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The Diverse Effects of the Drought

Report Categories:

Agricultural Situation Dairy and Products Fresh Deciduous Fruit Grain and Feed Oilseeds and Products Potatoes and Potato Products Sugar Vegetables

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Report Highlights:

This report outlines the effects of the recent drought on agricultural production in the Netherlands. Dairy farmers will face a loss due to higher feed costs, while the producers of arable crops, vegetables and fruits are expected to benefit from higher prices. The Dutch Government allowed flexibilities related to manure application and sowing of grass and catch crops to help compensate for financial loses. Due to the limited domestic feed supply, more hay, corn and soybeans are forecast to be imported.

Introduction

At the request of the Dutch Ministry of Agriculture, Nature and Food Quality, Wageningen University (WUR) published a <u>report</u> (in Dutch) on the effects of the warm and dry summer. Data from the Netherlands Meteorological Institute (KNMI) since 1970 concluded that the summer of 2018 was the hottest, sunniest and driest on record. From their analysis, researchers first determined the effects of five earlier hot and dry summers (1976, 1983, 1995, 2003 and 2006) on the harvest and price of a range of crops (see table below). Based on these statistics and interviews with 25 experts, WUR forecast a lower harvest and a price increase for all selected fodders, arable crops, vegetables and fruits. The most significant harvest losses are expected for grass, corn for silage, potatoes and onions. Significant price increases are forecast for hay, straw, corn for silage, onions and apples.

	Effect on Harvest		Effect on Price		
	Average	2018	Average	2018	
	5 hot summers	(estimate)	5 hot summers	(estimate)	
Cow Feed and Milk		-	-		
Grass / Hay	-	-20%	9%	25%	
Wheat / Wheat Straw	0%	-2%	-3%	20%	
Corn (for silage)	-7%	-35%	10%	25%	
Milk	1%	0%	-	1%	
Livestock Feed					
Swine Feed (for fattening)	-	-	6%	0%	
Cattle Feed (dairy)	-	-	2%	0%	
Grains					
Wheat (winter)	0%	-2%	8%	10%	
Barley (summer)	-3%	-2%	9%	10%	
Other Arable Crops and Fruits					
Potatoes (for consumption)	-11%	-20%	76%	11%	
Sugar Beets	-1%	-12%	2%	5%	
Unions	-26%	-50%	143%	100%	
Vegetables	-11% / -9%	-20% / -5%	-6% / 33%	5% / 20%	
Apples	-1%	-10%	33%	30%	
Pears	7%	-10%	12%	15%	

Based on the expected harvest and price developments, WUR calculated anticipated farm revenues and incomes. The additional costs for spraying the crops, and buying feed and litter were included in the calculation. Also taken into account were the fact that some costs will be reduced, such as for crop protection, harvesting and transport. Insurance reimbursements were not included in the calculation. Dutch farmers are rarely insured for droughts, except perhaps fruit farmers (22 percent).

Difference between regions

The effect of the drought was highly dependent on soil type. The WUR study made a distinction

between farms with clay, peat or sandy soils. Clay soils have the best water retention. In addition, Dutch farms with clay and peat soils are commonly located in the regions below sea level (generally called polders) and have a better availability of surface and ground water than the higher located farms. The sandy soils are commonly located above sea level in the East and South of the country. This is the region where farmers were most affected by the lack of rainfall. Another factor taken into account is the high salinity of water in deeper soils in the Southwestern part of the Netherlands, the main sugar beet and potato area.

Based on the limited availability of fresh water the Dutch Government restricted the spraying of crops mainly in the East, South and the Southwest of the Netherlands. In 13 of the 21 Water Board districts, it was not allowed to spray the crops with surface water. In two districts it was also forbidden to spray the crops with groundwater. In the East, South, and Southwest of the country the restrictions are still enforced. Because the Netherlands commonly has an oversupply of water, and is mainly prepared to cope with floods, some experts at Wageningen and Utrecht University argued the country is "blind for droughts" and needs to prepare for both scenarious. Lakes such as the IJselmeer and the Volkerak are used as huge water reservoirs. The experts argue that higher water levels should be maintained in these reservoirs and that water should be stored in the floodplains along the rivers.

Farm incomes

The WUR estimates that as a result of the current drought, the average annual income of a *dairy farm* will be reduced by $\in 24,500$ (see table below). This is mainly a result of higher feeding costs. This study, and farm magazines report that most farmers harvested sufficient hay during the spring of 2018, but will be faced with a significantly lower amount of corn for silage. The calculation is based on the assumption that the Dutch milk price will increase by only one percent. The study forecast the average European milk price to increase by three percent¹. Rabobank analysts conclude that the situation isn't a catastrophe but an extreme situation in which farmers need to be prepared by building sufficient financial reserves and fodder stocks.

In contrast to dairy farms, the profit of an average *arable crop farm* is forecast to increase by $\in 13,800$. This is mainly due to the increased prices for crops. The drought has impacted production in other European member states more significantly, reducing supply at the continent. The effect on the grain sector has been relatively limited as most grains were harvested before the drought. However, prices for potatoes, sugar beets and onions have increased significantly.

The effect of the drought on the income of *horticultural farms* is expected to be limited. Due to the wide range of products, it is difficult to draw a general conclusion. A significant positive effect is forecast for the income of *fruit producers*. This is because 70 percent of the acreage has spraying installations and most contracts with wholesalers are not yet concluded, which means farmers can take full advantage of the lower yields in other countries.

The overall conclusion is that dairy farms will lose income due to increased feeding costs but that arable crop and fruit farms will benefit from the better availability of water compared to their competitors in neighboring countries.

	Effect on Farm Income Average 5 hot summers	Effect on Farm Income 2018
Dairy	-16%	-€24,500
-clay / peat	-15%	
-sand	-6%	
Arable Crops	85%	€13,800
-clay	74%	
-sand	19%	
Vegetables	19%	€1,600
Fruit	105%	€29,300

Measures

On August 23, AgMinister Carola Schouten informed the Dutch Parliament with a <u>letter</u> (in Dutch) about the measures put in place by the government related to the drought, and attached the WUR report. She stated that the study contained a lot of uncertainties and that conclusions can only be drawn after the crops have been harvested.

In the letter, the following measures were announced:

- Farmers will receive extra time to spread manure on their lands. Due to the drought, farmers applied less manure than normal during the summer. Depending on the soil type and crop farmers received an extension of two to four weeks, until the end of September.
- Farmers will receive an extension for sowing grass, depending on the soil type, up to the end of September. An extension for the sowing of catch crops² was given until September 17.
- Farmers with liquidity problems can receive a declaration from the Dutch Government, which they can use to get credit from their bank.

In general, the Dutch farmers association LTO is satisfied with the measures offered by Minister Schouten, but there is some criticism from farmers. They point out that the credit is just a loan with interest. LTO is in the process of negotiating additional support such as tax reductions and payment extensions. LTO argues that farmers in other Member States (Germany, Belgium and Sweden) received more financial support which could lead to unfair competition.

Feed Balance

Due to the drought, feed supplies are expected to remain limited until next spring. However, the shortages are not as big as earlier anticipated by the market. During September, sufficient rain has fallen for a notable recovery of corn and grass. As a result prices have come down a bit from the peak in mid-August. In the Netherlands, current hay prices fluctuate around €200 per metric ton (€170 a year ago), €135 per metric ton for wheat straw (€100) and €75 per metric ton for corn silage (€65). Dairy fodders, such as hay, straw and lupines are commonly imported from Germany and France, and already record imports are reported from these countries. Traders state that the United Kingdom could possibly balance the shortages. Hay and straw are generally not imported from third countries.

Though not included in the WUR report, feed shortages will also affect the poultry and in particular the swine sector³. In addition to the supply of wheat and corn, the availability of a wide range of other feeds will decline including by-products from the cereal and potato processing sector. Overall the EU feed balance will change as less wheat will be exported and probably more corn and soybeans imported⁴.

Notes:

- 1. For more information on milk prices see the upcoming FAS EU Dairy & Products Annual expected to be made public mid-October. Last year's report can be found here: <u>2017 FAS EU</u> Dairy & Products Annual.
- 2. A catch crop is a fast growing crop that is grown between successive plantings of a main crop.
- 3. For more information on the European swine and poultry sectors, see the <u>FAS GAIN Livestock</u> <u>Annual</u> (made public on September 6th) and <u>FAS GAIN Poultry Annual</u> (September 5th).
- 4. For more information on the European grain sector, see the upcoming <u>FAS GAIN EU Grain and</u> <u>Feed</u>, and <u>Oilseeds updates</u>, expected to be made public by the end of September.