



Introduction of milk quotas in Slovenia: Possibilities, accompanying measures and expected outcomes

S. Kavčič

University of Ljubljana, Biotechnical Faculty, Department of Animal Science, Domžale, SI-1230 Groblje 3., Slovenia

ABSTRACT

Some approaches that seem to be appropriate for milk quota introduction in Slovenia are presented. Empirical work is based on detailed analysis of Slovenian milk production structure. Special emphasis is given to small producers not having real prospects to sustain in milk production. Budgetary costs of different accompanying measures including early retirement scheme, voluntary supply restraint scheme, special promotions for disadvantaged areas (compensatory allowances, environmental programmes, extensification premiums) are projected under basic assumption of not reduced area farmed. Results emphasise necessity of accompanying measures unless rapid and significant stagnation of incomes of people currently involved in dairy farming is permitted.

(Keywords: milk quota, CAP, EU enlargement, income effects, Slovenia)

INTRODUCTION

With approaching Slovenian accession to the European Union (EU) introduction of supply restrictions in milk production is becoming a fact, which will not be possible to avoid. Milk quota, allocated to Slovenian farmers at national level during accession negotiations is at the top of accession questions both for responsible government bodies and for farmers associations. Furthermore, distribution of milk quotas to individual milk producers is a great fear of dairy farmers due to its direct economic consequences as well as due to its psychological impact related to high uncertainty of their likely future in dairy farming.

Data concerning the number of milk cows and milk production of individual dairy farms in Slovenia is still questionable. According to official data from agricultural census carried out in 2000 Slovenian dairy cows population counted 141.6 thousand distributed on more than 28 thousand farms (*SORS*, 2002). However, data for the same year provided by Slovenian dairies (Business association for Slovenian food industry) reported approx. 118 thousand dairy cows on 17 thousand farms included in milk delivering (cit. *Osterc et al.*, 2001). Nearly half of those -mainly family farms - reared 4 dairy cows or less, with additional 30% of dairy farmers with herds of 5-9 cows. Economic or better to say income interesting milk production in Slovenia started in nineties at moderate to high milk yields (more than 5,000 kg per year) in a range of over 20 dairy cows (*Lipovsek*, 2002). This limit is expected to shift even much higher in the foreseen producer price reduction (*Erjavec et al.*, 2002). In these circumstances roughly 10% of farmers - those with herds of more than 15 dairy cows - have real prospects in milk production in the future. Additional 10-15% of currently milk delivering producers

can also expect to achieve important share of their income from milk production also in the future. But farmers with less than 10 dairy cows will also claim for as high milk quota as possible. Current Slovenian agricultural policy does not have any efficient program to speed up necessary structural change in direction of herd size improvement, nor idea about adequate system of accompanying measures to release expecting pressure for milk quotas by small farmers not really have any prospects in milk production.

Aim of this paper is to present some opportunities for alleviation of milk quota burden. In this way it could contribute to the discussion of milk quota introduction, which would be best suited to Slovenian circumstances. Approaches described are roughly estimated with emphasis of income effects for producers along with accompanying budgetary implications.

MATERIALS AND METHODS

Possibilities for implementation of milk quota regime are analysed on last data available concerning dairy production in Slovenia. Analysis is mainly based on agricultural census data from 2000 (SORS) and distributional type of data concerning milk, actually delivered to dairies, provided by Slovenian dairies. Approach applied is simplified SWOT scenario analysis supplemented by calculation of crude economic indicators, mostly derived by adapted APAS-PAM sector model of Slovenian agriculture (Kavčič, 2001).

The simulation was run using baseline and two policy scenarios. The latter present the possible effects of the *European Commission* proposal (2002) on the Slovenian milk production after accession.

- *Baseline scenario (BS)* assumes continuation of agricultural policy from 2001/2002 and predominantly serves as a comparison tool. It takes into consideration intermediate policy changes, deriving from trade agreements. Like for the policy scenarios, the anticipated price movements are derived from the agricultural outlook for different regions (OECD, 2001; FAPRI, 2001).
- *Quasi Equal treatment scenario (EUe)* assumes that the candidate countries will apply the same CAP as current Member States with the full level of direct payments at the date of EU enlargement (i.e. in 2004 as the assumed accession and also as the simulated year). Two versions of this scenario are a subject of this study. The first one assumes competitive domestic dairy industry (EUe+) contrary to the scenario of non-competitive dairy industry (EUe-), reflected in lower producer prices.
- *EU negotiating proposal scenario (EU_p)* simulates Slovenian accession under framework as proposed by European Commission in its negotiating strategy of 30th January 2002 (*European Commission*, 2002). It assumes direct payments amounting to 25% of the current Member States' level and complemented up to the pre-accession (baseline) level (topping-up approach), and the given proportion of rural development programmes (2.1% of payments for candidate countries from EAGGF-Guarantee Section). Again, the first set of simulation results refers to relatively high level of producer prices (EU_p+) and the second one to reduced producer prices (EU_p-). The reason behind this distinction is the same as for EUe scenario.

Assumed as accession is the period from 2004 onwards, with the full absorption capacity for the CAP measures (including individual milk quota introduction) starting in the same year. Marketing year 2004/05 is also the period observed in the model. The relevant data for the analysis were provided by the Agricultural Institute of

Slovenia (Volk, 2001a and 2001b; Golez, 2001) and various published or recalculated sources of the Statistical Office of the Republic of Slovenia (SORS).

Current CAP (common agricultural policy of the EU) does not provide any direct payments in milk production sector, although they are brought in indirectly through payments for arable crops (foremost cereals as feed component) and also for beef (particularly slaughter and suckler cows premium). Indirectly milk production is subsidised also through CAP pillar II measures, where the most obvious farmers' revenues are budgetary payments obtained for production in less favoured areas (paid per hectare of area cultivated). Other income support measures involve early retirement scheme, voluntary supply restraint scheme, special promotions for environmental programmes, extensification premiums etc. Although income effect of these measures in individual sector like milk production is less transparent, they could at least mitigate anticipated negative impact of production quota and producer price reduction.

Involvement into early retirement scheme (ERS) is conditioned upon age of farmers. Like in Sweden in nineties (OECD, 1997) it could relax pressure on milk quotas also in Slovenia. There is roughly one third of farm holders older than 55 and the same holds also for dairy farmers (SORS, 2002). Restricted milk quotas is anticipated to rise their response to ERS eligibility, which could be additionally stimulated by voluntary supply restraint scheme. With such incentives the restructuring process in milk production would be accelerated, where payments for the step out of milk production should be calculated on the basis of the income loss for the next years. In Spain they range between 32.7 and 36.3 €/100 kg (Rosenwirth and Manhardt, 2002).

Special promotions for environmental programmes in livestock production including dairy farming under current national agricultural policy are most expanded as acreage payments for so called sustainable livestock production. In year 2001 approx. 2.6 million € has been paid in the field of ruminant production, mostly for beef and milk production. One could expect that importance of budgetary incentives for environmental friendly production will rise further after accession. The same holds also for extensification premiums which are not yet feature of Slovenian agricultural policy, but is anticipated to become important source of direct payments after accession, with one third to half of cattle population being eligible for this payment. Predominantly it is intended to beef producers, but it can have important impact also on milk production - particularly when small herd size prevail, what is the case in Slovenia. Budgetary payments for this incentive is forecasted to range between 3.7 and 10 million €, depending on accession negotiations' outcome.

Calculating effects of all measures mentioned above is not an easy task. Therefore combination of sector model and common sense, grounded on the principles of farm management has been applied.

RESULTS AND DISCUSSION

Projection for milk production under EU economic environment with effective production restriction is not favourable. Anticipated price decrease of 2% under EU.+ and additional 15% under EU.- scenario will further deteriorate milk production prospects. Forecasted effect of price changes along with expected policy framework modifications including production quotas as the most transparent one, is presented in *Table 1*.

Table 1

Expected effects of Slovenian EU accession in milk production sector

| Scenario | BS | EUe+ | EUe- | EU_p+ | EU_p- |
|------------------------------|----------------|-------------|-------------|------------------------|------------------------|
| Producer price (BS=100) | 100 | 98 | 83 | 98 | 83 |
| Delivery quota (mio t) | not restricted | 462.4 | | 422.7 | |
| Direct sale quota (mio t) | not restricted | 99.7 | | 40.6 | |
| Supply/Production (BS=100) | 100 | 98.2 | 90.4 | 86.0 | 86.0 |
| Self-sufficiency (%) | 120 | 118 | 106 | 103 | 101 |
| Income (€/hd) (BS=100) | 100 | 101 | 82 | 96 | 78 |
| Sector Income (BS=100) | 100 | 99 | 74 | 83 | 67 |
| No of dairy cows (000) | 107.5 | 93.4 | 94.9 | 92.6 | 93.9 |
| Average milk yield (kg/year) | 5015 | 4961 | 4884 | 5005 | 4934 |

Contrary to BS milk production after accession will be effectively restricted by national and individual milk quota regime. Current European Commission proposal for milk quotas (EU_p scenarios) would result in reduction of milk production for nearly 14%. Taking into account the fact that milk production in Slovenia currently contribute approx. 20% of total value of agricultural output, but more than half of aggregate income, this reduction is even more dramatic. Income per dairy cows will remain relatively high if domestic dairy industry will sustain competitive pressure in the common market (assumed in calculation by higher producer prices), but can fall for as much as approx. 20% if the opposite will happen. With coincidence of reduced total milk production, caused by production quotas, but in the case of lower producer prices foremost by alleviated income position, aggregate income of dairy farmers can fall for a quarter or even a third. As situation stands now, this is much more realistic projection than the one presented by EUe+ scenario, where, among others, very optimistic negotiation outcome along with competitive dairying resulting in high producer prices, are assumed.

Number of dairy cows will fall as well. Even under BS current trends in milk production together with price change effects will result in a fall of dairy cows for milk delivering of approx. 10 to 15 thousand. Milk quota will induce further reduction of national dairy herd of approx. 15 thousand cows. Reduction of dairy cows population for 20 to 25 thousand (approx. 20%) in a period of 3 to 5 years is another moment with tremendous consequences. Taking into account investments in dairy farming during last years, which were in reference year or still are not yet completely utilised, pressure on undistributed national reserve of milk quota is expected to be remarkable. All these problems force dissatisfaction of farmers that are dependent on milk production and lead them to the question: "Is there any rational solution?"

The answer is not straightforward. To achieve satisfactory income in dairy farming, farmers in Slovenia in 2001 had to have at least 30 dairy cows with yields of 5000 kg per year or more. This limit moved up very fast during last years. It is expected that similar economic tendency will be the fact also in the future (*Lipovsek*, 2002). Considering this figures there is room for only 3 thousand professional dairy farmers in Slovenia. As professional dairy farming is not prevailing feature of Slovenian milk production, it is expected that much more than economically justified number of farmers will sustain in milk production, in milk delivery and therefore also in milk quota distribution. Many of them, however, with negative economic results.

Returning back to discussion about possibilities to mitigate income reduction dilemmas - foreseen as Slovenian EU accession effect, but seems to be unavoidable in policy environment of reduced policy intervention as long term trend - there is not much room for any speculations. Even when there is illusion that accompanying measures can have important impact on dairy farmers' income position, many of them are likely to be only dream of farmers in candidate countries (i.e. non-discriminative level of direct payments) or - if they will be eventually applied - they will be of transitional nature and there will be difficult to fulfil eligibility criteria (early retirement scheme). Income assistance measures that seem to have most sustainable nature are those from environment box of CAP, with some characteristics of animal welfare and food safety. Most of them are from technological point of view connected with sufficient agricultural land for manure disposal and therefore require limited number of animals per unit of land cultivated.

Some proxy estimates of budgetary expenditures for accompanying measures, allocated to milk production sector mainly on the basis of land share, utilised by dairy cows, is presented in *Table 2*.

Table 2

**Expected vs. required budget expenditures for accompanying measures
in Slovenian milk production sector after accession (mio €)**

| | BS | EUmin | EUmax |
|-----------------------------------|------------|--------------|--------------|
| Less favoured areas | 7.3 | 13.5 | 18.2 |
| Environmental programmes | 2.5 | 4.7 | 6.5 |
| Early retirement scheme | / | / | 2.0 |
| Voluntary supply restraint scheme | / | / | up to 19.4 |
| Extensification premiums | / | / | 2.4 |
| Total | 9.8 | 18.2 | 48.5 |

Under BS scenario milk producers would receive in 2004 roughly 10 mio € revenues from national budget. As negotiation process stands in June 2002, it is expected that this source of dairy farmers' income could almost double, but this should not inspire any enthusiasm about eventually good prospects in the sector. The same EU proposal would effectively reduce sector income for as much as 20 to nearly 40 mio € (the latter refer to lower producer price EUp- scenario).

Under speculation of reduced producer price and current EU proposal for national milk quota, objective of sustained sector income could be achieved only if budgetary expenditure for milk sector (direct transfer to producers) would increase five times. Part of this increase is achievable through substantial growth of already implemented measures (LFA payments and environmental programmes), part from measures which are under discussion to be implemented in the year of accession or a year before (extensification premium and early retirement scheme), but there is still a large black hole with no money foreseen anywhere. Appropriation indicated by budget for voluntary supply restraint scheme in table 2 is likely to be the price that milk producers will have to pay at accession. To be more precise, it is crude estimate of their likely loss of income, derived from reduced milk production and producer price, but not compensated from additional budgetary sources.

Increasing budgetary transfers to milk producers five times is not to be expected, although even that would not be enough to keep current income for many farmers with

small scale of milk production. Whatever will EU accession bring to Slovenian milk production sector, structural changes will go on in any case. With this in mind, some producers will grow but will have to pay high price for additional milk quota, and many of them will get out of milk production.

Farmers with increasing milk production scale will, therefore, increase their income from milk production on the account of those ceasing milk production. Even if the latter would have opportunity to participate in voluntary supply restraint scheme, they would not compensate their loss of income completely with funds indicated in *Table 2*. On the other hand one can argue that since structural changes would happen anyway, it should not be attributed to accession effects. This argumentation is correct, but if policy has vision to help prospective dairy farms to be competitive in the near future, it should facilitate changes in a way that no one would feel to be pushed out of production.

With voluntary schemes offering compensation of income loss, advance in the field of competitive production structure would be much easier and faster, and costs for increased scale of milk production on individual farms under quota regime would become manageable again. This would result also in necessary new investment cycle in Slovenian milk production sector, which had been stopped mainly due to uncertainties originated from quota distribution dilemmas, resulted in fear of unchangeable size structure being captured some years ago (i.e. in reference year).

CONCLUSIONS

Crude estimates of likely EU accession effects for Slovenian milk production sector clearly show that expected change of economic environment for dairy farmers in Slovenia is not promising. Although income per dairy cow could remain relatively stable, income in the sector will drop substantially due to very restricted milk quota imposed. Therefore, many of farmers with small dairy herd is expected to get out of production. To mitigate their decision for voluntary quota transfer to those with real prospects in dairy sector, compensation of income loss seems economically justified. Along with expected increase of budget expenditure to those remaining in production (LFA payments, environmental programmes) some additional measures would be of high importance. In addition to early retirement scheme, which is intended to farmers of relatively narrow age group, more targeted voluntary supply restraint scheme in a transition period of 5-10 years would be in Slovenian circumstances of remarkable value to faster necessary structural changes in direction of competitive milk production structure.

REFERENCES

- Erjavec, E., Volk, T., Kavčič, S., Rednak, M., Juvancic, L. (2002). Ocena pogajalskih izhodišč Evropske unije na področju skupne kmetijske politike (Estimation of European Union negotiation position in the field of common agricultural policy). Expertise. Ljubljana, Agricultural Institute of Slovenia.
- European Commission (2002). Accession negotiations. Slovenia. Revised draft common position. Brussels, European Commission, DG Enlargement.
- Golez, M. (2001). Modelne kalkulacije 2000. Poljedelstvo. (Model Calculations for 2000. Arable Farming.) Prikazi in informacije 219. Ljubljana, Agricultural Institute of Slovenia.

- Kavčič, S. (2001). *Sektorski model slovenskega kmetijstva APAS-PAM (Sector model of Slovenian agriculture APAS-PAM)*. Domzale, Dept. of Animal Science.
- Lipovsek, B (2002). *Gospodarnost priraje mleka v Sloveniji v obdobju 1995 - 2001 (Economic position of milk production in Slovenia during 1995-2001)*. Unpublished B.Sc. thesis. Domzale, Dept. of Animal Science.
- OECD (Organisation for Economic Development and Co-operation) (1997). *A review of early retirement schemes for farmers in OECD countries*. In: *Adjustment in OECD Agriculture - Issues and policy responses*. Paris, OECD, 103-123.
- Osterc, J., Klopčič, M., Valjavec, I. (2001). *Strukturne spremembe v priraji in prodaji mleka v zadnjih dvajsetih letih (Structural changes in milk production and delivery in last 20 years)*. *Sod. kmet.*, 34. 307-314.
- Rosenwirth, C., Manhardt, H (eds.) (2002). *Restructuring of milk production and introduction of milk quotas in Slovenia*. Expertise (draft). Vienna, MAFF.
- SORS (Statistical Office of the Republic of Slovenia) (2002). *Agricultural Census 2002 data*. Ljubljana, SORS.
- Volk, T. (2001a). *Modelne kalkulacije 2000. Zivinoreja. (Model Calculations for 2000. Animal Farming.) Prikazi in informacije 218*. Ljubljana, Agricultural Institute of Slovenia.
- Volk, T. (2001b). *Modelne kalkulacije 2000. Domaca krma. (Model Calculations for 2000. Feed.) Prikazi in informacije 221*. Ljubljana, Agricultural Institute of Slovenia.

Corresponding author:

Stane Kavčič

University of Ljubljana, Biotechnical Faculty, Dept. of Animal Science
SI-1230 Domžale, Groblje 3., Slovenia

Tel.: 386 1 72 17 810, Fax: 386 1 72 41 005

e-mail: stane.kavcic@bfro.uni-lj.si