

Newsletter no. 2 / 2007

Summer greetings with news about the Water Framework Directive.

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- Conference on the objectives that we expect to achieve.

The starting signal for the idea stage sounded on 22 June. The AGWAPLAN-concept is much talked about. Here is an example from the webpage of the Aarhus Environment Centre, Aarhus: Water and Natura2000 planning in the Aarhus Environment Centre.

In East Jutland we will establish water plans for among other places the Gudenaa with its many lakes, the coastal waters of Randers Fjord in the north to Horsens Fjord further south, and to Samsøe in the south. Further we shall make Natura 2000 plans for valuable natural areas as Mols Bjerger and the woods around Silkeborg as well as for the specially chosen animal- and plant species as the otter, the green toad, corncrake, and fen orchids.

One of the water areas is Norsminde Fjord south of Aarhus which by 2015 must have achieved a good environmental state and thus fulfil the requirements for being an EU bird protection area. Provisional numbers show that fulfilling the environmental requirements will demand a further reduction of nitrogen discharge from agriculture, and a purification from phosphorus of the discharge water from country properties that are not furnished with sewers. This combined with grazing or hay harvesting in the meadows will improve living conditions for animals and plants in and around the bay, reduce the amount of pollution in the Aarhus bay and lessen the danger of deoxygenation.

The Aarhus Environmental Centre is a partner in an EU project called AGWAPLAN, www.AGWAPLAN.dk, where one of the project areas is Norsminde Bay. Through co-operation with the Danish Agricultural Advisory Service (National Centre), agricultural research (the Faculty of Agricultural Sciences, Aarhus University), and 22 farmers the project will show how the environmental requirements of the water plan can be achieved and how to find the best solutions taking the water environment as well as agriculture into consideration.

The project's corner stone is to provide the best possible knowledge about agriculture and environment in order to enable the making of an overall advisory package for the individual farm concerning agriculture and water environment. It focuses on the individual farmer's requirements as to the running of the farm and the his financial circumstances as well as the general objective of fulfilling the requirements of the EU Water Frame Directive. As an example it could be mentioned that a better utilisation of nitrogen in the field leads to a better harvest, while reducing the degree of pollution in the water environment. Just as wetlands in the catchment area can remove nitrogen and reduce pollution in the bay. The experience obtained from AGWAPLAN with setting and converting environmental objectives into action and a good co-operation between the partners in the project will be used as a model for the ongoing work. See the whole description here: <http://aar.mim.dk/Nyheder/SenesteNyheder/pressemedvogn-220607.htm> (in Danish).

For further information on the idea phase see: www.vandognatur.dk.

Conference on which objectives we can expect to achieve

A cross ministerial report "[A professional review of the means in relation to the implementation of the water frame directive](#)" highlights how Denmark can carry out the Water frame directive in a cost effective way. The report is based on professional analyses performed by the Faculty of Agricultural Sciences, the National Environmental Research Institute, and the Institute of Food and Resource Economics.

We still do not know the final objectives, but with the knowledge we have at present we estimate that the objectives can be obtained relatively cost effectively by making use of the following means:

- An extensification of river valleys of 45.000 ha.
- Catch crops in further 115.000 ha, 45.000 ha of these applied through reploughing of grass.
- Ecological cattle farming on 19.000 ha.
- Hay harvesting instead of grazing on 23.000 ha.
- Commercial fertilizer instead of deep litter on 65.000 ha.
- Ammonium fertilizer on 14.000 ha.

Carrying out the above mentioned initiatives is calculated to cost from 116 to 460 millions DKK per year. However, this estimate may be considerably higher when taking all elements of the implementation into account.

Excursion to Lund in Sweden on 11 to 12 April, 2007

Focus on small wetlands

Early in the morning on 11 April a delegation of 14 people set course towards Sweden – more specifically towards Lund. On the first day we got a picture of how the Swedes go about implementing the water frame directive. There were many similarities but differences as well – differences which of course are due to the different natural conditions of the two countries. An example of this could be that in Sweden you have to plan separately for lakes of more than 100 ha while we in Denmark talk about planning separately for lakes over 5 ha!

On the second day we went on an excursion. Here we saw how wetlands are established. The main idea is that they want to create smaller wetlands an idea which is quite different from the Danish way of working where we prefer larger wetlands. The idea of creating small wetlands has inspired us to establish a small wetland within the framework of AGWAPLAN at a farm by Norsminde Fjord.

Several farmers have expressed an interest in being able to establish their own small "water purifying plant" for their own land instead of taking part in the big chrome plated projects.



Newly established wetlands called "Askeröds Mose". The farmer liked the idea that he cleaned the water from his own land before it continued into the river system.

Next stop: Nitrogen loss

The AGWAPLAN-project is well on its way to being translated into even better farming.

By Troels Grønbæk

Loss of nitrogen.

Loss of nitrogen is one of the points on the list of weaknesses in the "environmental SWOT" that farmer Jens Gammelgaard and his son Allan, has prepared for today's meeting in the AGWAPLAN-project.

This meeting is meant to clarify the family's plans for the farm, introduce the project tools for the coming environmental efforts, and to pinpoint which means must be taken into use in order to reduce nitrogen derivation from the farm.

And nitrogen is what it is about during this phase of the AGWAPLAN-project that covers the area around Norsminde Fjord – into which some of Jens Gammelgaard's fields drain. So yes, loss of nitrogen is one of his weaknesses, although a weakness he shares with most of his colleagues. But as a participant in AGWAPLAN he has decided to do something about it. Jens Gammelgaard's wife, Susanne, takes part in the meeting as well. Decisions in connection with AGWAPLAN may have extensive consequences for the running of the farm, and the couple has always made major decisions together.

Meadows as water purifying plants

Participating in today's meeting is also project coordinator Irene Wiborg from the National Centre, Plan & Environment and environmental advisor Helge Kjær Sørensen, from LRØ, who is in charge of the meeting.

First point on the agenda is the environmental SWOT. It begins with listing the strengths of the farm, of which there are many. Some examples: good financial circumstances, a will to invest, own biogas plant and compact land.

With that as the starting point father and son mention several possible initiatives:

- We have a stream that drains a large area. The meadows around the stream can be converted into mini wetlands, which could act as a water purifying plant for the property, Jens proposes.

Allan points to the good results achieved by utilizing remnant nitrogen via catch crops. An experiment with planting oil radishes before spring barley has made the latter fit to burst – bluegreen from nitrogen. It certainly tempts us to do more of the same, he states.

Not just environment

And in this way the participants work through the strengths, weaknesses, possibilities and threats for the environmental efforts on the farm. They don't stick to talking environment. As Helge Kjær Sørensen remarks: "you get around a lot of subjects".

Now it is time to take a closer look at the tool DIS – the software that plays a main role for AGWAPLAN. The program collects all production- and environmental data from the property and present them as a whole. The idea is to show how the two aspects play together, what will happen if something changes and where you get the most environment *and* production for your money.

Jens Gammelgaard is enthusiastic after the demonstration that takes place on the office pc:
- It is interesting to see things put together that way. If data from all farms was entered into the system – and if it was utilized – it would really mean a lot for the environment.

Action plan on the way

After the environmental SWOT and the presentation of DIS the day of reckoning arrives. Helge Kjær Sørensen takes a GAP-manual (Good Agricultural Practice) and asks:

- What are you prepared to do now in order to reduce loss of nitrogen – and what might you do in the long run?

The possibilities – and there are many – are evaluated. Some are already practiced by the family, others they find natural as a supplement, and others they decline.

Helge Kjær Sørensen takes notes and when the list is complete he promises the family an action plan supplemented by a resume of the talk about the environmental SWOT.

And shouldn't we now go and take a look at the biogas plant? Jens Gammelgaard suggests.

The farm in a few words

In 1979 Jens Gammelgaard bought Enggarden with then 18 ha. Today he runs 425 ha and a production of 440 sows and 17.000 porkers corresponding to 688 AU.

There is no way to increase production within the existing framework. By 1 January 2013 the sow production will be discontinued in the present buildings which are placed close to the village Gosmer. The plan is to move production into the open land while simultaneously expanding.



Jens (left) and Allan Gammelgaard show the borders of the fields to Helge Kjær Sørensen, LRØ.

That certainly must be something for us?

New award for environmental technology

Danish Agriculture and the Danish Ministry of the Environment are looking for inventive people.

Danish Agriculture and the Danish Ministry of the Environment have collaborated on the establishment of a new award: "Agriculture's Environmental Technology Award" which will be awarded for the first time in November. The award can be won by a farmer or a group of farmers who have taken a lead in the use of environmental technology. Focus will be on "innovative solutions which introduce new technology or combines known technology in new ways". The candidate or candidates must have carried out a project in one of the following fields: stables and stable technology, handling of fertilizers and storage of fertilizers, fertilizer application or feeding.

The project must be primarily non commercial.

The deadline for handing in proposals is 15 September. When the award is handed out in November, the winner can look forward to receiving a piece of art of a value of up to DKK 10.000.

Webpage info: remember to check www.AGWAPLAN.dk.

Have you forgotten your log-in, or do you find it difficult to find your way around the page then contact Lotte Buchtrup Hornbek, tel.: +45 8740 5456.