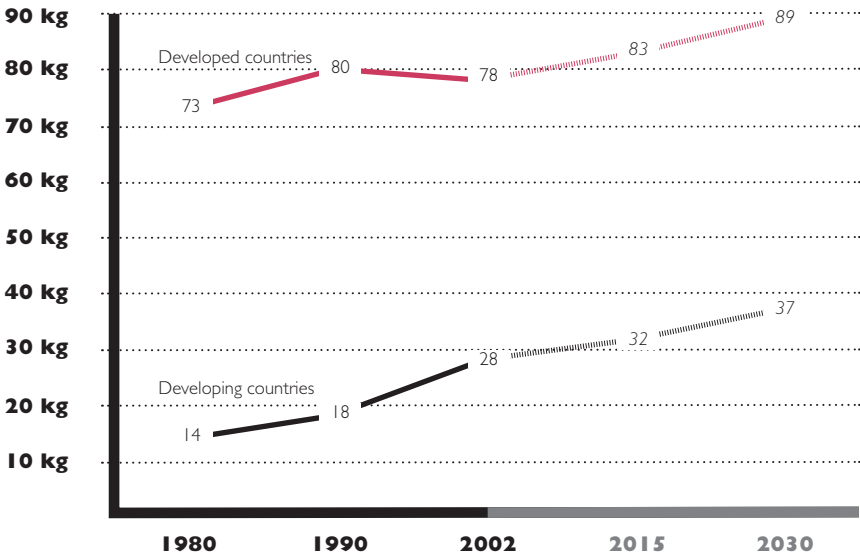
## Bigger climate culprit than the transport sector

Consumption of animal products as food is increasing at an alarming pace in the world. Increasing real incomes and population, combined with changing eating habits, have caused demand for animal products to skyrocket. Compared to the 1950s, the world's meat consumption has increased five-fold. And by 2050 the global consumption of meat is expected to have more than doubled by comparison to 1999's levels – from 229 million tons to 465 million tons. With respect to global milk consumption during the same period, an increase from 580 to 1043 million tons is expected.<sup>2</sup>

## Total consumption of meat in developing and developed countries, with estimated future consumption (millions of tons)<sup>3</sup>



*Per capita consumption of meat in developing and developed countries, with estimated future consumption (kilos)<sup>3</sup>*



The consequences of this increased consumption are no small matter. “The livestock sector emerges as one of the top two or three most significant contributors to the most serious environmental problems, on every scale from local to global,”<sup>4</sup> according to the latest report of the Food and Agriculture Organization of the UN (FAO) about the effects of the livestock industry on the environment, entitled *Livestock’s Long Shadow*. And they have plenty of evidence for the statement.

First of all, the livestock industry is becoming a significant source of climate changing greenhouse gas emissions.

When it comes to greenhouse gas emissions, most people think of carbon dioxide (CO<sub>2</sub>) emissions. And with respect to carbon dioxide emissions the first thing one thinks of is the burning of fossil fuels, for example in the transport sector. Even people and animals emit carbon dioxide when they exhale, but these emissions are normally absorbed by the plant life of the planet. The simplified picture is that these emissions are part of a biological cycle, while emissions from the burning of fossil fuels creates a net increase of carbon dioxide in the atmosphere. But when it comes to the total greenhouse emissions from livestock the picture is more complicated.

To begin with, even the livestock sector is a significant source of net emissions of carbon dioxide. Among other things, it has to do with the fact that forests that previously absorbed carbon dioxide have been cut down to make room for pasture and land for planting animal fodder crops. According to the report *Causes of Deforestation of the Brazilian Amazon*, published by the World Bank in 2004, as much as 88% of deforested surfaces in the Amazon may have been converted to pasture for livestock.<sup>5</sup> It is calculated that about 9% of global carbon dioxide emissions from human activity originate from raising livestock, although the numbers are still uncertain.<sup>6</sup>

Another factor in this context is that the fodder crops that are grown as food for livestock are being transported ever increasing distances. This leads to greater use of fossil fuels, which further increases carbon dioxide emissions.

Carbon dioxide is far from the only greenhouse gas. The Kyoto Protocol<sup>7</sup> names five other significant greenhouse gases whose emissions must be lowered. Two of them are of particular interest when considering the livestock industry's environmental impact: methane and nitrous oxide.

*Methane* (CH<sub>4</sub>) is a gas that, per unit of weight, has an effect on global warming that is 23 times stronger than that of carbon dioxide.<sup>8</sup> In the past 200 years, the levels of methane in the atmosphere have doubled from 0.8 to 1.7 parts per million by volume. Between 35% and 40% of global methane emissions attributable to human activity come from livestock's digestion process.<sup>9</sup>

Livestock such as cattle, buffalo, sheep and goats produce significant amounts of methane via digestion.<sup>10</sup> A single cow is estimated to produce, on average, 600 liters of methane per day.

*Nitrous oxide* (N<sub>2</sub>O), also called laughing gas, has an even stronger effect on climate: 296 times stronger than carbon dioxide over a hundred-year period.<sup>11</sup> Nitrous oxide can be formed in different ways when nitrogen reacts with oxygen. Livestock production produces enormous quantities of nitrogen that can become nitrous oxide. In total, livestock account for two-thirds of all nitrous oxide emissions caused by human activity.<sup>12</sup> Nitrogen is released from the fertilizers used on the fodder crops. It is also released from the urine and the excrement of the animals, as well as stored manure. FAO estimates that we will see a significant increase in these kinds of emissions from livestock production in the future.

Those who are not familiar with this problem may wonder how it is that domesticated animals can give rise to such quantities of nitrous oxide. Stefan Wirsenius, PhD in environmental science at the Institution for Energy and Environment of Chalmers University of Technology in Gothenburg provided an answer to this and other questions:

“The nitrogen that forms the greenhouse gas nitrous oxide is found naturally in the biomass, first and foremost in the form of proteins. But when ruminants eat these proteins a great deal of the nitrogen comes out in their excrement and urine. The form in which the nitrogen comes out of the animal is more reactive, and a part of it is converted into nitrous oxide.”

***In what way then are ruminants kept as farm animals more environmentally damaging than the animals living and procreating in the wild?***

“First of all, there aren’t as many ruminants in the wild as we have for meat and milk production. Secondly, wild animals live more spread out; the dung is spread over large areas and dries relatively fast. With livestock nitrogen-rich manure is often stored in a concentrated area and gives rise to gas-building to a higher degree.

Also, the fodder given to livestock, for the most part, contains more protein than the animal can absorb, partly because some of the amino acids are not optimal for absorption by the animal. A lot of surplus nitrogen can therefore be released in the animal’s urine and excrement and produce nitrous oxide.”

With respect to the nitrogen compound *ammonia* (NH<sub>3</sub>), global emissions from human activity are estimated to be 47 million tons. Ninety-four percent of these come from the agricultural sector, and 68% of the emissions from this sector come from livestock raising. Ammonia emissions occur when the animals’ urine and moisture from their manure evaporate. Ammonia contamination is more of a local or regional problem than emissions of methane, nitrous oxide and carbon dioxide, which have a global impact.<sup>13</sup> All the same, these emissions cause grave problems, including acidification, among others.

All together, FAO has established that the animal industry is responsible for approximately 18% of greenhouse emissions attributable to human activity, which is more than land transport’s share.<sup>14</sup>

Pigs and poultry raised by humans produce significantly less in the way of greenhouse emissions than ruminants do. But the pigs and poultry sectors cause considerable environmental problems in other ways. When you raise

pigs or chickens you have to buy large quantities of high-value protein feed: pigs and chickens can't live on grass.<sup>15</sup> And that brings us to the consequences of *the production of protein feed*.

### ***Land becomes fields of fodder***

In order to produce protein-rich fodder you have to grow protein-rich crops. And that requires space; a lot of space. Today, livestock raising takes up 30% of the earth's land surface. Seventy-eight percent of the total *cultivable* land area (including different types of pasture land) is used in some way for raising farm animals. Of the actual arable land, 33% is used to raise animals.<sup>16</sup>

With increased production of high-quality protein, more land has to be utilized. And the southern hemisphere is where it occurs most frequently. In Brazil, between 1965 and 1997, planting of the protein rich soybean increased by fifty times.<sup>17</sup> Today, Brazil accounts for 26% of the world's production of soybeans.<sup>18</sup> The majority of Brazil's soybeans is exported to Europe as animal fodder.

Fields of soybeans for meat production occupy ever greater areas of Brazil. Nature is impacted negatively by the devastation of rain forest, savannahs and other diversity-rich environments and by the spread of chemicals.

In spite of the fact that the rain forests occupy only 6% of the earth's land area, they have enormous significance for animal and plant life. The rain forest's ability to fix carbon dioxide is, as pointed out above, an important factor in countering the greenhouse effect. Thus, indirectly, even the growing of fodder crops spurs climate change.

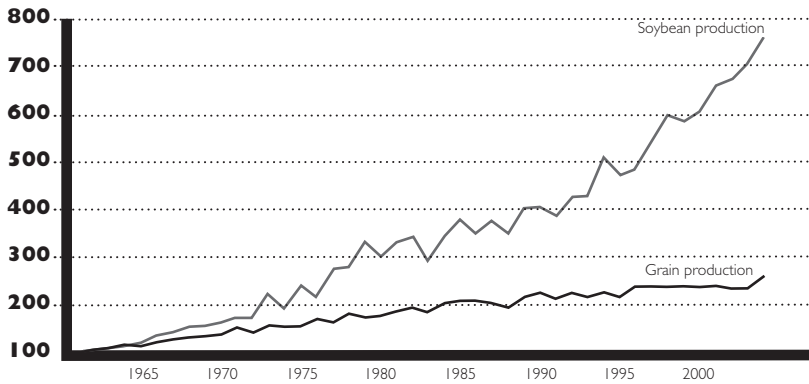
Due to periods of intensive rain, the planted fields often increase the risk of soil erosion. Depleted farm soil means new areas have to be cleared to create more fields for planting.

Ruminants eat a greater amount of roughage than pigs and chickens, for example pasturage and harvested silage or hay. But the trend is towards feeding even these animals ever greater quantities of high-value protein-rich fodder: for example, soybeans. Previously, in Europe, the livestock industry used meat and bone meal in cattle feed. This proved to be a factor in mad cow disease. The meat and bone meal has been replaced by even more soybeans on a large scale.

Even Swedish livestock are major consumers of soybeans.<sup>19</sup> In 2006, a

## The world's total crop area and total production of cereal grains and soybeans, 1961–2003<sup>22</sup>

(Index = 100 in 1961)



total of 292 000 tons of soybeans was used as raw material for animal feed in Sweden. And it is not only the soybeans in the feed that are imported. Fodder is to a large degree an import item: palm kernels, rape and corn gluten are other examples of raw material for fodder imported in thousands of tons every year.<sup>20</sup>

For some time now in Sweden voices have been raised within sectors of the farmers' association in favour of giving cattle locally produced fodder instead of soybeans.<sup>21</sup> If such measures were widely employed it would probably reduce international transportation and perhaps relieve some of the pressure on the natural environment of Brazil. But the environmental scientist Stefan Wirsenius is critical of this being promoted as a *solution* to the environmental problem: "It doesn't decrease the emissions of greenhouse gases from livestock," he points out.

### Energy guzzlers

According to *Vegan-vegetarian-omnivore? (Vegan-vegetarian-allätare?)*, a report from Sweden's University of Agricultural Sciences (Lantbruksuniversitet), the energy consumed to produce a kilogram of the most common types of meat at our latitude – pork and beef – is 8.3 and 12.8 kilowatt hours (kWh) respectively. Production of a kilogram of legumes (such as beans), which contain much of the protein that humans otherwise obtain from animal

products, requires only 0.86 kWh, and potatoes only 0.44 kWh.<sup>23</sup> That means that it takes ten to twenty times more energy to produce animal products than it does for vegetal food. This is primarily because the animals consume large quantities of energy – whether they graze or eat cultivated grain – before they are slaughtered for their meat. Slaughter, transport, processing and cooking also account for a considerable part of the energy consumption.

A report of the Swedish Environmental Protection Agency (Naturvårdsverket) entitled *Beef and Car? Households' Environmental Choices (Biff och Bil? Om hushållens miljöval)*, states that food accounts for Swedish households' greatest consumption of energy, approximately 40,000 kWh per year for a family with children. That means that food production, including transport of the same, amounts to a fifth of Sweden's total energy use.<sup>24</sup> The choice of food, and how it is produced, is therefore important for the reduction of energy consumption.

### ***Water guzzlers***

In many parts of the world water is scarce. With the spread of western meat-product consumption patterns to those who can afford to emulate them in the poor parts of the world, pressure on water resources is increased even more. Producing a kilo of beef requires a total of approximately 15,000 liters of water; a kilo of chicken takes 3,500–6,000 liters. By comparison, it takes only about 450 liters to produce a kilo of corn.

### ***Starvation producers***

Poor people in many parts of the world today cannot afford to buy the food available on the market. The question of food supply is therefore a question of fairness. What will the situation be in 50 years? Does the production of animal products threaten people's future chances to avoid hunger?

“There is a risk of significant competition for food in the world of the future, with survival problems as a result,” says social scientist Sverker Jagers of Gothenburg University. “The earth's population will in all likelihood increase by three billion during the next 50 years. Additionally, many people will be better off economically. Higher standards of life have led to increased demand for meat and dairy products, almost irrespective of country or culture.”

### *What might cause a more severe food supply crisis?*

“Large quantities of arable land are required to produce meat, especially beef. If the richer part of the world is prepared to pay a high price for meat, there is a risk that the limited arable land will be used for that which is most profitable, namely to produce animal feed instead of food for human consumption.”

### *The need for energy creates competition for space*

With respect to future demand for arable land, there is another significant factor: the demand for biomass for energy production.

We can only speculate on the scope of future bioenergy production. Different numbers are arrived at depending on how you calculate. You can choose to start with how much land is “left over” after taking away farmland and other kinds of productive land, and say that it is only this land that is available for production of biomass for energy production, or you can try to estimate how large we can expect future demand for bioenergy to be, and how much land would be required to satisfy the demand.

“If the world sets an ambitious stabilization goal in climate policies, and if technology for bioenergy becomes competitive, my judgement is that we will see a very large demand for biomass as an energy source,” says Göran Berndes, PhD in physical resource theory at Chalmers University of Technology. “It could be a question of several hundred million hectares.”

If the livestock industry’s claims on arable land continue to grow at the same time as demand for bioenergy skyrockets, we risk an arable land crisis. Both nature and the world’s poor will be losers.

In summary, the livestock industry appears to be a hidden, resource-hungry environmental culprit.

“People need to understand that what we eat is an important environmental issue,” says Annika Carlsson-Kanyama, Associate Professor in industrial ecology at the Royal Institute of Technology (KTH) in Stockholm. “In traffic, exhaust comes out of the car and everyone understands the connection, but when we eat, we don’t notice the environmental consequences in the same way.”

## European policy's blinders

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### *The EU backs the livestock industry*

There is every reason to focus on the livestock industry as a global environmental and resource problem. So what is the EU doing about this situation? The truth concerning political initiatives at this level is depressing.

In point of fact, every year the EU subsidizes the production of animal products in agribusiness to the tune of billions of euros. Within the EU's Common Agricultural Policy (CAP), there are a number of different forms of support for the farming sector. A large part of the support is for crops, including fodder crops, but a good deal also goes specifically to animal products. In general terms there are two main types of support in the EU's agriculture budget that benefit producers of animal products. In part, what is called direct support is paid out to farmers who have a certain kind of animal or produce a certain type of animal product. Additionally, there is a kind of support that goes under the name of interventions, which involves the EU going in and assuring demand for farm products in different ways. Interventions include the EU providing financial aid for the export of a given product to countries outside the EU. The EU also buys up and stores the surplus of a given product at a guaranteed price, called the intervention price, so that the producers are guaranteed income for the product they produce. The EU also provides support for marketing of different animal products so that sales of the products will increase. Some efforts have been made in recent years to reform the EU's agricultural policy, but that has not stopped the paying out of astronomical subsidies.

The EU's financial assistance to exports of animal products stands out as part of a noteworthy trade spiral. By subsidizing exports to countries in the third world, the EU has a negative effect on these countries' local farming. The subsidized price of food from EU countries is lower than it would otherwise be, which decreases the demand for locally produced farm products in developing countries and puts downward pressure on local market

prices. Therefore, it gradually becomes more attractive for food producers in these countries to produce for the world market.

Today, Brazil is one of the world's largest importers of dairy products. The EU has supplied a significant part of milk exports to Brazil in recent years. At the same time, as was shown above, Brazil exports enormous quantities of soybeans for animal feed to EU countries, among others. The EU's overproduction of animal products is nourished by third world crops, and the surplus of these animal products is dumped in the third world.<sup>25</sup>

**EU's subsidies to the livestock industry (from the EU budget, 2007)**

**Interventions**

**Title**

**Chapter**

**Article**

<b>Item</b>	<b>Heading = type of subsidy</b>	<b>Appropriation 2007 (in euros)</b>
<i>05 02 12</i>	<i>Milk and milk products</i>	
05 02 12 01	Refunds for milk and milk products	362 000 000
05 02 12 03	Aid for disposal of skim milk	32 000 000
05 02 12 04	Intervention storage of butter and cream	19 000 000
05 02 12 05	Other measures relating to butter fat	84 000 000
05 02 12 06	Intervention storage of cheese	24 000 000
05 02 12 08	School milk	65 000 000
05 02 12 99	Other measures (milk and milk products)	1 000 000
	Subtotal of items above (Article 05 02 12)	587 000 000
<i>05 02 13</i>	<i>Beef and veal</i>	
05 02 13 01	Refunds for beef	46 000 000
05 02 13 03	Exceptional support measures	59 000 000
05 02 13 04	Refunds for live cattle	12 000 000
	Subtotal of items above (Article 05 02 13)	117 000 000
<i>05 02 15</i>	<i>Pig meat, eggs and poultry, bee-keeping and other animal products</i>	
05 02 15 01	Refunds for pig meat	22 000 000
05 02 15 04	Refunds for eggs	7 000 000
05 02 15 05	Refunds for poultry meat	84 671 000
	Subtotal of items above (Article 05 02 15)	113 671 000
	<b>Total of all items above</b>	<b>817 671 000</b>

### *Direct support*

<b>Title</b>	<b>Heading = type of subsidy</b>	<b>Appropriation 2007 (in euros)</b>
<b>Chapter</b>		
<b>Article</b>		
<b>Item</b>		
05 03 02 06	Suckler-cow premium	1 178 000 000
05 03 02 07	Additional Suckler-cow premium	56 000 000
05 03 02 08	Beef special premium	98 000 000
05 03 02 09	Beef slaughter premium – Calves	128 000 000
05 03 02 10	Beef slaughter premium – Adults	232 000 000
05 03 02 11	Beef extensification program	6 000 000
05 03 02 12	Additional payments to beef producers	1 000 000
05 03 02 13	Sheep and goat premium	263 000 000
05 03 02 14	Sheep and goat supplementary premium	80 000 000
05 03 02 15	Additional payments in the sheep and goat sector	33 000
05 03 02 16	Dairy premium	442 000 000
05 03 02 17	Additional payments for milk producers	199 000 000
	<b>Total of all items above</b>	<b>2 683 033 000</b>

The sum of the EU's interventions and direct support to the livestock industry in 2007 is 3,500,704,000 euros.

In addition to these articles and items in the EU budget, which specifically concern animal products, there is a budget article called Promotion measures, which means support for the marketing of different types of agricultural products. How large a part of the sum shown is destined for animal products is not specified – it is determined by the applications received from the market players in the various EU-member states. But as we shall see, the livestock industry even benefits from these items.

### *Promotion*

<b>Title</b>	<b>Heading = type of subsidy</b>	<b>Appropriation 2007 (in euros)</b>
<b>Chapter</b>		
<b>Article</b>		
<b>Item</b>		
050210	Promotion measures	Commitment
05021001	Promotion measures – Payments by Member States	38 000 000
05021002	Promotion measures	7 295 000
	– Direct payments by the European Community	
	Subtotal of items above (Article 05 02 10)	45 295 000

In addition, livestock producers can purchase cheaper fodder for their animals thanks to EU subsidies to crop production. We do not have space here to discuss how large a part of these benefits the livestock industry. However, subsidies to the livestock industry are even greater, indirectly, than what we describe here.

“EU politicians should reflect on subsidies to the livestock sector in relation to the political ambition to decrease greenhouse emissions,” says Annika Carlsson-Kanyama. “What this support has for effect on emissions from farming is a very interesting question, I think.”

How then does the EU motivate this policy? We tried repeatedly to contact the EU’s agricultural commissioner, Mariann Fischer Boel, to ask her to explain the thinking behind these extensive subsidies to the livestock industry. She informed us that she did not have time to be interviewed. Instead, we spoke to her spokesperson Michael Mann.

Michael Mann begins by describing how the EU’s Common Agricultural Policy came about when “Europe lay in ruins” after the second world war. He says that the extensive support derives from a desire to avoid future food shortages in Europe. “The CAP has changed almost beyond recognition since it was created, particularly since the major reforms which began in 2003 and are still continuing.”

***But can the major meat and milk subsidies, which are nevertheless still a part of the agricultural policy, be defended, given the livestock industry’s serious impact on the global environment?***

“Since the 2003 reforms, it is slightly misleading to talk of ‘meat and dairy subsidies’. The majority of direct subsidies to farmers have been ‘decoupled’ from production. That means that farmers don’t get a subsidy to produce a particular product, but are free to produce what they want based on market signals. Instead of being product-linked, direct subsidies are linked to a number of standards, including standards of environmental protection. If these are not respected, the payments are cut.”

***But aren’t budget items in this year’s budget such as 05030206, 05030207, 05030208, 05030209, 05030210, 05030211, 05030212, 05030213 and 05030216 precisely the direct support that is coupled to a certain type of meat or milk production?***

“They are indeed. We wanted complete decoupling. But when the deal was done in the Council<sup>26</sup>, some countries wanted to maintain a link to production for some subsidies. Mrs Fischer Boel is on the record as saying

that she wants to move to full decoupling as soon as possible.

It is true that there is still a system of ‘intervention’ buying for butter and skimmed milk powder at a guaranteed price, but this is now little-used. We also have export subsidies for meat and dairy products, but have pledged to phase these out by 2013 at the latest.”

That the European Commission and its staff have a more restrictive attitude toward this type of support than the Council (which consists of representatives of the EU countries’ governments) is clear. By going through the preparatory documentation for the 2007 EU budget, you can see in many places how the Commission first presented a suggestion for a lower support sum, only to have the support level be raised in the final budget. Countries with an economically significant agricultural sector see to it that the support is not changed in a direction that they consider affects their farmers negatively.

The position that Michael Mann takes on the issue, however, is far from advocating the abolition of agricultural subsidies. He, once again, emphasizes the importance of so-called decoupling of the support.

“I hope that we will continue to have a common agricultural policy in the future. Direct subsidies to farmers will increasingly be linked to the fulfilment of ‘public goods’ and I hope that all residual links to production will be phased out entirely.”

“Of course, we need meat and dairy production because people need to eat meat and dairy products,” he adds.

“A groundless statement,” says Kåre Engström, a dietician connected with the unit for preventative medicine at Karolinska Institute in Stockholm. “It is a serious misinterpretation of reality to suggest there are physiological or health-related reasons that favour animal products; it is, rather, the opposite.”

## Increased export refunds – A Swedish example

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As an EU country, Sweden has long taken the position that EU support to the agricultural sector must be decreased. Both the former Social Democratic government and the current government have been open opponents to parts of the EU's farm subsidies. This is true in particular of the export refunds, the economic support for exporting – or dumping – parts of the economic surplus in countries outside the EU. How then has Sweden acted in those institutions that regulate the size of these grants?

Regular decisions about export refunds, intervention storage and other intervention measures in the EU are made by what are called administrative committees. The European Commission presides over the administrative committee and every EU country has delegates who participate in the decision-making of the meeting. For Sweden, officials from the Swedish Board of Agriculture and the Ministry of Agriculture take part. In the animal products area, there is an administrative committee for milk and dairy products, one for eggs and poultry, one for pork, one for beef and one for lamb and goat.

In Sweden's instructions for how to vote in the administrative committee meetings there are formulations to the effect that export refunds should be used restrictively and that delegates should "work for the elimination of export refunds in the long term." At the same time there are formulations concerning the short term that suggest delegates can "support certain increases in export refunds if the market situation warrants it."<sup>27</sup> And if you look at the reports from the meetings of the administrative committees, you can see that Sweden has, on repeated occasions, voted in favour of increasing the very grants it is said to oppose. This was the case, for example, at the meeting of the administrative committee for eggs and poultry on January 18 and February 14, 2006. Sweden's neighbor, Denmark, on the other hand, voted against increases on both of these occasions. All together the support was increased by 25% in early 2006 and tons of chicken were exported from EU countries to Russia and countries in the Middle East.<sup>28</sup>

Magnus Därth is the departmental secretary for the Swedish agriculture department and is responsible for the Swedish delegations to the administrative committees for eggs and poultry and for pork.

***Why does it sometimes happen that Sweden votes in favour of increasing export subsidies for animal products when Sweden is said to promote a restrictive policy?***

“It could happen that other intervention measures would be introduced if export refunds were not increased,” says Magnus Därth. “For example, it could mean that, otherwise, intervention storage of the product in question would come into play; that is, the EU would be forced to buy the surplus production at intervention prices. In some cases that can be a more expensive solution than increasing export subsidies.”

***Do you not then risk wiping out farming in poor countries by dumping the surplus there?***

“That should be avoided, of course. In those committees I am on, I feel I have taken that aspect in to consideration.”

The instructions for how Sweden should vote in the administrative committees even includes a line of reasoning that Sweden, even though it may feel differently, should support the EU Commission’s line when other member countries demand even greater increases in the subsidies “so that the Commission is not forced to grant these demands.” You even find formulations such as “If the Commission proposes increases in export refunds, Sweden should ask the Commission to motivate the increases. If the Commission cannot give a satisfactory explanation, Sweden, nevertheless, should not vote against the Commission’s proposal, but rather abstain.”<sup>29</sup> We asked Magnus Därth to explain the rationale behind these strategies.

“If we imagine a scenario in which the Commission proposed a 10% increase in subsidies while many other member countries strongly advocated a 40% increase, it could be better to support the 10% increase so that the Commission would not be forced to propose the larger increase.”

***But then don’t you support an increase after all?***

“Yes, but it has to do with the voting rules. As the rules stand, the Commission always seeks support for its position. If too many countries are for a greater increase, the risk is that we find ourselves alone in opposing it, and then it can be strategically better to accept the Commission’s position.”

Magnus Därth emphasizes that Sweden has had some success with its

restrictive policy. He mentions export refunds for beef products “where Sweden has successfully argued that the Commission should propose taking away the export refund for beef” because the EU has a shortage of that type of meat. “The other member states haven’t really had any reasonable arguments against it, and the Commission has on several occasions managed to lower the export refunds for beef.”

***How does that jibe with a restrictive position on export subsidy issues, Mr. Dårth?***

“Our task is to protect Swedish interests; that’s the goal when we participate in these meetings. This means that we must both see to our goal of restrictively implementing export refunds and, at the same time, not unilaterally treat Swedish companies unfairly. There are often a number of interests to consider. We were, for example, in favour of decoupling the special beef premium in discussions about the agricultural reform of 2003, but on balance we still found it appropriate to retain some coupling.”

Are then the environmental consequences of the production of animal products taken into consideration at all when Sweden plans its strategy for the EU’s administrative committees?

“No,” says Maria Rosander, departmental secretary at the department of agriculture. “All we have considered, aside from purely market considerations, is animal welfare. That is what’s behind our negative attitude toward export of live animals. Everything else is on a higher, purely political level.”

***Shouldn’t environmental effects be considered given the threat to the climate and other environmental threats?***

“I would have to say that we haven’t really thought that through yet. That is a rather new discussion,” says Maria Rosander.

“It’s odd that environmental aspects aren’t considered when working on the administrative committees,” says Fredrik Hedenus, doctoral candidate in energy and environment at Chalmers University of Technology. Where traffic is concerned, for example, environmental aspects are nearly always considered. But for some reason that’s not the case with meat consumption. If we are to deal with the climate issue, it’s time to begin looking at meat production as a problem area rather than just another kind of business.”

## Milk campaign with taxpayers' money

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When it comes to EU support for measures to promote sales of different kinds of agricultural products, money is often paid out to the livestock industry. During the 1990s mad cow disease caused a veritable flood of grants for marketing of beef products. "If we want to sell our quality beef and veal, we have to reassure consumers," commented the EU's then agricultural commissioner, Franz Fischler.<sup>30</sup> The grants went to advertising campaigns on radio and television, newspaper advertisements and participation in trade fairs.

One of the Swedish organizations that has recently received EU promotion measures support is the Swedish Dairy Association (Svensk Mjölk). They have received €330,000 for the period 2006–2009 to mount a campaign for "more milk for women in selected groups."

"We know that women are those that quit drinking milk or drink less milk," says Kerstin Wikmar, project leader for Svensk Mjölk. "That's something we want to change through this campaign."

Kerstin Wikmar tells us that the campaign targets women between the ages of 10–14 and 25–40 years old, as well as women over 55. For the older age groups they hold seminars, but for those 10–14 years old they have a more sweeping program.

"We print student calendars where the students can make notes on homework and parties, and where the calendar also has messages throughout about how positive calcium-rich milk is. In combination with that, we also arrange seminars for school nurses and supply them with teaching materials. We also let the school nurses be the one to pass out student calendars. Otherwise the students may well think it's boring to study this kind of information."

Dietician Kåre Engström is highly critical of this kind of campaign. "It's clear that there is overproduction of dairy products in the EU, and that the big players in the markets for animal products want to continue to have a

strong position. So they choose to subsidize this sort of thing with taxpayers' money. That seems very outdated.”

Kåre Engström dismisses the idea that there is a special need to get women to consume more milk.

“This is about producers who want to get as much profit as possible from their food production. Sweden has one of the largest calcium intakes in the world, and there is no general lack of calcium. Those deficiencies that may exist occur rather in individuals. If you want to alleviate their problem it would be much better to encourage the increased consumption of calcium-rich sesame seeds. That way you would also get other health benefits.”

## A way forward

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A newly released report from the Swedish Institute for Food and Biotechnology (SIK) reports on research done on the possibilities of producing food from locally grown legumes. The researchers also compared the environmental impact of such vegetarian meals with that of different meals containing meat.

According to the report, a locally grown vegetarian meal based on potatoes, vegetables and veggie burgers clearly provides the most environmentally friendly diet in spite of the fact that processing of the pea protein in a small-scale overseas factory was taken into account.

“It’s more efficient to eat what we grow directly instead of first letting it pass through an animal,” says Anna Flysjö, one of the authors of the report.

The environmental benefits this vegetarian meal gives are a lower contribution to the greenhouse effect, less acidification, less eutrophication and less use of chemicals. Another positive effect of using a locally grown protein source is that we take responsibility for our own environmental impact instead of doing as we do today, utilizing South American farmland.

The report’s authors come to the conclusion that large-scale conversion from meat to legumes would mean major environmental benefits, even compared to meat from animals fed with locally grown crops.

But how do we get there?

The EU’s present agricultural policy is, as the agriculture spokesperson Michael Mann points out, a product of the second world war’s food crisis. But that is not our situation today. Today’s crisis looks entirely different. And rather than guaranteeing thriving regional agriculture, today’s EU policy is characterized by a maelstrom of transportation of animal feed and animal products around the world.

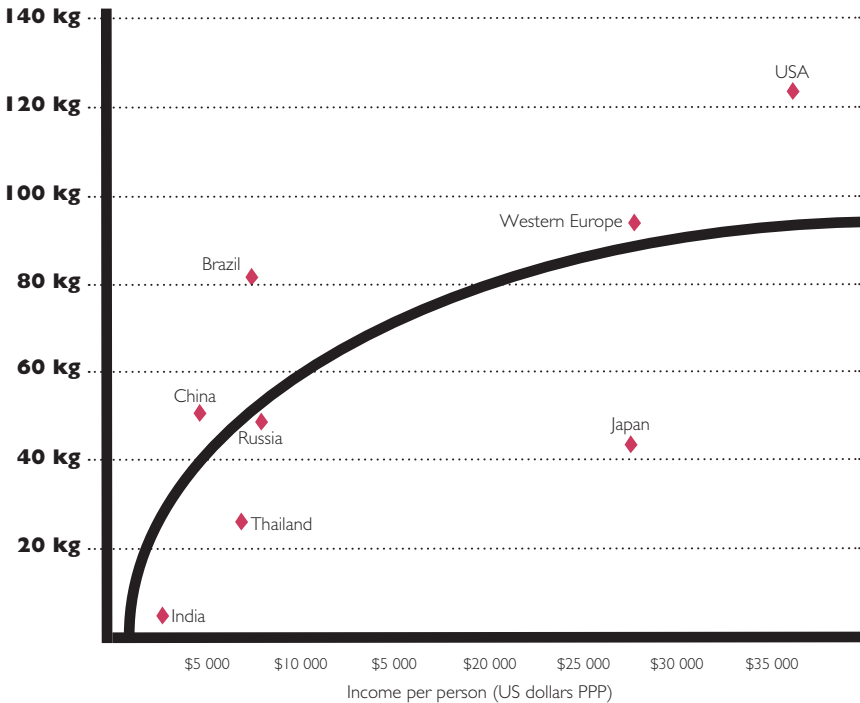
Against the background of how the livestock industry threatens the planet

and how policy has thus far dodged the problem, it is high time to work towards another kind of policy. Instead of subsidizing the production of and demand for animal products, we must make it more profitable to consume further down on the food chain, and less profitable to consume higher up: more plants as food for human consumption, and fewer animals.

“I believe that it would be effective to institute a tax on the fodder that animals eat,” says Annika Carlsson-Kanyama. “Grain prices are maintained at a high level by the demand from livestock raisers, and this demand presumably will increase. If fodder were more expensive, meat production would also cost more, at the same time as vegetable matter for human consumption could become cheaper. Rich people who consume a lot of meat would be adversely affected while poor people who don’t eat much meat would be positively affected.”

***The relationship between meat consumption and per capita income, 2002<sup>31</sup>***

(PPP = purchasing power calculated with consideration given to exchange rate)  
Meat consumption per person in kilos



The fact is that such ideas have already been presented. In the article “Environmental sustainability in agriculture: diet matters”, the World Bank’s former environmental advisor, Robert Goodland, suggests a fee system that would make the production of animal products more expensive. Goodland calls the proposal a “food conversion efficiency tax.” The thinking is that fodder would be taxed at different rates based on how effectively the animal converts the fodder into meat.<sup>32</sup> But all crops used in the production of animal products would be subject to fees. Grain for human consumption would not be taxed, thereby benefitting low income groups and those that prefer vegetarian food. Goodland could also agree on subsidies for some crops consumed by the poor of the third world. Goodland summarizes the purpose of his proposal as follows: “High taxes on inefficient food and no taxes on efficient food ... would alleviate the global food crises and promote sustainability.”<sup>33</sup>

The basic point is that meat production must bear its own environmental and resource costs. This type of tax could be used in the same way as green tax shifts, which have become politically popular in recent times. The money could be redistributed to healthcare, environment work, public health information and international development work, areas that today suffer in different ways from the effects of meat production.

Some have seen the taxing of processed meat products as easier than taxing fodder. Which solution is preferable from a tax viewpoint is an open question. What is important is that it requires political action. Animal products must cost more and the green alternatives less.

The fact that there is an urgent need to decrease global emissions of greenhouse gasses also suggests a focus on the livestock industry. It will take time for reduced carbon dioxide emissions from industry and transportation to result in decreasing the effect on the climate; not because of politics and society’s sluggishness, but because carbon dioxide breaks down slowly. Methane and nitrous oxide break down faster, and a reduction in these emissions consequently would give faster climate results.

The wealthy countries, including the EU countries, which have thus far exported their environmental problems to the poor countries, and which function as lifestyle role models for large parts of the rest of the world, have a special responsibility to take the initiative for change.

## Notes

1. FAO (2006), *Livestock's Long Shadow*, p. 80
2. FAO (2006), p. XX
3. FAO (2006), p. 15
4. FAO (2006), p. XX
5. Margulis, Sergio (2004), *Causes of Deforestation of the Brazilian Amazon*, World Bank, Working Paper no. 22
6. FAO (2006), p. 112
7. The Kyoto Protocol is the international agreement from 1997 that calls for a decrease in the annual global emission of greenhouse gasses by 5% from 1990 levels during the period 2008-2012.
8. This is the relevant figure if the effect is measured in global warming potential (GWP), which is a measure of different greenhouse gasses' strength, where the effect of carbon dioxide over a hundred years is given a value of 1. GWP therefore not only takes into consideration the gas' ability to absorb and reflect radiation but even how long the effect lasts. FAO (2006), p. 82
9. FAO (2006), p. 112
10. FAO (2006), p. 95
11. FAO (2006), p. 82
12. FAO (2006), p. 114
13. FAO (2006), p. 114
14. FAO (2006), p. 272
15. Cederberg, Christel (2002), *Life Cycle Assessment (LCA) of Animal Production*, Paper V, p. 16
16. FAO (2006), p. 74
17. Blix, Lisa and Mattsson, Berit (1998), *The Environmental Impact of Agricultural Land Use: Field Studies of Rape, Soy and Palm Oil (Miljöeffekter av jordbrukets markanvändning: Fallstudier av raps, soja och oljepalm)*, p. 36
18. FAO (2006), p. 43
19. The Swedish Board of Agriculture's examination of fodder production 2006, Report 2007:3, pp. 45-46 (the sum of roasted soybeans, extracted and roasted soybeans, protein concentrate from soybeans and soybean hulls)
20. The Swedish Board of Agriculture's examination of fodder production 2006, Report 2007:3, pp. 43-45
21. See, for example, the supplement *Fodder* (2002), in *Land Lantbruk*, no 39
22. FAO (2006), p. 27
23. Sweden's University of Agricultural Sciences (Lantbruksuniversitet) (1997), *Vegan - Vegetarian - Omnivore? (Vegan – vegetarian – allätare?)*, p. 47

24. Swedish Environmental Protection Agency (Naturvårdsverket) (1997), Beef and Car? (Biff och bil?), p. 12
25. For further thoughts about this vicious circle, see Cordeiro, Angela (2000), Sustainable Agriculture in the Global Age, a report from the Swedish Society for Nature Conservation (Naturskyddsföreningen), pp. 13-16
26. The EU's council of ministers, formally known as the Council of the European Union, (our annotation)
27. See, for example, the instructions for the meeting of the administrative committee for pork, May 17, 2006
28. Statistics from the European Commission/Swedish Board of Agriculture
29. Instructions for the meeting of the administrative committee for milk, July 27, 2006
30. The European Commission, press release, January 27, 2000
31. FAO (2006), p. 9
32. Goodland, Robert (1997), "Environmental sustainability in agriculture: diet matters", in Ecological Economics nr 23, p. 189-200
33. Goodland, Robert (1997), p. 200





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