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# MEETING SOCIETAL CHALLENGE TOWARDS A SAFER, CLEANER AND MORE EFFICIENT PRODUCTION (a)

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## 1. Introduction

Tomorrow will be different from today. Also with respect to the way the fertilizer industry operates. Words like sustainability, globalization, free trade, climate gases, environmental friendly farming, and food safety have surfaced relatively recently. We better realize that they will impact on us. Companies that don't, will be struggling to survive.

Furthermore, the explosion in France last year of off-spec ammonium nitrate, killing 30 people and injuring more than 2000, does not help to build strong relations with the public and the regulators. The rules will be tightened. The impression is that the fertilizer industry is not a safe and prosperous employer. We are risking ending up as the steel industry, with low profitability and massive shut downs.

Unless we, the fertilizer industry, do something about it.

Needless to say, our company, Hydro Agri, has all intentions of staying a leading fertilizer company. A strong position on safety and environment is a basis for reaching our goals. In the following I will give you my views on meeting the societal challenge towards a safer, cleaner and more efficient production.

## 2. Sustainable Conduct

Since the fertilizer business is a global business, it is essential for all of us to operate with *sustainable conduct*. We cannot accept outlaws in our industry who operates without care for people and environment. Such behaviour undermines our image. A serious accident or environmental incident will not only affect the individual company in the country where it happens, but can force costly over-regulation onto our business in general.

And as we are well aware, at least in Europe, the farmer is getting a beating and the public is demanding more environmental friendly agriculture. Negative publicity easily destroys the elaborate work that has been done to put the picture right - that our industry and the use of industrially produced fertilizers are environmentally sustainable and very safe for food production.

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I take it that you will agree with me that environmental care, safety and health are important topics for the future of the fertilizer industry, as well as reliable and efficient production. We should strive towards the goal of *zero incidents*. What is then more obvious than agreeing to some basic standards of conduct?

### **3. Working Together**

Let me remind you of what you have agreed to. IFA has, on your behalf, signed the UNEP International Declaration on Cleaner Production, which says:

✓ *We recognize that achieving sustainable development is a collective responsibility. Actions to protect the environment must include the adoption of improved production and consumption practices.*

✓ *We believe that Cleaner Production and other preventive strategies such as eco-efficiency, green productivity, and pollution prevention are preferred options. They require the development, support and implementation of appropriate measures.*

✓ *We understand Cleaner Production to be the continuous application of an integrated, preventive strategy applied to processes, products and services in pursuit of economic, social, health, safety and environmental benefits.*

✓ *To this end we are committed to:*

- *leadership (using our influence)*
- *awareness, education and training (building capacity)*
- *integration (encouraging the integration of preventive strategies)*
- *research and development (creating innovative solutions)*
- *communication (sharing our experience)*
- *implementation (taking action to adopt Cleaner Production)*

Nice words. But they hardly help building societal trust and confidence in our operations at the local site level. However, it is important to agree on some common values within the industry, and work together to resolve common problems.

We should work together, on a global scale, to further improve the safety and to resolve the environmental challenges of our industry. This will help us in convincing the regulatory authorities in making the right rules. This will strengthen the case for fair trade and avoiding protectionism. And most importantly, this will give better operational efficiency and productivity gains, which ultimately will make us more attractive with the investors.

We cannot, however, expect that anybody will believe in us unless we perform as expected and consistently deliver good results. This is the door-opener for building trust and confidence. Only then will the regulators listen to our arguments and advice for safety manage-

ment, technical standards, operating procedures and environmental protection. Only then will the investors knock on our doors.

The industry must also be prepared to be their own watchdog and react towards those *not* behaving with sustainable conduct. It is evident that parts of the industry must take the burden of upgrading their operations. Otherwise they cannot be considered sustainable, and should disappear.

The industry and the regional industry associations should work closer together. IFA can act as a convener. We are prepared to contribute. Some of the issues on which we can exchange views, are:

- ✓ health, environment and safety management principles and operational practices
- ✓ definition of best available techniques for pollution prevention and control, and associated achievable emission levels for older and modern plants
- ✓ abatement of greenhouse gases (global warming)
- ✓ benchmarking of safety and environmental performance
- ✓ technical standards for ammonia storage tanks and inspection
- ✓ occupational exposure limits
- ✓ materials HSE data sheets
- ✓ impurities in fertilizers and their health effects

Such collaboration must not only reflect a will to come to some written agreements, but the standards and operating practices must also be *implemented* by the companies concerned. I definitely see the need to "beef up" the authority of the industry associations, so that these are not just nice meeting places.

#### **4. Local Actions at Production Sites**

As some wise man said: *"the proof of the pudding is in the eating"*, our societal standing depends on how we perform. The most visible proof is the performance of our production plants, whether it concerns accidents, environmental emissions, or job opportunities. This gives us our *license to operate*.

Let me also remind you of the stockmarket's opinion (Dow Jones' Sustainability Group Index):

*"Sustainability companies not only manage the standard economic factors affecting their businesses, but the environmental and social factors as well. There is mounting evidence that their financial performance is superior to that of companies that do not adequately, correctly and optimally manage these important factors."*

Unfortunately, every month, somewhere at one of the 20 production sites of Hydro Agri, something goes wrong - an injury to a worker, an environmental incident, or a technical

breakdown. The life of a plant manager is demanding. Failing to score successfully on our 15 minimum requirements for HSE management can be detrimental for his career.

Our safety record today is close to 3 lost-time injury per million hours worked, including contractors working on site, - a level generally in line with other major international companies, but trailing those who continuously obtain zero accidents. They are characterized by strong leadership, wide employee involvement, and strictness in following procedures.

We have learnt that things are connected: Starting with improving our safety record, we find that other improvements follow - housekeeping, maintenance, plant availability, emission control, lower costs, product quality, and most importantly: happier customers, better profitability and more interest from shareholders. In Hydro we believe that management drive, individual awareness and teamworking are keys for success. Working safe is a condition of employment, and *zero tolerance* to substandard conditions and practices is agreed.

Our 15 SHE management requirements are:

1. All sites shall have a high standard of housekeeping.
2. All sites shall establish annual HSE targets with action plans.
3. All sites shall have a Safety Committee consisting of the site manager and those directly reporting to him/her.
4. All employees shall participate in a safety meeting at least once every year.
5. The HSE requirements of jobs shall be specified, and training programs shall be established to achieve and maintain the level of competence required.
6. All jobs shall be evaluated with respect to safety, and a job safety analysis shall be carried out for those jobs that are considered critical. Critical jobs shall be described in job procedures, with prescription of the use of any special personal protective equipment.
7. The use of personal protective equipment shall be specified for employees, contractors and for visitors.
8. A preventive maintenance system shall be in place.
9. All modifications of process systems and process equipment shall be approved based on a systematic review of the HSE issues. Normally, a Hazard and Operability study shall be carried out for process modifications.
10. All sites shall operate a work permit system.
11. All sites shall operate a safety passport system for contractors.
12. All accidents and near misses incidents shall be investigated, with the subsequent implementation of corrective actions. For accidents and near misses classified as 'major', the investigation shall be carried out by senior people from other parts of the organisation.
13. All sites shall have an emergency plan. This shall be tested at least annually.
14. Line managers shall follow up the HSE performance (at meetings, monthly performance review, managers' walk-observe-talk, internal audits)
15. All sites shall work closely with the worker representatives to create individual ownership and participation.

An important part of our work in Hydro is benchmarking and the exchange of knowledge and experience. This is the advantage of being a company of a certain size with many plants. The benchmarking also makes accountability stick. Nobody wants to be at the bottom of the rankings.

We are also emphasizing the need for follow-up by means of audits and inspections. We have typically three layers of audits: (1) done locally by people in the plant, (2) by line managers from other sites, and (3) by the HSE professionals.

Like many of you, we are also certified to ISO standards. Having reviewed some serious accidents lately, it is evident to me that systems, procedures and meetings are not enough to reach zero. We must put more emphasis on the *correct application* of the procedures, and taking time to assess the job safety risks.

And we must take control of the contractors on site.

## **5. Communication**

Plant managers are clever people. They should not only be masters of technology, excellent team leaders and motivators, making all the right decisions in no time, and getting everything done at zero cost, but should also be a professional in communication. We are practising different methods for communication: annual open door visits to plants, regular meetings with external environmental interest groups, open discussion meetings with politicians and regulators, briefings for journalists, etc. In addition, we issue environmental reports stating facts and figures about our performance versus permits.

I strongly believe such activities are necessary.

## **6. Emission Targets**

The regulatory standards on emissions and pollution control can vary widely from country to country and even between regions within the same country. The emission permit is often site specific. However, some overriding principles have been or are being established on international and national level, such as the emission limits adopted by the World Bank, the definition of Best Available Techniques for pollution prevention and control in the European Union, the TA Luft values in Germany, etc.

The European producers have understood the importance of talking with one voice for setting standards. In response to some unrealistic suggestions from consultants, EFMA in 1995 issued a series of booklets on achievable emission levels for modern and for older fertilizer plants (ammonia, nitric acid, sulphuric acid, phosphoric acid, urea, UAN, AN, CAN, and NPK processes). The levels are not "relaxed", but are considered necessary for future accep-

tance of our industry, in Europe. We are now annually benchmarking our units towards these EFMA standards, giving guidance on where to improve. When the booklets were launched, EFMA achieved recognition by the environmental authorities as a responsible organisation. As a consequence, EFMA is frequently invited to the table of discussions of future regulations. In Hydro we use EFMA's recommendations in the local negotiation of permit levels.

I believe we should not limit this to a regional issue. A common global approach by the fertilizer industry is the next step. IFA has taken a move in this direction and initiated a benchmarking of emissions on a global scale. More than 50 companies participated and a new benchmarking is due next year. This is a way of improving the credibility of our industry, in line with the UNEP Declaration on Cleaner Production.

## **7. Kyoto - Threats or Opportunities?**

I must also say a few words about the Kyoto agreement on global warming. This represents a major challenge for the fertilizer industry. Our production and our products are associated with emissions of large amounts of greenhouse gases, like CO<sub>2</sub> and N<sub>2</sub>O. We can see regulatory permits and emission taxes lurking in the horizon, but at the same time the discussion of tradable emission rights presents opportunities. These opportunities should be better explored by the industry.

In fact, fertilizers and agriculture should be recognized as a means for *reducing* greenhouse gas emissions. Fertilizers stimulate plant growth and the photosynthesis enables significant amounts of CO<sub>2</sub> to be captured by the plants. Furthermore, the solar energy stored in the plants is 5-10 times higher than the energy used for making the fertilizer. If care is taken to utilize plant waste material as an energy source, the production and use of fertilizers will reduce the world-wide greenhouse gas emissions. However, our unique position as a "green" industry has not helped us with the regulators and the public. It seems that we are not very clever in positioning ourselves.

## **8. Beyond the Factory Gate**

The Toulouse explosion in France last year, the environmental impacts from use of fertilizers, and the growing concern of impurities in input material for food production, raise questions on the product stewardship of the fertilizer industry and the distributors.

It is expected of us that we produce products that are safe to handle and use, and that the environmental impacts are under control.

In order to meet our societal responsibility, we need to go beyond the factory gate. In short, we need to address the following issues related to product stewardship:

- ✓ possible impurities in the raw materials and additives we utilise for fertilizer production, and their effects on health and environment

- ✓ safety risks associated with the handling and moving of products through the supply chain to the farmer, providing practical advice on safe storage
- ✓ risks associated with reject fertilizers and waste material, both at the factory and in the supply chain, with guidelines on how to deal with the possible hazards
- ✓ providing assurance that the products satisfy the fertilizer regulation and quality criteria of the customer
- ✓ traceability of products, in order to trace a producer or distributor in case of a complaint or an adverse event
- ✓ advice to farmers on correct fertilization, for environmental friendly food production.

These are just a few. They are not new topics, and a structured approach has been implemented in many regions. But more is expected, and it is expected that we deliver. Otherwise others will develop rules for us, and who knows what will be decided for us, which we will have to comply with. I like much better to be behind the steering wheel. Don't you?

So let us take charge of this within the industry.

## **9. Action Points for You and Me**

Let me summarize my presentation by the following request for action:

1. React to sloppy activity inside your own company - they threaten your company's profits and future sustainability. Be demanding on your fellow workers.
2. React to sloppy and dangerous operations in other companies - they threaten the fertilizer industry's future.
3. Don't allow lousy contractors destroy your and the fertilizer industry's reputation.
4. Communicate your performance to your neighbours and to the regulators.
5. Participate in creating a common position for the fertilizer industry, in areas of safety and environmental protection.
6. Take charge of product stewardship - our interests is not limited to the factory gate.