



# The Danish Agricultural Advisory Centre

## *Development of a Code of Good Agricultural Practices, Republic of Lithuania*

**Draft Plan for Farm-level Implementation**

The Danish Environmental Protection Agency,  
contract no. M 124/ 024-0077

DAAC Project # 8760

September 2000

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Code of Good  
Agricultural Practices,  
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## ABBREVIATIONS AND ACRONYMS

AP	Accession Partnership
AU	Animal Units - number of animals equivalent to production of 100 kg N ex storage per year
CGAP	Code of Good Agricultural Practices
DAAC	The Danish Agricultural Advisory Centre
DEPA	The Danish Environmental Protection Agency
EU	The European Union
FADN	Farm Accountancy Data Network
FO	Farmers' Organisations
FYM	Farm yard manure
GAP	Good Agricultural Practices
HELCOM	The Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area
ISPA	Pre-accession Instrument for Structural Policies
LAAS	The Lithuanian Agricultural Advisory Service
LAU	The Lithuanian Agricultural University
LFU	Lithuanian Farmers Union
LIA	Lithuanian Institute of Agriculture
LIWM	Lithuanian Institute of Water Management
MEP	Ministry of Environmental Protection
MoA	Ministry of Agriculture
NOVABOVA	NOVA - The Nordic Forestry, Veterinary and Agricultural University, and BOVA - The Baltic Forestry, Veterinary and Agricultural University
NPAA	National Programme for Adoption of the Acquis.

Phare	European Union programme for economic support to Central and Eastern European countries
PPP	Plant Protection Product
PSC	Committee for Co-ordination of Environment-Agricultural Matters. An inter-ministerial committee, that also serves as steering committee for the project.
SAPARD	Special Accession Programme for Agriculture and Rural Development
SPPS	State Plant Protection Service
TAIEX	The Technical Assistance Exchange Office, Brussels

## PREFACE

DAAC and LIWM have in co-operation with experts of many Lithuanian authorities, institutions and organisations since January 1999 been working with the preparation of a *Code of Good Agricultural Practices* in conformity with the provisions of the EU Nitrates Directive (91/676/EEC), which is part of the Lithuanian Acquis. The activities have kindly been funded by The Danish Environmental Protection Agency, as well as by The Ministry of Agriculture and The Ministry of Environment of The Republic of Lithuania

The Lithuanian Government has, together with the EU Commission, drawn up an [Accession Partnership](#), AP, which says ***“It should be recalled that incorporation of the acquis into legislation is not in itself sufficient; it will also be necessary to ensure that it is actually applied to the same standards as those which apply within the Union.”*** In this connection we have considered it natural to follow the formulation of the actual codes up by expressing our ideas for the practical farm-level implementation of the GAP. Our hope is that these ideas could be of value for the formulation of the future agro-environmental policies.

The present *Draft Plan for Farm-level Implementation* has been prepared by experts of DAAC and commented by experts of LIWM.

Both the *Code of Good Agricultural Practices* as well as the *Draft Plan for Farm-level Implementation* can be found in English versions on the homepages <http://www.lr.dk/fertilising-baltic> and <http://www.baap.lt>.

The Danish Agricultural Advisory Centre  
September 2000

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# 1 SUMMARY

## 1.1 General background

The present *Draft Plan for Farm-level Implementation* of the Code of Good Agricultural Practices in Lithuania is one of the results of the project “**Development of a Code of Good Agricultural Practices, Republic of Lithuania**” supported financially by The Ministry of Agriculture, The Ministry of Environment of The Republic of Lithuania and The Danish Environmental Protection Agency.

This report is a Draft Plan for Farm-level Implementation.

Due to the *Reinforced Pre-Accession Strategy (Agenda 2000)* many Lithuanian activities, concerning accession to EU, have been accelerated during the period of the project. This means that parallel to this implementation plan a lot of planning and implementation consideration have been carried out in other form.

The work with the formulation of the actual codes has been so laborious that neither LIWM nor DAAC have had capacity to cover a detailed preparation, and also due to the fact, that the DEPA funded project “**Long-term Assistance in the Transposition and Implementation of the EU’s Nitrates Directive in Lithuania**” will develop a strategy for implementation of the Nitrates Directive. This strategy is expected to be - thorough going (but only covering the codes that have direct relation to the Nitrates Directive), and will for the relevant codes take its offspring in the present Draft Plan for Farm-level Implementation.

We would further like to stress, that our aim has been to emphasise on the farm-level implementation rather than on matters relating with necessary actions for establishing of monitoring and sanctioning structures.

The CGAP consists of 75 different codes but this *Draft Plan for Farm-level Implementation* concerns only 41 voluntary codes (not based on present Lithuanian legislation) pointing at appropriate or feasible instruments, institutions and time schedules for farm level implementation. There has in this connection been identified 10 instruments, 6 institutions and 3 time schedules, that are considered to be appropriate or feasible. Instruments are divided into regulatory measures, advisory measures and financial measures.

## 1.2 Summary of recommendations

Statistically summarised it has been recommended that the following instruments, institutions and time schedules are employed:

INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
Regulatory measures			Advisory measures			Financial Measures				LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU and agr. colleges			
Cabinet Regulation	Minister Instruction	Advisory	Training	Information	Excise taxation	Foreign trade	Direct subsidies	Soft credits	30 years							6 years	2 years	
1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	1	2	3
	24	23	16	17	37	2		8	5	35	15	7	23	3	33	1	26	15

Members of the Steering Committee for the project have approved the suggested instruments, institutions and time schedules for implementation of the codes.

It should especially be noted, that we in general have found it relevant to point at LAU and agricultural colleges when we point at LAAS as relevant institution, and *vice versa*; we find it natural, that both coming farmers and agricultural students are taught subjects the advisory service is working with and *vice versa*.

The Lithuanian *Code of Good Agricultural Practices* is not indicating whether codes are having direct relation to the Nitrates Directive. We have, however found it relevant in connection with the elaboration of this *Draft Plan for Farm-level Implementation* to stress these codes, which is done by shadowing the cell in the tables in section 5 with the code number. There are 23 such codes. We have found it relevant to suggest that regulatory measures are employed for the implementation of these codes in vulnerable zones (yet to be designated).

During the elaboration of the *Draft Plan for Farm-level Implementation* it has become obvious that some of the codes would benefit from a more precise formulation, and it is therefore suggested that all the codes are carefully evaluated in connection with a future revision of the Lithuanian Code of GAP.

Due to the above mentioned comments

- it can only be recommended, that selected codes are transposed to law

(mandatory measures) in vulnerable zones (yet to be designated), rather than the entire collection of the 75 codes;

- it is very important that some codes in the future will be re-formulated, so it can be clearly examined whether the codes are implemented on a farm (i.e. controlled whether the farmer follows the rules); and
- it is very important that codes are formulated, so it clearly by environmental indicators can be expected that the implementation of a code will have an environmental effect.



Picture 1 *Presentation from Ministry of Environment, by Minister, Mr Danius Lygis, who was then Vice Minister, at Inception Seminar in Kedainiai on 18 March 1999. The Inception Seminar presented the expert groups for the idea of a Draft Plan for Farm-level Implementation as a part of the outcome of the project.*

## 2 INTRODUCTION

The present *Draft Plan for Farm-level Implementation of the Code of Good Agricultural Practices* in Lithuania is one of the results of the project “**Development of a Code of Good Agricultural Practices, Republic of Lithuania**” supported financially by The Ministry of Agriculture, The Ministry of Environment of The Republic of Lithuania and The Danish Environmental Protection Agency.

The background for the *Draft Plan for Farm-level Implementation* is that the technical content of the project application suggested, that there by project end would be *inter alia* the following tangible results:

- A Lithuanian *Code of Good Agricultural Practices* is prepared and published.
- A plan for implementation of a Lithuanian Code of GAP has been elaborated.
- A suggestion for a related agricultural subsidisation scheme is elaborated as a part of the plan for implementation, as a part of Lithuanian EU pre-accession preparation.

It is also mentioned, that one project indicator would be that “A plan for implementation has been elaborated and adopted by Committee for Co-ordination of Environment Agricultural Matters.”

It is emphasised that this report is a *Draft Plan for Farm-level Implementation*.

During the period of the project many Lithuanian activities, concerning accession to EU, have been accelerated due to the *Reinforced Pre-Accession Strategy (Agenda 2000)* and due to the fact, that the DEPA funded project “**Long-term Assistance in the Transposition and Implementation of the EU’s Nitrates Directive in Lithuania**” will elaborate a strategy for implementation of the Nitrates Directive. This means that parallel to this draft implementation plan a lot of planning and implementation considerations have been carried out in other form.

The strategy for implementation of the Nitrates Directive is expected to be throughout elaborated (but only cover the codes that have direct relation to the Nitrates Directive), and for relevant codes take its offspring in the present *Draft Plan for Farm-level Implementation*.

The work with the formulation of the actual codes has been so laborious that neither LIWM nor DAAC have had necessary remaining project allocations to cover a more detailed preparation.

We would further like to stress, that our aim has been to emphasize on the farm-level implementation rather than with matters relating with

necessary actions for establishing of monitoring and sanctioning structures.

The work has been guided and supervised under the auspices of the *Project Steering Committee* headed by Director of department, Dr Antanas Maziliauskas, Ministry of Agriculture, Vilnius.

This *Draft Plan for Farm-level Implementation* includes a set of recommendations addressed to the respective Lithuanian authorities.

It is the hope that this *Draft Plan for Farm-level Implementation* will constitute a basis for the process of implementation of *l'Acquis Communautaire* in general and the implementation of the Nitrate Directive (91/676/EEC) in particular.

As the implementation of the *Codes of Good Agricultural Practices* has strong economic, social, structural and administrative aspects we imagine that the respective authorities will judge the recommendations and use them as instruments in the *Accession Partnership* discussions with EU, in the process to identify specific co-financing opportunities and in the future financial support schemes for agriculture.



Picture 2 *Dr Torben Bonde, from The Danish Environmental Protection Agency, and who is the Danish representative in EU's Nitrate Committee, makes a presentation on the Inception Seminar 18 March 1999 at The Lithuanian Institute of Water Management.*

### 3 ORGANISATION OF THE WORK WITH PREPARATION OF THE DRAFT PLAN FOR FARM-LEVEL IMPLEMENTATION

This *Draft Plan for Farm-level Implementation* of the Lithuanian Code of Good Agricultural Practices has been elaborated in order to assist the respective authorities in Lithuania and the National Contact Point to find the most adequate and transparent solutions to the Lithuanian needs and conditions.

Due to the *Reinforced Pre-Accession Strategy (Agenda 2000)* many Lithuanian activities, concerning accession to EU, have been accelerated during the period of the project. This means that parallel to this implementation plan a lot of planning and implementation consideration have been carried out in other form.

Clear definitions have been found, and it is the future task to incorporate findings in the different projects into one final Implementation Plan.

This work has been based upon background papers prepared by international and national experts. We specially refer to the final report of "*Elaboration of a Draft Framework of a Code of Good Agricultural Practices*" co-ordinated by Dr. Torben Bonde, "*Guide to the Approximation of European Union Environmental Legislation*" and other relevant publications from the European Commission (see list of references).

Different schemes of concordance have been used, in order to safeguard the compliance with The Nitrates Directive and the HELCOM annex on agriculture. The plan for implementation has been prepared *inter alia* under consideration of ways to

- develop administrative, monitoring and enforcement procedures;
- designate responsible national/regional or local authorities (Competent Authorities) (CA's);
- ensure that division of responsibilities is clearly defined;
- establish and implement policies programmes and management systems;
- define which/if parts of the codes should be transposed into national law;
- allocate funds;
- establish timetables; and
- define reasonable transition periods.

The Code of Good Agricultural Practices consists of 75 codes:

Chapter no.	Chapter name	Number of codes	Number of codes, that are based on present Lithuanian legislation
2	Agriculture and Environmental Protection	14	4
3	Liming and Fertilisation	9	0
4	Plant Protection and Use of Pesticides	15	4
5	Animal Production	10	9
6	Storage and Application of Animal Manure	6	2
7	Management of Wastes and Wastewater	6	5
8	Land Reclamation, Biological Diversity and Landscape	15	11
<b>Total</b>	<b>Code of GAP</b>	<b>75</b>	<b>34</b>

Within the 75 codes 34 are based on present legislation, and therefore presumably already implemented. These 34 codes are shown in shadowed boxes in the tables in section 5 below, and on basis of their nature compulsory for all farmers. The rest of the codes will be implemented voluntarily by the farmers, but can be transposed to Lithuanian law for farms in vulnerable zones (yet to be designated). The present *Draft Plan for Farm-level Implementation* concentrates on the 41 codes to be implemented voluntarily.

## 4 IMPLEMENTATION METHODS

The aim of each code is to balance profitable agriculture environmentally friendly production methods.

Apart from information there are generally two feasible ways for reaching another situation as we would like with the codes; to provide financial incentives or financial sanctions. If the new situation by nature is economically superior to the present situation, then advisory, training and information campaigns directed to the farmers should be prioritised rather than more expensive financial incentives, i.e. provisions of subsidies and soft credits. Financial sanctions or penalties require that these are based on legislation.

It is important to consider how to prioritise the less expensive advisory, training and information campaigns directed to the farmers, and the more expensive provision of soft credits, subsidies etc.

The selection of implementation **instruments** is of fundamental importance.

Thereafter it is relevant to assess the **institutions**, that would be relevant to “employ the instrument”, and to estimate the **required time** for the instrument to become fully effective.

Agenda 2000 and the Lithuanian Accession Partnership, the AP, become in this context significant:

Outlined in the Agenda 2000 the pre-accession strategy focuses on the specific areas of The Acquis where the candidate countries still have work to do. The strategy consists of the following programmes and instruments:

- The refocused Phare programmes.
- SAPARD (assistance to agriculture and rural development).
- ISPA (regional policy).

SAPARD and ISPA will have effect from year 2000 and until date of accession.

The EU indicative budget allocations for all three pre-accession instruments from the year 2000 (€, million per year) are:

- Phare                      1,500
- SAPARD                    500
- ISPA                        1,000

The Lithuanian Accession Partnership (AP) is based on Agenda 2000, and

sets out

- the assessment of the priority areas in which Lithuania needs to make progress; and
- the ways in which Phare will support the Lithuanian efforts.

On basis of the AP there has been prepared a National Programme for Adoption of the Acquis (NPAA). The NPAA sets out

- the legislative, administrative and operational adjustments; and
- an implementation timetable.

An Institution Building Plan is an integral part of the NPAA. The progress made will be recorded in an annual report written by the Commission (the Commission's Opinions). The overall allocation may be reviewed in the light of performance, changing requirements and progress in implementing the AP. Each year the Commission signs a Financing Memorandum with the candidate country. The Memorandum identifies the projects to be carried out.

Based on the above mentioned comments the following section will be a discussion of attainable instruments, conceivable institutions and reasonable time schedule for implementation of the codes.

## 4.1 Instruments

The purpose of this section is to discuss attainable instruments, relevant for the implementation of the codes:

- **Regulatory measures** (i.e. sanctions or penalties based on legislation).
- **Advisory measures** (i.e. advisory, training and/or information campaigns).
- **Financial measures** (i.e. subsidies or soft credits).

The *Draft Plan for Farm-level Implementation* is based on the view, that for most codes it would be relevant to implement them through a combined use of different measures.

### 4.1.1 Regulatory measures

These are the juridical framework of agriculture, i.e. legislation and codes, which must be in harmony with *inter alia* EU regulation.

Any regulative measure describes the moral of the society and could be perceived as a guaranty for "catching" of dissidents from the norm.

Regulatory measures are relevant if the new situation, as described by the specific code, can be considered as attractive for the nation from a combined economical, environmental and social point of view. This includes also legislation that Lithuania has to implement according to its status as associated EU member and as full HELCOM member.

If a regulatory measure is unattractive for the farmer from a combined economical, environmental and social point of view, then it is not realistic to believe these measures are sufficient; they must be combined with advisory and/or financial measures.

Regulatory measures existing in Lithuania:

- **INSTRUMENT 1: Parliament law**
- **INSTRUMENT 2: Cabinet regulation**
- **INSTRUMENT 3: Minister instruction**

It is natural that the Ministry of Agriculture and the Ministry of Environment will be the pivot institutions during the transposition period and the process of application and enforcement. It is the responsibility of these authorities to take binding measures, which fully carry out the letter and the spirit of EU environmental law.

It is relevant to mention, that the Ministry of Environment (MEP) and the Ministry of Agriculture (MA) receive support from different bilateral and multilateral sources:

## Denmark

- The project “**Long-term Assistance in the Transposition and Implementation of the EU’s Nitrates Directive**” is supported financially by DEPA and undertaken by Danagro in co-operation with MEP. The project will “...*draft necessary legislation and ministerial orders on, e.g. periods when land application of fertilisers is prohibited, capacity of storage vessels for livestock manure, and limitation of the application of fertiliser*”.
- DEPA is annually administrating funds of a magnitude of DKK 800 mio for projects in Central and Eastern European countries. The funds are especially used for EU law approximation, institutional development, introduction of cleaner technologies etc. according to separate country programmes, and the activities that can be funded is not limited to agriculture.

## EU

- Phare - New focus on the Phare programmes. EU contribution up to 75%:

- Help the administration to acquire the capacity to implement the Acquis (30% of the Phare budget).
- Mobilising investments to bring up major infrastructure to EU standards (70% of the Phare budget).
  
- Phare Twinning - Twinning is pivotal to the entire institution-building process. Twinning will focus on training specialists in the fields of law provided as long-term secondments. Twinning involves two partners:
  - A bid (proposal by expert from member states to provide services).
  - A demand (candidate countries request for support).
  - Both partners must usually submit the Twinning Application jointly to the Commission.
  - Projects emerge from the AP and will be selected for Phare funding according to the Financing Memorandum.
  
- TAIEX - The Technical Assistance Exchange Office, Brussels, is partly financed by Phare funds. The office deals with:
  - Public administration in applicant countries.
  - Screening (compliance between EU and national legislation).
  - The office offers:
    - Training seminars.
    - Study tours.
    - Visits by experts.

#### 4.1.2 Advisory measures

The implementation of the GAP codes requires an intensive use of the Agricultural Advisory Service system.

Advisory measures are relevant if the new situation, described by the specific codes, would be considered attractive for the individual farmer if he was told the economic, environmental and social consequences. A regulation is not sufficient or efficient in itself; it must be ensured that farmers comprehend the rational concepts behind the regulations. Advisory measures are therefore often appropriate in combination with regulatory measures.

Advisory measures comprise

- **INSTRUMENT 4: Advisory packages**
- **INSTRUMENT 5: Training programmes**
- **INSTRUMENT 6: Information campaigns**

The Lithuanian Agricultural Advisory Service, LAAS, is highly recognised as an effective and professional organisation (see below).

LAAS may be seen as the key institution regarding the advisory measures.

It is relevant to mention, that Lithuania receives different bilateral and multilateral support for development of the advisory capability and capacity.

## Denmark

- Denmark provides support to develop Lithuanian advisory capacity and capability, mainly via funds that are administrated by East Assistance Office under Ministry of Food, Agriculture and Fisheries. Annual budgets for Baltic countries, Northern Poland, as well as Leningrad and Kalinin-grad Regions in Russia are around 33 mio. DKK for environment related activities. Of main relevance is to mention, that presently the Ministry funds the project **“Improvement of the Fertiliser Normative - Especially Manure Standards, Phasae 2, Republic of Lithuania”**. A Phase 1 was completed in 1998, and a Phase 2 is expected to run until end of year 2001. Else the Ministry funds in Lithuania projects about improvement of the pesticide certificate, establishment of a system for test of field sprayers, and introduction of a pesticide decision support system. LAAS is partner in the mentioned projects.

## Sweden

- Sweden has in the period 1994 to 1998 funded different activities under the so-called BAAP programme administrated by the Swedish University of Agriculture in Uppsala, and within a budget of SEK 25 mio and covering Baltic countries, Northern Poland, as well as Leningrad and Kaliningrad Regions in Russia. The Swedish activities have supported the establishment of an agricultural run-off monitoring (on different levels - watershed, drainage system in plots) and demonstration farm, development of farmers organisations and training, information and advise to farmers and advisers. A BAAP 2 programmes with a budget of SEK 25 mio. has just been started to continue the activities.

It should be remembered also, that development of agricultural education institutions as well as of agricultural research institutions in this context also is to be considered as a support for development of the advisory system, as the advisory system is based on development of research into farm-practice, and as advise and education should be coherent.

### 4.1.3 Financial measures

All financial instruments used should favour environmentally acceptable production on land best suited for cultivation.

Financial measures are relevant if the new situation, described by the specific code, would be considered clearly economically unattractive or not

affordable for the individual farmer.

The financial instruments comprise

- **INSTRUMENT 7: Excise taxation** on production means (adjusting the price relation between value of the products and value of the production means).
- **INSTRUMENT 8: Foreign trade policy** (through intervention systems, import/export quotas, import taxation etc., having the same effect as INSTRUMENT 7)
- **INSTRUMENT 9: Direct production subsidisation**, combined with different conditions (cross compliance) for instance to lower the economically optimal application rates of fertilisers, pesticides and water.
- **INSTRUMENT 10: Soft credits** (especially relevant where the implementation requires investments to be done).

Commencing in 1994 the Lithuanian Government has applied agricultural policies with the financial instruments as informed in the State Subsidy Programme for Rural Support Fond (Kaimo Rėmino Fondas).

Proposed national programs in the Rural Support Fund of 2000:

	Programmes	Approximate allocation of funds
1.	Programmes related to accession to EU, of which	
1.1.	Animal registration and identification programme	7,27%
1.2.	Parcel declaration programme	4,04%
1.3.	Quality control system of agricultural products development	21,22%
1.4.	Breeding programme	21,07%
1.5.	Agricultural research programme	7,24%
1.6.	Training and Consulting	13,83%
2.	Other programmes, of which:	
2.1.	Compensations for interest costs	10,64%
2.2.	Compensations for losses caused by adverse weather conditions and animal decease	1,06%
2.3.	Direct payments for organic farming	0,85%
2.4.	Compensation for investments in dairy farms	3,19%
3.	Co-operative development programme	1,06%
4.	Allocation to Rural Credit Guarantee Fund	8,51%

Source: the Ministry of Agriculture

The subsidy programme, which is a part of the state budget, is administered by The Ministry of Agriculture. The Agriculture Law adopted in 1996 determined the basic aspects of Lithuanian national agricultural policy. This law sets a minimum allocation of 10 % of the national budget for agricultural sector annually.

The Lithuanian Environment Fund is further providing funding for different environment-related activities based on applications and decided by a

special board for the Fund. The fund is administrating means that are aggregated from environmental taxes and fines.

Lithuania is further receiving international support for employing of financial measures, comprising:

## EU

- Phare - Similar to the previous actions, the PHARE programme will continue to target on institutional building issues:
  - Improvement of structures for quality, veterinary and plant-health controls including improvement of border control posts;
  - Support to strengthening capacity to manage the Common Agricultural Policy including technical assistance, pre-accession advice and related investments;
  - Support to establishment of integrated farm register and agricultural information system;
  - Support to strengthening rural administration structures including technical assistance and related investments for development of IACS, FADN, economic accounts for agriculture;
  - Support to development of administration and capacity to implement the Common Fishery Policy. This will include technical assistance, pre-accession advice and related investments, establishment of Vessel Monitoring System, improvement of fish research laboratories.
- SAPARD (Special Accession Programme for Agriculture and Rural Development), in effect from January 1, 2000, provides EU contribution < 75% for specific measures. It is in the Lithuanian SAPARD Rural Development Plan proposed, that the following areas will be eligible for support from SAPARD:
  - **Measure 1 “Investments in agricultural holdings”**  
There will be supported farmers or agricultural enterprises investing in improvement of housing for cattle and pigs, preparation and improvement of pasture and grazing areas, improvement of feed-stuff quality and advanced feeding technologies, improvement of animal waste storage and treatment, as well as acquisition of advanced cattle breeds.
  - **Measure 2 “Improving the processing and marketing of agricultural and fishery products”.**  
In the area of dairy sector, the measure is aimed at supporting the rationalisation, concentration and specialisation of dairy processing industry, improvement of quality of dairy products, improvement of raw milk collection system, introduction of new, higher added value products, utilisation of dairy by-products, and reconstruction/-reorganisation of enterprises in order to meet EU veterinary and hygiene requirements. In the area of meat processing sector, the

measure will be aimed at consolidating of the meat processing industry, supporting investments into premises for meat slaughtering and processing which have an objective to meet EU hygiene and sanitation standards, supporting de-linkage of processing and slaughtering, and encouraging the integrated production chain (producer/farmer-processor-retailer).

- **Measure 3 “Development and diversification of economic activities, providing for multiple activities and alternative income”.**

This measure is aimed to support development of small and medium food production enterprises (i.e. breeding of various fowl/game animals, lambs, rabbits, their slaughtering and preparing for consumers' use, establishment of small scale fisheries processing enterprises, cultivation of mushrooms and their small scale processing, etc.), direct marketing of production, provision of services in rural areas.

With regard to afforestation, this measure will support land owners who wish as an alternative use of agricultural land to establish forest on marginal or abandoned agricultural land, which would contribute towards an eventual improvement in forest resources and forms of countryside management more compatible with environmental balance.

- **Measure 4 “Improvement of rural infrastructure, renovation of villages and maintenance of rural heritage”.**

The support system will be focused towards the investment projects including rehabilitation of drainage systems on farm implementing the farm modernisation project with the high efficiency production technologies, towards the common use water management systems rehabilitation projects, including polder systems or small-scale dams, as well as towards the water supply and sewage collection and treatment systems (individual or common use). Support will be extended towards projects, aimed to develop electricity and rural roads infrastructure.

Regarding development of cultural activities and village renovation, this measure, put into practice, includes investments in renovation of historical and cultural heritage (churches, manors, and other buildings) and culture centres. Especially there will be encouraged local group initiatives to renovate villages and to make them more attractive.

- **Measure 5 “Technical assistance, training, information and publicity”.**

The aim of the technical assistance will be to create a close partnership between the Commission, national authorities, social and economic partners for preparation, implementation, monitoring and

evaluation of the measures, undertaken by the RDP. It is expected that such technical assistance by the Commission will help to speed up the national institutional building and will strengthen administrative capacity.

- ISPA - Pre-accession Instrument for Structural Policies, in effect from January 1, 2000, provides EU contribution < 85% for investments:
  - Environment (investment requirements needed to conform with EU legislation).
  - Transport improvements.

The ISPA funds are intended for projects of substantial size, i.e. of more than € 5 million in budget. Of this reason it is doubtful whether ISPA funds will be relevant for the agricultural sector, and it is clear, that they won't be for individual farm projects.

## World Bank

- GEF - The Global Environment Facility programme under The World Bank provides support for investments in the agro-environmental sector. There are no concrete plans for support to activities in Lithuania, but a joint Swedish and GEF project identification mission was recently touring Lithuania.

## 4.2 Institutions

The Ministry of Agriculture and the Ministry of Environmental will be the pivot institutions during the Transposition period and the process of Practical Application and Enforcement. It is the responsibility of these authorities to take binding measures, which fully carry out the letter and the spirit of EU environmental law.

It is the responsibility of these two authorities to provide the required action programmes concerning

- legislative schedule;
- preparation of implementing administrative rules, decrees, etc.;
- budgetary schedule;
- institutions, staff and resources;
- training and information;
- investments;
- operational expenses;
- monitoring;
- information assembly and reporting; and
- enforcement.

The role of the governmental authorities is also to follow the 3-step

process of accession:

- Incorporate relevant EU laws into the national legal order (elaborate a Table of Concordance) (“**Transposition**”).
- Provide the institutions and budgets necessary to carry out the laws (define an Implementation Programme) (“**Practical application**” or “**Implementation**”).
- Provide the necessary encouragement and controls/penalties (“**Enforcement**”).

All considerations/decisions in different forms must be co-ordinated. There are therefore overlap between members of steering committees for both the above mentioned “Nitrate Directive project” as well as for the “Codex project” and for the “Normative project”.

Else it is suggested, that ME and MoA nominate the following institutions for providing support to the administration of various implementation:

- **INSTITUTION 1: LAAS** (The Lithuanian Agricultural Advisory Service)

LAAS was established in 1993 with *inter alia* Danish assistance with the objective of raising productivity of Lithuanian agriculture. LAAS has close relationships with DAAC. In 1997 LAAS was re-organised as a limited liability company, with an ownership structure of 33 % LAAS, the MoA 33% and Bendroves Association 33%.

LAAS receives funding from MoA administrated state budgets, from farmers in exchange of services rendered, as well as grants from international donors. LAAS has 44 regional offices and in total around 240 employees. The main single activity is assistance to farmers with farm book-keeping and accounting services, while crop and fertiliser planning still is a minor activity. Field and fertiliser planning is carried out with a simple computer program that has been developed in co-operation with DAAC. Plant protection plans are prepared with help of the software “PC-planteværn”, under introduction and adaptation in connection to a Danish funded project. LAAS has further in connection with the “Normative project” under development a simple computer program for calculation of nutrient balances on farm-level

It is very important that the farmers receive training based on professional calculations and methods. This underlines the importance of involvement of LAAS. LAAS will be able to play an important role in the dissemination process of environmental friendly methods and in organizing the training of advisers and farmers. We expect LAAS to play a substantial role in the implementation of the Codes.

The aim of each code is to present the appropriate balance between profitable agriculture and avoidance of pollution. This stresses the absolute need for advisory service bodies to take action as it is neces-

sary to change attitudes of advisers, consultants and the public.

It is very important to allocate funds for information campaigns and funds for the important activities in the advisory sector.

Thus actions encouraging good agricultural practices are of utmost importance. This should be reflected in the Lithuanian subsidy programme ( the Rural Support Fund, the annual Financing Memorandum with EU ) and in campaigns and training activities.

- **INSTITUTION 2: Lithuanian Institute of Agriculture (LIA)**

LIA is a scientific institute that conducts scientific research concerning plant protection but also routine soil sampling and testing for mineral content and fertility, soil mapping and agricultural mapping. LIA is having the scientific responsibility for fertiliser norms and is partner to DAAC on the “Normative project”.

The existing norms need revision because they are on standards from Soviet time. In Soviet times, prices for nitrogen fertiliser were flat. The norms were established on basis of productivity optima rather than on production economy optima, that are also more environmentally friendly.

- **INSTITUTION 3: LIWM**

LIWM has delivered the main Lithuanian expertise and experts during the elaboration of the Code of GAP. It is important that expertise from this institution will be used and conceptions maintained in the future continuous adjustment of the codes.

LIWM has since 1994 been partner in the Baltic Agricultural Action Programme (BAAP). This programme is aimed to demonstrate the benefit of sustainable agriculture on small agricultural watersheds and demonstration farms. This programme is very closely related to the implementation of the Code of GAP. Therefore implementation of the Code of GAP should be in close co-operation with activities in the BAAP programme. Experience gained during implementation and demonstration will be very useful when updating the Code of GAP.

- **INSTITUTION 4: Farmers organisations**

Lithuanian Farmers Unions, Bendroves Association and Lithuanian Agricultural Chamber represent the main professional organisation for the Lithuanian farmers. One of the main functions is to comment on pending legislation on behalf of the farming sector.

- **INSTITUTION 5: SPSS**

SPSS (State Plant Protection Service) is a division of the Ministry of Agriculture, responsible for matters, that have relation to plant protection, here under test and registration of PPP, administration of phytosanitary regulations and border control, pest and disease warning, and drafting of regulatory measures.

- **INSTITUTION 6: Educational Institutions**

LAU (The Lithuanian Agricultural University) is providing academic education as well as basic research in agriculture. It is organised in (7) faculties, and has in total around (7,000) students.

Agricultural colleges in Lithuania provide some training of rural youth, but the education needs modernisation and the sector re-organisation. There are more than 45 education institutions with in total around 14,000 students. Often the students are not trained in agricultural matters, but receive other training. The Lithuanian farmer education is not acknowledged to give any access to buy farms, to receive credits, to receive any special establishment loans or alike. The colleges will probably change jurisdiction in the near future.

Steps should also be taken to ensure that any educational institution involved in running agricultural courses are being encouraged to incorporate the subject in their agricultural syllabuses.

#### **4.3 Time schedule**

In estimation of a realistic time schedule for the farm-level implementation of the various codes there has been given consideration to the following:

- **TIME SCHEDULE 1: 30 years**

It is a complex discipline involving around 60,000 Lithuanian farms. Experience from Denmark shows, that it can take up to 30 years to change the attitude and farming practices

Also the Agenda 21 for the Baltic Sea Region is in connection with its more general suggestions for programmes and actions for implementation of HELCOM environment-agricultural policies (which are in compliance with the EU environment-agricultural policies) implying a time lasting and strategic approach.

The 30 years scope is most relevant for codes, that are neither based on present nor on coming (EU and HELCOM based) legislation.

- **TIME SCHEDULE 2: 6 years**

All countries wishing to join the European Union must adopt and entirely implement the Acquis upon accession. The *Code of Good Agricultural Practices (GAP)* are parts of The Acquis. According to the *Accession Partnership* Lithuania has drawn up a *Rural Development Plan* for EU pre-accession for the period 2000 - 2006. The plan shall

- set out the needs of the rural areas concerned;
- establish a strategy for rural development;
- indicate the impact of the programme;
- provide an estimate, per year, of the financial resources needed for the realisation of the programme; and
- describe the systems that will be used for programme implementation (authority, financial management, control, monitoring and evaluation).

The time schedule for this implementation plan must be in concordance with this general framework and in compliance with the HELCOM guidelines.

- **TIME SCHEDULE 3: 2 years**

EU will, as mentioned in beginning of this chapter, follow the progress made in connection with the NPAA. There will be recorded an annual report written by the Commission (the Commission's Opinions), on basis of identified benchmarks (the so-called screening process). The overall allocation of funds from EU may be reviewed in the light of the identified performance concerning EU accession efforts, changing requirements and progress in implementing the AP.

The Lithuanian Government has therefore a clear interest to implement the codes as quick as possible. In this light a 2 years time schedule could be relevant goals for the implementation of some of the codes.

In connection with the above mentioned comments it should be kept in mind also, that Lithuania is committed to implement various HELCOM recommendations before year 2011. This appears from Annex on Agriculture (HELCOM Recommendation 19/6).

Further, in connection with the Nitrates Directive, Lithuania has committed itself to finish the planning of the implementation before end of year (2002), and to undertake the full implementation before end of year (2010).

## 5 DRAFT PLAN FOR FARM-LEVEL IMPLEMENTATION

### 5.1 Comments to Draft Plan for Farm-level Implementation

In the following is given an overview of the codes in a matrix format, with indication of relevant instruments, institutions and time schedule.

It should be noted, that an X indicates what has been considered appropriate instrument(s), the responsible institution(s) and relevant/necessary time schedule for implementation.

All codes are included in the tables in order to give a full overview, but the codes, that are based on existing Lithuanian legislation (shown with shadowed background) have in general not been considered for farm-level implementation as it has been anticipated that these codes already are implemented.

To indicate that a code is directly related to the Nitrates Directive the cell with the code number is "shadowed". There are 23 such codes.

For some codes, the consultant is of the opinion, that they due to their formulation appear as good advises or guidelines rather than as codes; this is the case for codes 4.2, 4.3, 4.4, 4.5, and 4.7. The suggested plans for implementation for these codes are therefore similarly uncertain.

The consultant is further of the opinion, that some codes are partly overlapping: e.g. code 5.3 overlap with code 6.2; code 8.1 overlap with code 8.2. The implementation of these codes should therefore be seen in combination (i.e. there must be used same instruments, the same institutions must be responsible, and the time schedule should be the same).

Finally the consultant would like to mention, that in connection with the elaboration of the Draft Plan for Farm-level Implementation it has become obvious, that some of the codes would benefit from a more precise formulation. One example is Code number 4.7: *"One should avoid growing such crops in neighbourhood if pests or diseases that survived the winter or propagated in early spring in one crop can easily spread to neighbouring crop field."* After reading this code (and the adjacent text in the Code of GAP booklet) the following questions appear:

- How can it be evaluated whether this code is implemented on a specific farm?
- What would be a relevant environmental indicator for measuring of the environmental effect of the implementation of this code?

On basis of this example the consultant can suggest, that all the codes should be carefully evaluated in a possible future revised version of the

Lithuanian Code of GAP, and that only relevant, selected codes will be transposed to law (mandatory measures) in vulnerable zones (yet to be defined), rather than the entire collection of 75 codes.

The Lithuanian *Code of Good Agricultural Practices* is not indicating whether codes are having direct relation to the Nitrates Directive. We have, however found it relevant in connection to the elaboration of this Draft Plan for Farm-level Implementation with indicate these codes, which is done by shadowing the cell with the code number. There are 23 such codes. We have found it relevant to suggest that regulatory measure are employed for the implementation of these codes in vulnerable zones (yet to be designated.)

It should also be noted, that we have found it relevant always to point at LAU and agricultural colleges when we point at LAAS as relevant institution, and *vice versa*; we find it natural, that both coming farmers and agricultural students are taught the subjects the advisory service is working with and *vice versa*.

## 5.2 Agriculture and Environmental Protection

Co- de	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHE- DULE		
		Regula- tory mea- sures			Advisory Measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
	<b>Codes part of which to be legitimated in future</b>																			
2.1	Sustainable agriculture should be promoted in Lithuania. It is especially important that farms with more than 15 ha of arable land would work out plans for farming activities, fertilisation and crop-rotation, calculate nutrient (NPK) balance for the individual fields as well as for the farm as a whole		X		X	X	X				X	X	X	X		X		X		
2.5	Number of livestock should be as big as it is needed for accumulation of organic fertilisers in order to keep natural conditions for grazing. Bought in fodder should not comprise more than 10% of the total amount of the used fodder.		X		X	X	X		X		X	X		X					X	
2.6	Agricultural crops should be grown in crop rotation where fore-crops for cereals would be fodder and technical crops. Farmers, who cultivate more than 50 ha of agricultural crops, should grow at least 20 percent of perennial and leguminous crops.		X				X				X				X		X			
2.7	In order to reduce nutrient losses, green (winter and perennial) crops should cover 50% of the total cultivated area on each farm above 15 ha of arable land		X	X			X				X						X			

Code	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
2.8	On hilly relief farms (fig. 2.7) that have more than 50 ha of cultivated land, erosion preventive rotations (cereals-grasses and grasses-cereals) should be applied or perennial cultivated meadows and pastures should be arranged.		X	X			X				X					X		X		
2.10	In order to reduce nutrient losses more plants of longer vegetation should be grown in the crop rotation. Catch crops (after-crops, under-crops and remained stubble) should be grown in the areas of the short vegetation plants and after ploughing of fields in summer.						X				X			X	X			X		
2.11	In farms of combined specialisation new meadows and pastures should be established on fields that are unsuitable or little suitable for other marketable plants because of moisture conditions and incline, i.e. in the lowest places or on slopes of hills.						X				X			X	X			X	X	
2.12	Soil tillage should be co-ordinated with other measures influencing the yield: crop rotation, fertilisation and sowing. Soil tillage should be carried out when soil moisture is optimal (60-80% of retention capacity).						X				X			X	X			X		
2.13	Soil should be prepared for sowing so that at the depth of seed incorporation there would dominate 1-5 mm crumbs and there would be enough plant available moisture in the soil.						X				X		X	X					X	
2.14	Agricultural machinery has to move on fields in such a way, that soil would be less compacted, crushed and grinded.				X		X					X		X					X	

Code	Code text	INSTRUMENTS									INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures			1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1								
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years
	<b>Codes based on existing Lithuanian legislation</b>																		
2.2	When making the production plans for products for sale, a land user has to take into consideration the national requirements for agricultural production in discrete regions, the territorial planning and particular land use conditions. <sup>1</sup>																		
2.3	Structure of lands in national parks, reserves and their protective zones could be changed only according to the projects complied with Environmental Ministry and administration of the parks. <sup>2</sup>																		
2.4	Ecological farms have to follow requirements of rules for ecological farms. The ecological farm has to be certified, its whole production has to be marked with the label of ecological production. The farm has to prepare an activity plan, to make crop rotation and fertilisation plans and to carry out the account according to a set form. <sup>3</sup>																		

<sup>1</sup> Resolution of the Government of the LR 1995 12 29 No. 1640 on partial alteration of LRVN 1992 05 12 resolution No. 343 “On approval of special conditions of forest and land use”

<sup>2</sup> Law on preserved territories of the Republic of Lithuania. 1993, V.

<sup>3</sup> Rules on ecological farming: production, processing, realisation, labelling (Lithuanian). - Ekoagros, 1999



## 5.3 Soil Liming and Fertilisation

Co- de	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHE- DULE		
		Regula- tory meas- ures			Advisory Measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
	<b>Codes part of which to be legitimated in future</b>																			
3.1	Very and medium acid soils (up to 5.0 pH) used for growing of cultural plants should be limed. Fields with slightly acid (pH 5.1-5.5) soils should be limed if winter wheat, fodder beets, leguminous cereals, clover and other crops sensible to acidity of a soil are to be grown there.				X	X					X					X		X		
3.2	Agrochemical characteristics of arable layer: pH, the amount of humus, mobile phosphorus and mobile potassium should be analysed every five years at least in order to regulate plant nutrition properly and to control changes in soil fertility.						X			X	X	X		X	X		X	X		

Code	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
3.3	Farms with manure stores over 500 m <sup>3</sup> should determine fertilisation value of manure by a quick test method or in a laboratory immediately before spreading. Slurry or liquid manure has to be well mixed before the test. It is enough to analyse fertilisation value of manure one time if manure storage technology does not change. If possibilities to analyse manure composition do not exist, then normative average chemical indices for manure accumulated by corresponding technologies are used (Annex 3.3)		X	X							X	X						X		
3.4	Mineral fertilisers and manure should be applied according to official fertiliser norms that are based on crop need for the planned yield. Nutrients taken out with crop yield should be restored in a form of organic and mineral fertilisers. <sup>2</sup>						X				X		X		X			X		
3.5	Organic fertiliser (manure, sewage sludge, composts, etc) should be spread from drying up of soil in spring to freezing of soil in autumn. Organic fertiliser should not be spread from 15 November to 15 March (on soils that are frozen, water saturated or are covered with snow). <sup>4</sup>		X	X	X	X	X				X	X	X		X				X	

Code	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
3.6	Solid manure should be incorporated into the soil within 6 hours after application. <sup>5</sup>		X	X			X				X				X		X			
3.7	Slurry and liquid manure should be spread in crop fields by trailing hoses. Having not such equipment, such manure should not be applied in crop fields. Slurry and liquid manure should be spread on bare soil by trailing hoses or broadcast spreaders and incorporated by cultivator with harrow within 6 hours after application.		X	X			X		X	X	X			X	X		X			
3.8	Storage of mineral nitrogen in 0-40 cm layer should be determined prior to fertilisation in order to find out the exact needed amount of nitrogen fertilisers. 90 kg/ha and higher nitrogen rate should be given in two times at an interval of 25-30 days.		X	X			X				X			X	X		X			
3.9	Mineral fertilisers should be stored in their original (put in factory) package and unpacked fertiliser - in separate stores protected of humidity.		X	X			X							X	X			X		

## 5.4 Plant Protection and Use of Pesticides

Code	Code text	INSTRUMENTS											INSTITUTIONS						TIME		
		Regulatory measures			Advisory measures			Financial measures					1	2	3	4	5	6	SCHEDULE		
		1	2	3	4	5	6	7	8	9	1							1	2	3	
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LI A	LI WM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
	<b>Codes part of which to be legitimated in future</b>																				
4.2	Abundant use of pesticides for plant protection from diseases, pests and weeds should be avoided. Alternative methods for plant protection should be used instead of them..				X	X	X							X	X				X		
4.3	Reduction of expenditure for plant protection and in the same time reduction of environmental pollution should be achieved by selection of plant varieties, which choke weeds and are more resistant to diseases and pests. Not the most fertile but more resistant for harmful organisms crop varieties should be selected.				X	X	X						X	X				X		X	
4.4	Plant resistance to harmful organisms should be increased growing it under better conditions especially during germination when plants are most vulnerable to diseases, pests and weed competition.				X	X	X					X	X				X			X	
4.5	In order to increase natural plant resistance for plant diseases and pests they should be fertilised supplying with all needed nutrients.				X	X	X					X	X				X		X		

Code	Code text	INSTRUMENTS											INSTITUTIONS						TIME		
		Regulatory measures			Advisory measures			Financial measures					1	2	3	4	5	6	SCHEDULE		
		1	2	3	4	5	6	7	8	9	1							1	2	3	
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
4.6	Crop varieties in crop rotation should be laid out in such a way that crop seeded in every field would have as less as possible common diseases and pests remained in soil with a plantation grown in the same field before.				X	X	X					X	X		X			X			
4.7	One should avoid growing such crops in neighbourhood if pests or diseases that survived the winter or propagated in early spring in one crop can easily spread to neighbouring crop field.			X	X	X	X					X	X			X			X		
4.8	There should be established 10 m a no-spray boundary zone towards plants that have plenty of beneficial insects and territories of vulnerable environment, i.e. water bodies, karst sinkholes, preserves, etc., if plans of land use or designs of the territory do not determine higher requirements.		X	X			X				X			X		X			X		
4.9	Land user himself should make an estimate of a real need for plant protection measures when he has evaluated situation in every field. Farmers without agronomic education should take such decisions after consultation with specialists		X	X			X			X		X	X			X			X		
4.10	Pesticides should be used only when the amount of harmful organisms in crop field has reached thresholds of harm determined by scientific investigations.		X	X			X				X	X		X		X			X		



Code	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
4.11	It is forbidden to use those pesticides in Lithuania that are not registered and written in the Lists of Professional or Individual Use of Plant Protection Measures, regulating pesticides use in the country. <sup>8,9</sup>																				
4.13	The amount of prepared solution should comply an area to be sprayed. Sprayer should be washed after work. Washing water can be sprayed on the same plants. It is forbidden to wash sprayer or spill used water where the cleaning water can run to drain or other water bodies. <sup>10</sup>																				

Code	Code text	INSTRUMENTS											INSTITUTIONS						TIME		
		Regulatory measures			Advisory measures			Financial measures					1	2	3	4	5	6	SCHEDULE		
		1	2	3	4	5	6	7	8	9	1							1	2	3	
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
4.14	<p>Every operation with plant protection preparations have to be carried out exactly following work safety and environmental requirements that are described in detail in the "Rules on Use of Plant Protection Means".<sup>11</sup> The most important requirements are the following:</p> <ol style="list-style-type: none"> <li>1. Only trained persons who have acknowledged with the characteristics of preparations and requirements of work safety may work with pesticides.</li> <li>2. Only healthy persons who have health examination certificates can work with pesticides.</li> <li>3. It is necessary to use personal safety precautions and to follow rules of hygiene during operations.</li> <li>4. Use only correct, calibrated and checked prior to operations machines and equipment for spraying of pesticides on crop fields and for dressing of seeds. New sprayers must be certified and sprayers in use must be checked by technical inspection.</li> <li>5. It is forbidden to apply pesticides on blooming plants. The blooming plants could be sprayed only in exception, following special recommendations.</li> </ol>																				

## 5.5 Animal Husbandry

Co-de	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
	<b>Codes part of which to be legitimated in future</b>																			
5.1	Animal density in a farm should not exceed 1.7 animal units per hectare of utilised agricultural land. <sup>12</sup>		X	X	X	X	X			X		X	X	X	X			X		
	<b>Codes based on existing Lithuanian legislation</b>																			
5.2	Every animal shall be kept, fed and treated according to its species, age, physiology and behaviour. The owner of animals must constantly take care about their health, feeding, adequate care and appropriate environment. Animals shall be protected from suffering, cruel behaviour and other negative impact. <sup>13</sup>																			
5.3	It shall be prohibited to feed stimulating substances to animals in order to improve their productivity, capacity for work and sport results, except for those substances that are allowed by the Government and its authorised service. <sup>14</sup>																			

Co-de	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
5.4	With regard to the instruction of state veterinary surgeon the animal carcasses, aborted embryos, damaged skins and furs, waste of slaughtered animals and other animal waste have to be fired, buried or brought (according to veterinary requirements) to animal waste processing companies. <sup>15</sup>																			
5.5	As animal carcasses could be used as raw material for processing companies producing feeds, pharmaceutical or special purpose products, persons having such waste shall inform the processing company and keep it before the collection under veterinary sanitation requirements. <sup>16,17</sup>																			
5.6	The carcasses of game birds and animals as well as carcasses of dogs, cats, piglets, rabbits, sheep or goats, lambs under four weeks and other small animals or their parts can be buried in the places established for this purpose and permitted by the State Veterinary Service or in private plots. <sup>18</sup>																			
5.7	Place for construction of livestock-farm (barn) is selected according to sanitary, zoo-veterinarian, environmental and fire-prevention norm requirements. <sup>19,20</sup>																			

Co-de	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
5.8	Designing barns in farmsteads within settlements or small towns the shortest sanitary distances to dwelling house and between farmstead buildings and neighbouring constructions are determined under guidance of construction norms regulating design of farmsteads in towns and settlements. <sup>21</sup>																			
5.9	Lithuanian Republic normative acts do not allow building new animal husbandry buildings, manure storage and silage storage places and expanding the existing ones in the following zones: <ul style="list-style-type: none"> <li>• Protective zones of communications and electricity supply lines;</li> <li>• sanitary protective zones of roads, railways and their facilities, and airports;</li> <li>• protective zones of main gas and oil pipelines and their facilities, fuel supply bases, gas stations and solid fuel shops;</li> <li>• protective zones of health resorts;</li> <li>• zones of the territory of historical and cultural monuments, protected landscapes</li> </ul> sanitary protective zones of water bodies (watering places). <sup>22</sup>																			

Co-de	Code text	INSTRUMENTS										INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory measures			Financial measures				1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1									
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years
5.10	Farms that use more than 10 m <sup>3</sup> of water per day have to get License for use of nature resources. Control (monitoring) of environment is compulsory on big farms where annual production of 500 AU is planned and some times on other farms, if it is prescribed in the License for use of nature resources. Monitoring of liquid manure watering, field drainage systems and surface water is compulsory when the size of a farm is 200 AU and more. <sup>23,24,25</sup>																			

## 5.6 STORAGE AND APPLICATION OF ANIMAL MANURE

Co- de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
	<b>Codes part of which to be legitimated in future</b>																				
6.2	Animals should be fed only with valuable feed at officially determined feeding norms based on animals need.						X							X				X	X		X
6.3	In the farms having more than 10 animal units there should be manure storage of sufficient capacity in order to reduce nutrient losses and preserve environment.		X	X	X	X	X					X	X	X						X	
6.4	Manure storage should be of such size that manure would be spread only when the plants can utilise nutrients. The minimum level to be required should be 6 months storage capacity. Urine and slurry stores should be covered or handled by a method that efficiently reduces ammonia emissions. <sup>26</sup>		X	X	X	X	X					X	X	X							X
6.6	Effluent evolved during silage production should be collected to reservoirs of slurry or urine.		X	X	X	X	X					X	X	X			X	X		X	
	<b>Codes based on existing Lithuanian legislation</b>																				

Co- de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHE- DULE		
		Regula- tory meas- ures			Advisory meas- ures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
6.1	Animals have to be reared and kept under such conditions that are not harmful for animals. Rearing and housing conditions have to be chosen with regard to peculiarities of animal species and breed. <sup>27,28</sup> Animal husbandry systems and types, the size of barns are designed according to the branch and specialisation of a farm. The chosen animal keeping system has to ensure good animal health and high productivity, low expenditure of fodder, labour, low monetary costs, qualitative production and to protect environment from pollution with production wastes. <sup>29</sup>																				
6.5	When selecting a place for manure storage, as for every other production building of livestock-farm, the distance to dwelling houses, water bodies and roads is determined under the guidance of existing normative. <sup>30</sup>																				

## 5.7 Management of Wastewaters and Wastes

Co- de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LI A	LI WM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
	<b>Codes part of which to be legitimated in future</b>																				
7.6	Wastes should be sorted in a farm. Organic wastes have to be used for compost production. The proper ratio of composted materials has to be chosen in order to produce valuable compost.		X	X			X				X	X		X	X		X		X		
	<b>Codes based on existing Lithuanian legislation</b>																				
7.1	Wastewater may be discharged to natural environment only when its pollution does not exceed norms approved by the Lithuanian Ministry of Environment. <sup>31, 32, 33</sup>																				
7.2	Choice of biological wastewater treatment facilities of second step is determined by local conditions (relief, ground, distance to outlet to rivulet, etc.) and valid sanitary environmental restrictions. <sup>34</sup>																				
7.3	Sludge from biological treatment facilities may be used for fertilisation of fields if the sludge meets the requirements of environmental norms. <sup>35</sup>																				

Co- de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LIA	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
7.4	Effluents from wet silage, wastewater formed during feedstuffs preparation, milking and livestock slaughtering, and also colostrum, whey and buttermilk have to be discharged to urine reservoir, slurry storage or separate reservoir or it may be used in compost production. Then the wastewater is spread on the fields with help of mobile spreaders or watering equipment. Single and annual watering norms are restricted according to the fertilisation value of the wastewater. It is strictly forbidden to discharge this wastewater to biological wastewater treatment plant. <sup>36</sup>																				
7.5	By wastewater treatment plants there should be installed sanitary protective zones restricting economic activity; besides, minimal sanitary distances to other objects have to be kept. <sup>37</sup>																				

## 5.8 Land Reclamation, Biological Diversity and Landscape

Co-de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LI A	LI WM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
	<b>Codes part of which to be legitimated in future</b>																				
8.2	Landowner should be responsible for: - proper usage and maintenance of drainage systems; - quality of water flowing from drainage systems to adjacent territory; - damage of drainage systems and pollution of water in drainage system.		X	X		X										X	X		X		X
8.5	When sprinkler irrigation technique is used, such watering intensity should be chosen that water would have time to soak into soil and surface runoff would not be formed, which would induce erosion and washout of nutrients and humus.						X				X		X		X			X			

Co-de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LI A	LI WM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
8.8	Dug well should be established in such a way that surface water or snow would not get into it, animals and any things would not fall into it accidentally. In the same time the well should have a ventilation hole. To protect ground water flowing to the well from pollution, 50 m upstream from the well should not be any farm buildings, field toilets, slurry pits, manure piles, storages of fertiliser, pesticides and oil products as well as greenhouses and intensively fertilised kitchen gardens.			X	X	X	X						X		X			X			
8.11	Meadows, groves, wetlands and ponds should be located in the landscape according to documents of territorial planning.		X	X			X								X		X		X		
	<b>Codes based on existing Lithuanian legislation</b>																				
8.1	Landowner is responsible and he can not impede to ensure functioning of land reclamation facilities in adjacent lands <sup>38</sup> and also has not to violate the rights of other users of water resources. <sup>39</sup> Every earthwork and construction of new buildings in drained areas must be co-ordinated with State Land Reclamation Service. <sup>40</sup>																				

Co-de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1										
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LI A	LI WM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
8.3	Coastal protective strips are established at surface water bodies. For regulated rivulets and reclamation ditches, which have basin area smaller than 10 km <sup>2</sup> , width of preservation strip is determined depending on local conditions: <ul style="list-style-type: none"> <li>- When inclination of riverside is up to 5 degrees – 1 m;</li> <li>- When inclination of riverside is 5-10 degrees – not smaller than 2.5 m;</li> <li>- When inclination of riverside is more than 10 degrees – not smaller than 5 m.<sup>41</sup></li> </ul>																				
8.4	Landowner must: <ul style="list-style-type: none"> <li>- Maintain a ditch that goes through his land in order to create conditions for draining of adjacent areas;<sup>1</sup></li> <li>- not to violate requirements of preservation strips and zones.<sup>42</sup></li> </ul>																				
8.6	Drilled and dug wells located in the territory of land user are sources of drinking water and laws regulate their protection. <sup>43</sup> Sanitary protective zones and strips shall be designated around the water extraction sites, single wells and economic activities shall be regulated or prohibited there. <sup>44,45</sup>																				



Co-de	Code text	INSTRUMENTS											INSTITUTIONS						TIME SCHEDULE		
		Regulatory measures			Advisory Measures			Financial measures					1	2	3	4	5	6	1	2	3
		1	2	3	4	5	6	7	8	9	1							1	2	3	
		Parliament law	Cabinet regulation	Minister instruction	Advisory package	Training	Information	Excise taxation	Foreign trade policy	Direct subsidisation	Soft credits	LAAS	LI A	LIWM	Farmers organisations	SPPS	LAU + agr. colleges	30 years	6 years	2 years	
8.13	Landowners and users are obliged to preserve natural and cultural heritage objects.		X	X			X								X	X			X		
8.14	Physical and juridical persons who use soil resources must: - preserve and enhance soil fertility; - take measures in order to avoid negative effect of soil erosion. <sup>51</sup>																				
8.15	In flooded and springy areas it is forbidden: - to drain, plough (except for polders) and change otherwise state of flood meadows and pastures and their grass composition; - to destroy vegetative cover of natural marshes mechanically; - to change hydrological regime of springs that do not dry up and their groups; - to drain and make agricultural lands or waters out of upland moors, intermediate marshes and low-lying marshes that have area of more than 0.5 ha and depth of peat more than 1 m.		X	X			X						X					X			

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