Yara, the company

Introduction

Yara International ASA is a Norwegian chemical company. Its largest business area is the production of nitrogen fertilizer, however it also encompasses the production of nitrates, ammonia, urea and other nitrogen-based chemicals. It is the second largest fertilizer company and active all over the world. Yara is Europe’s biggest industrial buyer of fossil gas and the company are very active lobbying for fracking and the availability of cheap natural gas. Together with other fertilizer companies Yara is presenting the use of synthetic fertilizers as a necessity to feed the world and to react on climate change.

The type of activities, its size and the fact that Yara is very active in North-West Europe make Yara the logical focus of the Free the Soil campaign. This company file is for people involved in the campaign and in general for all people who care about healthy soils fighting climate change.
A brief history of Yara

The company was established in 1905 as Norsk Hydro – the world’s first producer of synthetic nitrogen fertilizers. The company used cheap hydropower for their industrial activities. In 1929, Yara built the first large nitrogen fertilizer factory in Herøya. In 1949, a factory was opened in Glomfjord, next to Herøya, to produce calcium nitrate and NPK fertilizers. In the 60s, an ammoniak production facility was opened at the same spot.

In 1969 Norsk Hydro’s international expansion started with a joint venture with Qatar authorities and the opening of a factory in that country. By the 1970s, the company was established in Asia, the Middle East and North America. The late 1970s to the mid-1980s was a period of rapid growth, through the acquisition of major fertilizer companies in France, Germany, the Netherlands and the UK. At the end of the 1990s, the company was also established in Brazil and South Africa.

In 1979 there was the acquisition of the Nederlandse Stikstof Maatschappij (NSM) in Sluiskil in the Netherlands. Afterwards followed by Supra in Sweden, Windmill in the Netherlands (Vlaardingen) and Cofaz in France. Norsk Hydro turned into a conglomerate of companies.

In 2004 Norsk Hydro de-merged and the fertilizer part continued as Yara International ASA. Yara is listed on the Oslo Stock Exchange and has its headquarters in Oslo.

In recent years Yara has been involved in various corruption scandals most notably bribery and was fined $32.7 million to account for such actions.

The Norwegian Ministry of Trade, Industry and Fisheries Norwegian government is the largest shareholder with 36.2 percent of the shares. The second is the Government Pension Fund of Norway with 5.9%. Many of the prive shareholders are based in Norway, the UK, or the USA.

Yara’s products

Yara’s core business is to produce and sell all kinds of synthetic fertilizers; phosphorus, potassium and other smaller nutrients, both for large farmers and small gardeners all over the world. But the largest part of their turnover is created by selling nitrogen fertilizers. At the moment Yara is trying to move from the production of cheap bulk synthetic fertilizers towards more complex and also expensive compound fertilizers. To do this the company is very active in trying to convince farmers to start using those compound fertilizers.

In Europe Yara is selling a whole range of fertilizers products. The most important are:

**YaraBela** - Nitrogen fertilizers. The nitrogen fertilizers are the most relevant ones for the Free the Soil campaign, while the production requires a lot of fossil gas.

**YaraVita** - fertilizers to treat seeds, leaves and to use with substratum agriculture (substraatlandbouw).

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1 History paragraph mainly based on the English and Dutch Wikipedia pages on Yara: https://en.wikipedia.org/wiki/Yara_International
2 https://www.oslobors.no/ob_eng/markedsaktivitet/#/details/YAR.OSE/overview
3 https://www.yara.com/investor-relations/share-and-debt-information/shareholders
**Yara**

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**YaraTera** - In water disposable or liquid fertilizers. Those fertilizers normally contain nitrates as well.

**YaraLiva** - Calcium nitrate fertilizers.

**YaraMila** - NPK fertilizers containing more types of nutrients.

**YaraVera** - Uream based (nitrogen) fertilizers.⁴

Besides fertilizers, Yara produces and sells (i.a.) ammonia, Ad-Blue (a fluid to reduce the emissions of diesel engines), animal nutrients and some chemical intermediate products.

### The size and market share

"As the industry’s only global player, we have production facilities on six continents, operations in more than 60 countries – and sales to about 160 countries." This is a quote from Yara’s annual report of 2018.⁵ According to the ETC-group Yara is the second biggest fertilizer company, after Nutrien from Canada and before The Mosaic Company from the US. However, if we only look at the nitrogen fertilizers Yara is the biggest.

Compared to other segments in industrial agriculture the fertilizer business is not very concentrated. The three largest companies have ‘only’ 13.8% market share. In the seed business this is 61.7%, with pesticides this is 58.8% and with machinery 32.3%.

To give a general impression of the size and the activities of the company some numbers from the same 2018 Annual Report annual:

- **Number of employees** 16,757
- **Revenue**: 13.054 billion US Dollars per years. This has been staying relatively stable in the past years.
- **Profit 2018**: 159 milion US dollars. This is actually much less then the previous years (e.g. 1.176 in 2014 and 477 in 2017). Yara’s most significant market risk is linked to the margin between nitrogen fertilizer prices and natural gas prices. The gas price has been going up and the fertilizer prices only went up at the end of 2018.

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⁴ A more extended overview in of their products you can find on Yara’s website:

Yara's activities worldwide (source: Annual report 2018)
Energy use and emissions

In 2017, Yara’s total energy consumption in production was 266 Peta-joules (million Gigajoule). In 2018 this went up to 301 Peta-joules. About 90% of the energy is consumed in ammonia production. (Source: annual reports 2017 & 2018).

Yara’s greenhouse gas emissions in 2018 were 16.6 Million tonnes CO₂ equivalents. (15.1 in 2017, so this is still rising. Yara blames this on the new acquisitions.)

The nitrogen oxide (NOx) emission is close to 9,400 tonnes per in 2018.

But the main contribution of Yara to climate change and the pollution of ground water and air is due to the use of it’s synthetic fertilizers.

The use of synthetic fertilizers is bad for the soil life and in this way contributing to the loss of organic matter.⁶ Soils around the world have lost, on average, at least 1–2 percentage points of organic matter in the top 30 cm since chemical fertilizers began to be used. This amounts to some 150,000–205,000 million tonnes of organic matter, which has resulted in 220,000–330,000 million tonnes of CO2 emitted into the air. That is 30 per cent of the current excess CO2 in the atmosphere.

Yara’s activities in Germany

In Germany, Yara has a trade and a research location and two production facilities.

Brunsbüttel

According to the website of the industrial area near Brunsbüttel "the Yara site at Brunsbüttel has two production units: one ammonia plant and one urea plant. The air separation plant in the ammonia synthesis plant produces the atmospheric gases nitrogen, oxygen and argon, which are required for various technical and industrial applications. The production includes different ammonia and urea grades made to specifications and tailored to the specific market requirements. Technical aqueous solutions, such as AdBlue/Air1 and NOxCare-products for the reduction of nitrogen oxides in truck and power plant exhaust gases are made available to the international market".⁷

Adblue is a product to make diesel engines emit fewer small particles. This part of Yara’s activities has nothing to do with fertilizers.

Brunsbüttel is located on the west cost of Schleswig-Holstein where the Kiel Canal and the river the Elbe flow into the North Sea. The Yara plant is located on the ‘ChemCoast Park Brunsbüttel’. Other

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⁷ Source: https://www.chemcoastpark.de/en/companies
companies present in this industrial area are (amongst others) Total, Lanxess (on this location they have a plant ‘zur Herstellung von organischen Grund-chemikalien als Vorprodukt für die Pflanzenschutz-mittelproduktion’ = pesticides.), Nordsee Gas Terminal, Sasol (chemical company using ammonia).

Yara is not producing nitrogen fertilizers in Brunsbüttel. Instead there is the production of Adblue which makes cars less polluting. Why an action camp on this spot?

Yara, the largest producer of synthetic nitrogen fertilizers in the world, owns an important production facility near the German town Brunsbüttel. Although the nitrate fertilizer itself is not produced in the ChemCoast Park in Brunsbüttel, Yara is producing here large quantities of ammonia and urea, both important ingredients for the production of nitrate fertilizers. It is likely that at least a large part of the in Brunsbüttel produced ammonia is transported to the Yara plant in Rostock. Yara Rostock needs ammonia and has the possibility to store it. There are easy transport possibilities by ship between Brunsbüttel and Rostock. Urea is also used a lot as nitrogen fertilizer, but more in the Global South than in Europe. In the US ammonia is used as fertilizer.

Probably not all ammonia and urea produced by Yara Brunsbüttel is used for the production of fertilizers. But those other processes and products are not much better. The production is still dependent on large amount of fossil gas and which are all polluting chemical industries. Free the Soil also does not have to feel sorry for possibly disrupting other companies present in the ChemCoast Park. It is all about chemical industry, the fuel sector or the production of pesticides, sometimes with the ammonia from Yara.

But our action is not just about the activities of Yara in Brunsbüttel! Yara is a large, worldwide operating company producing and selling synthetic fertilizers and by doing this contributing to climate change and soil degradation. We are criticizing the whole company, not just they activities in Brunsbüttel and especially not their local employees. And even broader we are criticizing the use of nitrogen fertilizers and industrial agriculture in general. Large corporations play an important and powerful role in the current food system. Yara is an important representative. But even if we could dismantle Yara, other companies would just take over its role and market share and we would not have changed the system.

Rostock

The Yara facility in Rostock hosts two nitric acid production plants and two plants producing nitrogen fertilizers, one plant producing UAN (a liquid fertilizer containing urea and ammonium nitrate) and two plants producing ammonium-nitrate for technical purposes. Also the nitric acid is also often used for the production of nitrogen fertilizers.

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8 Ammonia is an intermediate product for all nitrogen fertilizer, while nitric acid is a second intermediate product for the production of, e.g. nitrates. Finished fertilizer products are urea, nitrates (CAN, AN), NPK and others. Industrial products range from high purity carbon dioxide and basic nitrogen chemicals to industrial applications of upgraded fertilizer products.  [https://www.yara.com/siteassets/investors/057-reports-and-presentations/other/2018/fertilizer-industry-handbook-2018-with-notes.pdf](https://www.yara.com/siteassets/investors/057-reports-and-presentations/other/2018/fertilizer-industry-handbook-2018-with-notes.pdf)
Dülmen

In 1959, the research centre Hanninghof from the company Ruhr-Stickstoff AG Bochum had established. In 1985, Norsk Hydro (precursor of Yara) bought Ruhr Stickstoff AG. Six years later the research centre moved from Bochum to Dülmen. Later Norsk Hydro moved its own whole trade company from Essen to Dülmen. The research centre in Dulmen work for Hydro Agri/Yara world wide.

In 1999, Hydro Agri Rostock and the trade agency in Dülmen merged into Hydro Agri GmbH & Co. KG. Since 2005, the facility in Dülmen hosts both a distribution centre for fertilizers and industrial products and the research centre Hanninghof.

Yara’s activities in the Netherlands

Sluiskil

Opened in 1929, the Yara Sluiskil site is located on the Gent-Terneuzen canal, a waterway opening into the North Sea and connecting to European waterways. As with many European fertilizer complexes, development of the site was linked to the availability of coke oven gas from a neighbouring coke factory. Today, Yara Sluiskil uses mostly North Sea gas to produce nitrogen fertilizers and industrial chemicals.9

The site has three ammonia plants, four CO2 plants, two nitric acid plants, two urea plants (one prilling and one granulation) and two nitrate granulation plants. **Sluiskil has Yara's (and Europe’s) largest installed ammonia and nitrate fertilizer capacities.** In recent years, production of ammonia and the derivative products such as nitrate, urea, and Air1 has increased. The site in Sluiskil produces 1.8 million tonnes of ammonia per year which for the most part is valorized locally into a large range of end products. The majority of the finished product volumes are sold in European markets, but significant volumes are sold overseas, mainly in the Americas.10

Vlaardingen

In Vlaardingen Yara produces fully water soluble fertilizers, potting soil

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9 Source: https://www.yara.nl/over-yara/yara-in-de-benelux/yara-sluiskil
10 Source: https://www.yara.nl/over-yara/yara-in-de-benelux/yara-sluiskil/over-yara-sluiskil/productie-eenheid-sluiskil
fertilizers and a package of liquid fertilizers mainly targeting the fertigation segment. Also Yara’s commercial teams for fertilizers as well as for industrial products are located on the Vlaardingen site. The site is located nearby the largest glasshouse areas in the Netherlands and also directly on the river, with a canal network to the heart of Europe. It’s located centrally in Europe’s largest container port.\(^\text{11}\)

**Yara’s activities in Sweden**

**Köping**
West from Stockholm in Köping, nitric acid and nitrates are being produced. The capacity has recently been expanded.
With this investment, Yara further strengthens its position as the largest independent supplier of technical ammonium nitrate (TAN) globally. Normally TAN is not used for synthetic fertilizers though.

**Yara’s activities in Norway**

**Oslo**
Norway is the home country of Yara International. The company is listed on the Olso Stock Exchange and its head quarter is located in Oslo. In 2014, Yara moved into a new building in the neighbourhood Skøyen. Still their office building in Oslo is not very impressive. The production, research and development takes place in other locations.

**Porsgrunn**
Yara several units in the Herøya Industripark Park in Porsgrunn: A modern ammonia factory with a capacity of 530,000 ton per year, three nitric acid factories with a capacity of 1.3 million ton acid per year, two modern complete fertilizer (NPK) factories with a total capacity of about 2.0 million ton NPK per year and a calcium nitrate factory with a capacity of about 1 million ton per year. Together with Yara Sluiskil in the Netherlands, Yara Porsgrunn is the biggest of Yara International's production units.\(^\text{12} \ 13\)

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\(^\text{11}\) Source: [https://www.yara.nl/over-yara/yara-in-de-benelux/yara-vlaardingen](https://www.yara.nl/over-yara/yara-in-de-benelux/yara-vlaardingen)

\(^\text{12}\) [https://eng.heroya-industripark.no/about-hip/the-companies-in-the-industrial-park/yara-porsgrunn](https://eng.heroya-industripark.no/about-hip/the-companies-in-the-industrial-park/yara-porsgrunn)

\(^\text{13}\) Website Yara: [https://www.yara.no/om-yara/om-yara-norge/porsgrunn/](https://www.yara.no/om-yara/om-yara-norge/porsgrunn/)
Porsgrunn also hosts the Yara Technology Center for research and development activities and some of Yara’s corporate activities.

**Glomfjord**

Close to the pole circle, Yara has another plant producing nitric acid, NPK and calcium nitrate (CN). Half of it goes to a Norwegian customer and the other half to other European countries.

**Yara’s activities in Belgium**

Close to Saint-Ghislain in the southern part of Belgium, Yara has a production facility producing ammonia, nitric acid and nitrates. Although the plant is smaller than the ones in Sluiskil and Brunsbüttel the place is not uncontroversial. The local group Tertre Yara STOP pollution is campaigning against the effects of the plant on local people’s health.

**Yara’s production per location**


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14 Source: https://www.yara.be/fr-be/a-propos-de-yara/yara-tertre/information

15 Facebook page of the action group: https://www.facebook.com/Yara.Tertre.Pollution/
Lobby groups and influence

Overview of the organisations and networks Yara is member of:

- **Fertilizers Europe**\(^{16}\) – A lobby organisation of the European industry. In Brussels Fertilizer Europe declares membership of a remarkably long list of expert groups\(^{17}\), among them the influential Expert Group on Climate Change Policy\(^{18}\) and the High Level Expert Group on Energy-Intensive Industries\(^{19}\). (link to CEO article).

- **The International Fertilizer Industry Association** (IFA) - Accourding to their own website the IFA is “the only global fertilizer association with a membership of 480 companies in 68 countries. 45% of IFA's membership is based in developing economies. IFA Members represent 75-80% of global fertilizer production.”\(^{20}\) IFA's Members include fertilizer producers, traders and distributors, as well as their associations, service providers to the industry, research organisations, and non-governmental organizations (NGOs).

- **The Fertilizer Institute** – According to their own website the TFI is “the leading voice of the fertilizer industry, acting as an advocate for fair regulation and legislation, a consistent source for trusted information and data, a networking agent, and an outlet to publicize industry initiatives in safety and environmental stewardship.”\(^{21}\) Not only say to be the voice of the industry, they also pretend to do this in a scientific way and care about environmental stewardship, that are the most dangerous ones.

- **International Plant Nutrition Institute** – “The International Plant Nutrition Institute (IPNI) is a not-for-profit, science-based organization dedicated to the responsible management of plant nutrition for the benefit of the human family.” Sound good .. non-profit and science based, for the benefit of the human family. But it is actually just s greenwash tool if the largest fertilizer companies, some other chemical companies like Yara, Mosaic, Nutrien, Shell and their main lobby groups like Fertilizers Europe, IFA and TFI. – www.ipni.net/

Political influence of Yara

While its annual revenue of 12.9 billion USD \(^{22}\) makes Yara a relatively small player in agricultural inputs compared to companies like Bayer (annual sales of 39.6 billion in 2018 \(^{23}\)) or John Deere (37.36 billion in 2018 \(^{24}\)), Yara is unusually active in trying to frame itself as “the Crop Nutrition Company of the Future”\(^{25}\). Yara builds this brand and reputation partially through participating in a wide-range of international alliances and development projects, positioning itself as an advisor to governments around the world (but especially in the developing world) and contributing to agricultural policy decisions. Yara is an active member of groups like the Alliance for a Green Revolution for Africa, the New Alliance for Food Security and Nutrition, the Farm to Market Alliance, and The Global Alliance for Climate Smart Agriculture. Yara also pioneered the concept of “African Agricultural Growth Corridors,” a framework for development of infrastructure to

\(^{16}\) https://www.fertilizerseurope.com/
\(^{17}\) https://lobbyfacts.eu/representative/773dc9fd178f4534b5d4da1bb522eb7a/fertilizers-europe
\(^{18}\) https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3590
\(^{19}\) https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3326
\(^{20}\) https://www.fertilizer.org/Public/About_IFA/Public/About_IFA/About_IFA.aspx?hkey=870c5e5d-e662-4429-bb5e-5338c3e6a0c3
\(^{21}\) https://www.tfi.org/about-tfi
\(^{22}\) https://www.yara.com/investor-relations/latest-annual-report
\(^{23}\) https://www.annualreport2018.bayer.com
\(^{25}\) Yara Annual Report 2018
support export (and input) intensive agriculture across Africa, especially Mozambique and Tanzania. These kinds of multi-stakeholder platforms allow Yara to influence governments to adopt policies that support input-intensive agriculture - growing the market for Yara’s products - under the guise of “feeding the world” through “sustainable intensification and climate smart agriculture”.

Yara also sits in the Commission’s Gas Coordination Group on behalf of IFIEC Europe. This influential advisory group looked at security of supply and provided its members with privileged access to upcoming plans for new gas infrastructure and other Commission proposals between 2015 and 2018. As a major user of fossil gas, this provided Yara an important opportunity to protect its interest and maintain Europe’s fossil fuel dependency.

According to Yara’s own declaration in the EU Transparency Register, it spent up to €500.000 in 2018 lobbying the EU. Looking at past entries, Yara has spent as much as €11.850.000 since 2010.

Global Alliance for Climate Smart Agriculture – GACSA

60% of the GACSA’s membership is made up of fertilizer companies. The Food and Agriculture Organisation of the United Nations (FAO), claim that Climate Smart Agriculture is crucial to achieving future food security in developing countries whilst tackling climate change goals. However, this name is not only misleading as there is no concrete definition of what “climate smart” is, it also allows companies to get away with doing serious harm by presenting fertilizers and other chemically intensive practices as an environmentally friendly solution to a crisis which is infact as a result of implementing such practices in the first place. Take the example of CGIAR (the Consultative Group for International Agricultural Research), one of the international institutions which created the concept of CSA, who promote herbicide tolerant crops (such as Monsanto’s Round-Up ready crops) as a climate smart agriculture “success”, while completely ignoring the toxic effects of glyphosate, the key ingredient found in Round-Up. Not having a clear definition is a favourable strategy towards members whose investments and projects could be highly questionable in regard to “climate friendliness” and social responsibility.

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26 See e.g. articles from CIDSE, EcoNexus and the Guardian about this topic.
27 https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=10966&NewSearch=1&NewSearch=1
30 The article uses the highest bracket for declared spending. All data used is from the most recent lobbying declarations in the EU Transparency Register.
31 For 2010 Yara declared up to €100.000; for 2011 up to €150.000; for 2012 they increased to up to €600.000; for 2013 they had a record of up to €7.500.000 (which in the light of other years seems to be a mistake); for 2014, 2015 and 2016 up to €799.999 each year; for 2017 up to €599.999; and for 2018 up to €499.999.
32 http://www.fao.org/3/i1881e/i1881e00.pdf
34 https://usrtk.org/pesticides/glyphosate-health-concerns/
Corruption scandal

One of the most extreme controversies in recent years was Yara’s bribery scandal, which led to one of the highest profile corruption cases in Norwegian history. The case involved the use of bribes directed at highly placed public servants in Libya and India from 2004 to 2009, while investigators also uncovered bribes paid to a Russian supplier. More than NOK 70 million ($7.7 million) changed hands between Yara and various officials to enable them to start joint ventures in the respective countries. Yara acknowledged corruption and was fined NOK 295 million ($32.7 million).

In 2015, four top Yara executives, including former CEO Thorleif Enger and chief legal officer Ken Wallace, were convicted for bribery and given prison sentences. In 2016, the verdict for Enger and others were overturned on appeal, but Wallace’s verdict was upheld.

Future strategy

Yara’s last five years were all about expanding its network of plants and distribution centres. In the next five years the company hopes to cash in on all that investment. Who for? Shareholders of course! Yara’s annual report makes clear generating “satisfactory returns for shareholders” is a “top priority”.

Shareholders haven’t done badly from the company recently – Yara has paid out almost $2 billion to them in the last five years. But payouts have been declining in line with profits (just $240 million was paid out in 2018, compared to $517 million in the bumper year of 2016). (Source: Annual Accounts)

How to give the Norwegian state and its fellow shareholders the returns they expect? Grow and make more profit: “improving margins [i.e. profits] and growth are the two only ways of creating shareholder value” apparently. Yara says it intends to pay out at least 40% of its profits it makes over the next five years to shareholders.

35 https://www.newsinenglish.no/2014/01/15/yara-hit-with-huge-fine-for-bribery/
36 https://www.reuters.com/article/us-yara-intl-lawsuit-idUSKCN0PH1LY20150707
In a presentation to investors at London’s Tate Modern Museum in July, company bigwigs outlined Yara’s plans. Chief among them is selling more of its expensive fertilizer brands. Specifically, the company outlined plans to sell over 100 million units of its YaraVita fertilizer by 2025, compared to 40 million in 2018. Unlike most other fertilizers, YaraVita – produced in Yara’s Sumare plant in Brazil and Pocklington plant in the UK - is designed to be sprayed directly onto leaves, “developed to target the leaf or fruit, to work fast and to effectively overcome crop deficiencies”. According to Yara it will be particularly good for farmers growing “commodity crops” to be traded.

Yara also plans to bolster its work with food companies – essentially to get access to these companies’ farmers or other suppliers. It hopes to grow “crop solution” sales through food companies from 300,000 tonnes to 2 million tonnes by 2025.

But Yara’s main priority may be expanding in India. It bought the major Babrala Urea plant from Tata Chemicals in 2018. Yara has big plans for the country, which it told investors was “an area that represents a big untapped potential for our solutions, especially the YaraVita range of products.” The company also looked forward to deregulation of the Indian fertilizer market, noting “the market growth potential for premium products would increase significantly” if that were to happen. Yara’s major shareholder will no doubt help ease Yara’s way. When Hindu nationalist prime minister Narendra Modi was re-elected in May this year, his Norwegian counterpart Erna Solberg sent him her “warmest congratulations” and looked forward to “further developing our cooperation in our many fields of common interest”.

**Yara in the data-race**

Most large corporations in Agriculture see the collection of data as the new way to increase their incomes. Collect as much as possible information about the weather, the crops that have been sowed, the conditions of the crops and yields, needs and behaviour of consumers and you can increase your margins and offer new services. It is positively presented as a full package of the right fertilizers, seeds, pesticides and personalised advice that “improves farmer profitability and agricultural sustainability”. Meanwhile it is giving the company more power over the farmer. The ETC-group published a good report about this development: Blocking the Chain. From this report it becomes clear that Yara is also joining this race: “In 2017, Yara acquired a ‘nitrogen recommendation platform’ to optimise field-specific applications by modelling crop, weather and field data. Yara also picked up a sensor company that gauges moisture levels and a farm management platform. Furthermore, it has developed a tractor-mounted remote-sensing system to adjust nitrogen applications along with a handheld nitrogen measuring device.”

In April 2019, Yara opened a press release with the message that “Yara and IBM will combine world-class agronomy and cutting-edge technology to develop the world’s leading global digital farming platform.”

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39 Yara about their YaraVita: https://www.yara.us/crop-nutrition/fertilizer-products/yaravita/
40 https://www.yara.co.uk/about-yara/about-yara-uk/where-yara-operate-in-the-uk/
42 idem
45 http://www.etcgroup.org/content/blocking-chain
Obviously info in this booklet is not complete. So we encourage you to join the workshop programme in the camp and add your notes here:
Got inspired? Draw your own Yara cartoon, banner design or sticker idea here: