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Review of the Sunflower Oil Sector: 2004 Update and Mid-Term Strategy / Обзор сектора подсолнечного масла: Обновленные данные на 2004 год и среднесрочная стратегия расвития

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Food and Agriculture Organization
of the United Nations

European Bank
for Reconstruction and Development

UKRAINE

REVIEW OF THE SUNFLOWER OIL SECTOR: 2004 UPDATE AND MID-TERM STRATEGY

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CURRENCY EQUIVALENTS

US$1 = UAH 5.33 (August 2004)
US$1 = EUR 0.831 (August 2004)

ABBREVIATIONS

AMS	Aggregate Measurement of Support
ARMA	Agency for Restructuring and Modernization of Agriculture
EBRD	European Bank for Reconstruction and Development
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FAT	Fixed Agricultural Tax
FSU	Former Soviet Union
IMF	International Monetary Fund
MAP	Ministry of Agrarian Policy
MFN	Most Favoured Nation
UAH	Ukrainian Hryvnia
US$	United States Dollar
VAT	Value-Added Tax
WTO	World Trade Organization

ACKNOWLEDGEMENTS

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The following report is the result of a series of consultations involving public and private stakeholders of the sunflower oil sector in the Ukraine. Participants in the exercise included representatives of all major crushing companies operating in the Ukraine, traders of sunseeds, UkrOliyaProm (the association of Ukrainian crushers of oilseeds), the Ukrainian Ministry of Agrarian Policy (MAP), farmers' associations, and research institutes. The last stakeholders consultation took place in Kiev on 5 April 2005. The main findings and recommendations contained in this report were formally presented to H.E. First Deputy Minister Demchak, Ministry of Agrarian Policy, on 18 July 2005. More details on the April 2005 workshop can be found on http://www.eastagri.org.

The main writer of the report was Mr David Jackson (LMC International), under the supervision of Mr James Fry (General Manager, LMC International). The report was reviewed by Ms Lyudmyla Lishchenko (EBRD, Agribusiness team), Mr Emmanuel Hidier (FAO, Investment Centre Division) and Mr Jean Balié (FAO, Policy Assistance Division), who also organized and facilitated the successful workshop of April 2005. The report benefited from the in-depth knowledge of the sunflower sector of Messrs Emile Choné and Jean-Louis Benassi (Prolea/Agropol, France), who made useful comments and suggestions.

The FAO team would like to extend its sincere thanks for the kind assistance received from the Ukraine Ministry of Agrarian Policy, in particular from H.E. First Deputy Minister Demchak and Mrs Marina Netesa, Head of the Department of International Relations. Warm thanks are also extended to all private and public stakeholders who accepted to participate in the series of debates and contributed to the report. Finally, the assignment would not have succeeded without the support of Mr Sergey Feofilov and Ms Tatiana Braginets (UkrAgroconsult) whose help for the collection and analysis of sector data was most precious.

EXECUTIVE SUMMARY

(i) In 2002, the EBRD/FAO produced the report "Ukraine: Review of the Sunflower Oil Sector". This report presented the current situation of the sunflower industry, identifying constraints within the sector, and pinpointing areas of relative strength and weakness. Moreover, the report made some initial recommendations for improvements within the sunflower sector. Subsequently, a seminar was held in July 2004, where stakeholders within the sector were invited to further identify and discuss the issues most important to the sector's continued revitalisation. This current report provides an update to the 2002 sector review, and addresses some of the key issues identified at the stakeholders' seminar in July 2004.

(ii) The issues identified and the recommendations made within this report are designed to provide a medium term strategy reference document for the Ukrainian Ministry of Agrarian Policy (MAP) and professional organisations involved in the sunflower sector. The medium term time period considered for the strategy is the next 5 to 10 years.

Current Situation of the Sunflower Sector

(iii) Ukraine ranks consistently in the three largest sunflower seed producers in the world, along with Argentina and Russia. Table 1 summarises the recent performance of the sector.

Table 1: Harvested Area, Yield and Production for Sunflower Seed, 1990/91-2004/05

	Area Harvested ('000 ha)	*Yield (tonne/ha)*	*Production ('000 tonnes)*
1990/91	*1,636*	*1.66*	*2,725*
1991/92	*1,601*	*1.52*	*2,448*
1992/93	*1,641*	*1.38*	*2,523*
1993/94	*1,629*	*1.27*	*2,301*
1994/95	*1,725*	*0.91*	*1,989*
1995/96	*2,008*	*1.42*	*3,247*
1996/97	*2,026*	*1.05*	*2,292*
1997/98	*2,001*	*1.15*	*2,386*
1998/99	*2,431*	*0.93*	*2,607*
1999/00	*2,680*	*1.00*	*2,600*
2000/01	*2,920*	*1.20*	*3,500*
2001/02	*2,395*	*0.96*	*2,300*
2002/03	*2,890*	*1.21*	*3,500*
2003/04	*4,020*	*1.14*	*4,586*
2004/05	*3,650*	*0.93*	*3,395*
Five Year Averages			
1990/91-1994/95	*1,646*	*1.35*	*2,397*
1995/96-1999/00	*2,229*	*1.11*	*2,626*
2000/01-2004/05	*3,175*	*1.09*	*3,456*

Source: State Statistics Committee

(iv) Sunflower seed output was relatively stable between 1986 and 1990, at an average level of 2.6 million tonnes, with yields of 1.65 tonnes per hectare, higher than Russia or Argentina. During the next five years, between 1991 and 1995, yields in Ukraine declined sharply due a shortage of fertilisers and chemicals. Table 1 reveals that sunflower production has grown since 1990/91, while sunflower seed yields have continued to move in the opposite direction. The driving force behind increases in output has, therefore, been sunflower seed area. Increasing area has more than offset the decline in yields, and explains the observed increase in output.

Reasons for Low Sunflower Yields

(v) Many reasons are proposed for the reduction in sunflower yields. The most important among these include:

- *The reduction in the period between sunflower crops in rotation;*
- *Uncertainties regarding land tenure;*
- *Difficulties in accessing credit and finance;*
- *Reductions in the use of fertiliser and chemical inputs;*
- *Poor agricultural practices;*
- *Inappropriate seeds, and lack of diffusion of hybrid varieties.*

(vi) Also, difficulties with land ownership and credit have reduced the replacement of farm equipment, and as a result the average age of agricultural machinery in the Ukraine is high.

Potential Solutions

(vii) Over the medium term, there appears little potential for expanding sunflower acreages significantly. The main prospect for increases in future production thus lies with increased yields. Though average yields are low and declining, the experience of some farms suggests that sunflower seed yields can improve significantly. Clearly, the most appropriate measures for addressing the problem of low farm productivity are the reversal of the constraints outlined above. Above all, industry participants and observers considered two overriding constraints to be of paramount importance:

- *Farm finance;*
- *Application of technology.*

(viii) Taking this a step further, it could be argued that, if the problem of farm finance was addressed suitably, then this would have a directly beneficial effect on the application of technology. Thus, growers' access to credit is of fundamental importance to the future success of the field sector.

(ix) One common practice elsewhere for providing farm credit is prepayment and credit provided by crushers. This has been adopted at some point by many Ukrainian crushers over the past five years. However, crushers' experiences of this provision are almost universally negative. Where crushers have extended credit or provided inputs in exchange for part of the crop, defaults have been common, and provision of credit in any form from crusher to grower is currently negligible in Ukraine. Nevertheless, several crushers maintain that they would be prepared to offer prepayment terms in future if several constraints were addressed, notably:

- *Land ownership: if land could be offered as collateral to guarantee loans, this would increase lending.*
- *Crop guarantees: credit was usually provided against the guarantee of a seed supply from the grower. However, growers often did not honour agreements, and sold seed to the highest offer following harvest.*
- *Legal enforcement: where loan conditions were not honoured, crushers felt that the legal system offers little potential for redress.*
- *Farm resources: better resourced farms were more likely to be offered credit. Though this is something of a circular problem, several crushers mentioned that they would be more prepared to offer credit to farms run as joint ventures with overseas backing.*

Oilseed Crushing Sector

(x) Sunflower crushing in Ukraine has increased significantly since 2000/01, reflecting the large amount of investment that has flowed into the sector.

***Table 2: Oilseed Crushing in Ukraine, 1992/93-2004/05** ('000 tonnes)*

	Sunflower	*Soybean*	*Rapeseed*
1992/93	*1,656*	*87*	*64*
1993/94	*1,640*	*36*	*16*
1994/95	*1,440*	*17*	*6*
1995/96	*1,414*	*15*	*28*
1996/97	*815*	*13*	*9*
1997/98	*1,011*	*17*	*22*
1998/99	*1,101*	*25*	*46*
1999/00	*1,709*	*56*	*93*
2000/01	*1,866*	*72*	*40*
2001/02	*2,040*	*107*	*50*
2002/03	*3,215*	*164*	*37*
2003/04	*3,558*	*195*	*17*
2004/05	*3,270*	*215*	*41*

Source: UkrAgroConsult; Oil World

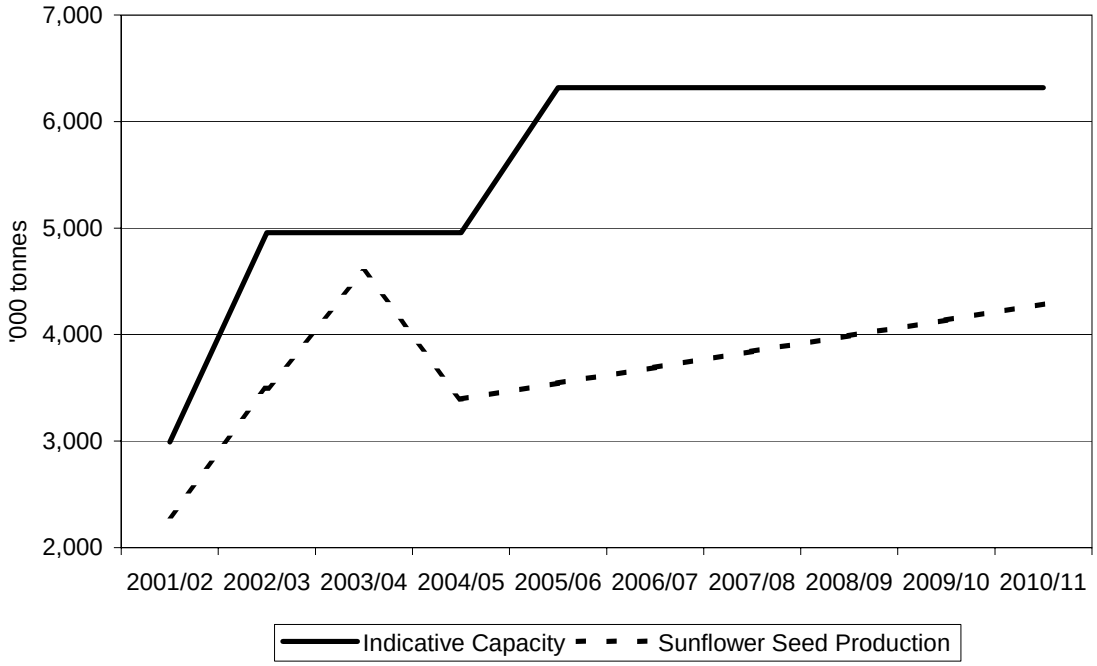
(xi) The increase in sunflower crushing activity, and in sunflower oil output, expanded after the imposition of a 23% export duty on sunflower seeds in October 1999. However, a loophole exploited by exporters, which enabled them to export seed under tolling contracts with foreign crushers, eroded the effectiveness of this tax. In July 2001, the export tax was reduced to 17%, but, at the same time, overseas tolling arrangements were banned. Therefore, while the tax was lower, it became more effective in limiting seed exports, as illustrated in Diagram 1. Nevertheless, though the export tax had an immediate impact on reducing seed exports, the abnormally large domestic crop of 2003/04 generated a surplus of seed that necessitated exports, paying the export tax. Increases in capacity, stimulated by high crushing margins, and a smaller 2004/05 crop have, however, reduced seed exports once again to very low levels. Overall, exports of sunflower seed from Ukraine in the past three to four years appear to reflect the surplus of seed supply over effective crushing capacity.

Diagram 1: Sunflower Seed Exports, 1992/93-2004/05

Source: UkrAgroConsult, LMC International Ltd.

(xii) Total design crushing capacity in the industry has risen sharply, from around three million tonnes in 2001/02 to around five million tonnes in 2004/05. By 2005/06, this has the potential to increase further, to 6.3 million tonnes. The revitalisation of the crushing sector in Ukraine has given rise to a problem of under-utilisation of capacity in the sector. In order to illustrate the scale of the emerging problem, we have prepared Diagram 2. We have assumed a step change in total capacity from its previous to its current level, and that all potential capacity becomes available for 2005/06.

Diagram 2: Crushing Capacity versus Sunflower Seed Production, 2001/02-2010/11



(xiii) The diagram reveals that increases in seed production have not kept pace with the additions to capacity in recent years. In the near future, the capacity gap, and hence capacity utilisation, which is an important determinant of industry costs, is set to widen further. Though profitable crushing margins have attracted a great deal of investment into the sector, as margins return to a more sustainable level, the industry may respond to overcapacity in several ways. These include:

- *Closure of capacity;*
- *Increase domestic seed production;*
- *Import seed.*

(xiv) Although domestic seed production is sufficient to support a relatively large crushing industry, the industry is currently over-capitalised. We estimate that an optimistic output of four million tonnes of seed per year would be sufficient to support domestic crushing from a maximum of 13 to 14 crushing plants, each with a capacity of around 1,000 tonnes per day. This is towards the lower end of the scale found in Western Europe, and would be the minimum that would enable the sector to remain competitive as trade barriers to Western Europe are reduced over time.

Government Intervention in the Domestic Oilseed Market

(xv) The Government does not give direct subsidies to oilseed or vegetable oil production. Instead, the thrust of recent policy in the sector has been aimed at:

- *Applying border protection measures to deter imports of some oilseeds and products;*
- *Reducing the tax burden on agriculture;*
- *Subsidising agriculture implicitly via VAT exemptions;*
- *Protecting the domestic sunflower seed crushing industry through export taxes on seed.*

Value-Added Tax

(xvi) Agricultural enterprises in Ukraine have special provisions for the payment of value-added tax (VAT). VAT is charged on sales of sunflower seed at 20% of the purchase price, yet farms continue to be exempt from paying this VAT to the national budget. The accumulated VAT from sales of seeds must be deposited in special bank accounts and used by the farmer only to purchase five specially approved classes of agricultural production inputs. Many industry observers feel this technicality is not observed in reality, and that VAT receipts were in effect simply a subsidy, or transfer, to farmers' overall income.

(xvii) The VAT exemption of the agricultural sector is an implicit but significant subsidy. In addition, crushers are entitled to refunds of the VAT from seed purchases when sunflower products are exported. Approximately two-thirds of the VAT paid out on seed purchases by crushers is eligible for refunds as products are exported. This creates a significant difficulty for government, because this potential expenditure is not matched by incomes, as farmers are entitled to retain the VAT received on seed, rather than transferring this to government. The government's VAT income and expenditure account, therefore, reveals a net deficit averaging US$87 million per annum over the past three years. At its peak, in 2003/04, when volumes proportions of oil and meal were exported, this reached over US$100 million.

Export Taxes

(xviii) The 17% export tax on sunflower seed is an important policy intervention, with significant impact. The export tax was discussed in the previous section, and we shall consider its importance in the following section. There are no export duties on sunflower oil or meal exports.

Impact of the Export Tax and Vat on the Sunflower Sector

Export Tax

(xix) The 17% export tax has had a marked impact on the sunflower sector. Among its most important effects have been:

- *Lowering the domestic price of seed;*
- *Increasing the availability of sunflower seed to domestic crushers;*
- *Raising capacity utilisation in domestic crushing plants;*
- *Reducing sunflower seed exports, but increasing sunflower oil exports;*
- *Encouraging investment in domestic crushing and refining facilities.*

(xx) Success in the last of these factors, encouraging investment in domestic crushing facilities, has in fact lessened the impact of the export tax on improving capacity utilisation. Nevertheless, seed exports now tend to occur only when there is a surplus of seed production over effective domestic crushing capacity, as in 2003/04, and capacity utilisation in several crushing facilities is at or near 100% utilisation.

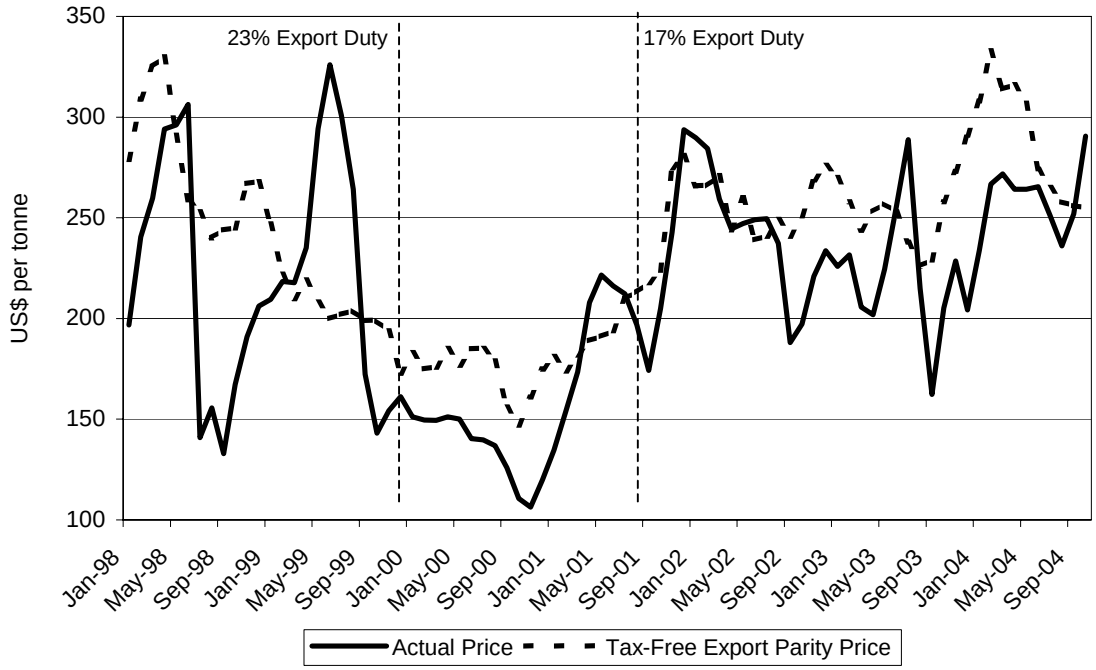
Seed Prices

(xxi) The export tax has had a major part to play in reinvigorating the Ukraine sunflower sector. However, a major argument levelled against the export tax is that it depresses sunflower seed prices paid to farmers. Diagram 3 compares actual Ukraine seed prices with the price that should prevail in the absence of export taxes, i.e., the tax-free export parity price.

(xxii) When there is a surplus of seed available for domestic crushers, as in 2003/04, with an export tax of 17%, we would expect actual domestic prices to settle around 17% below the tax-free export parity price. Diagram 3 reveals that this is very close to what actually happened, with domestic prices in fact averaging 21% below the indicative tax-free export price. In these circumstances, therefore, the domestic seed price reflects in full the export tax payable. This is because there is no need for crushers to bid up seed prices above the maximum prices that exporters can afford to pay, which is 17% below the export price. In effect, with a domestic seed surplus, exporters determine the domestic seed price. In fact, the price often falls more than 17% below the tax-free export parity price, due to the selling imperative of farmers early in the season in order to raise cash. Such distress selling is associated with the September troughs in the Ukraine seed price (see Diagram 3).

(xxiii) This situation contrasts with 2001/02, when there was no domestic surplus of seed available. This situation is likely to arise again in the 2004/05 season. In these circumstances, competition for seed between domestic crushers serves to bid up domestic seed prices. In 2001/02, domestic prices averaged only 3% below tax-free export parity prices. Thus, when domestic seed supplies are scarce relative to effective crushing capacity, domestic seed prices are bid up close to the prices that would prevail if there were no export tax in operation. Any remaining differential possibly reflects the increased risks associated with crushing in Ukraine. In conditions of seed deficits relative to crushing capacity, therefore, the export tax is largely inconsequential. With domestic crushing capacity now significantly in excess of potential seed production, this situation is likely to prevail in the near future.

Diagram 3: Sunflower Seed Prices in Ukraine (including VAT) Compared with Tax-Free Export Parity Price



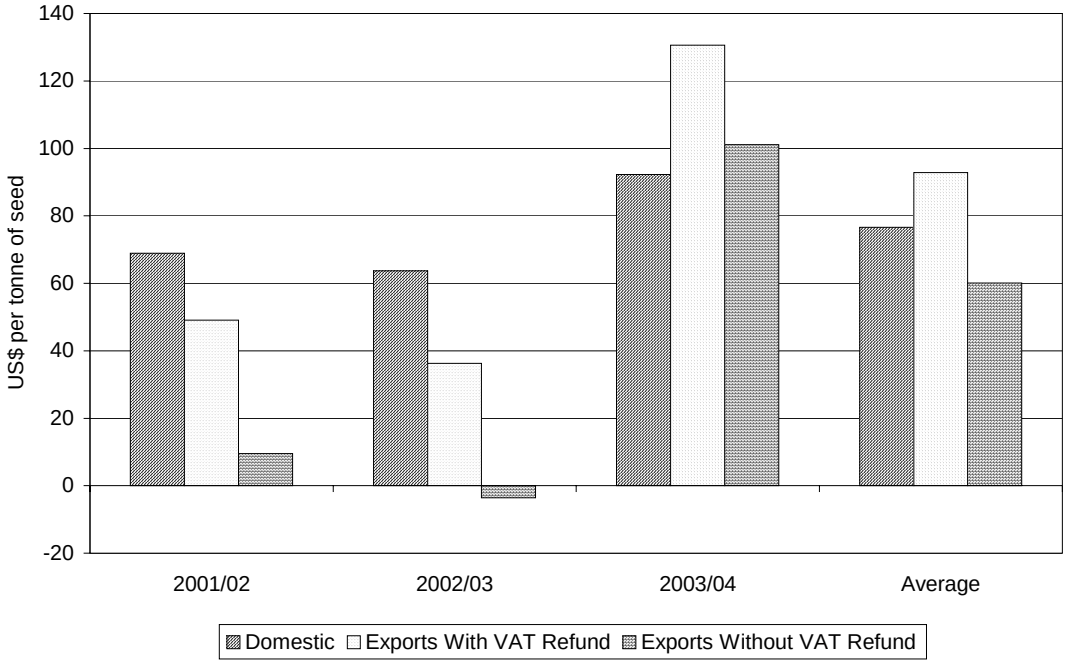
Value-Added Tax

(xxiv) The average sunflower seed price in 2003/04 was US$239 per tonne. This implies that the average VAT payment on sunflower seed was US$40 per tonne. For a crusher procuring 300,000 tonnes of seed, this means a total VAT payment per year of around US$12.0 million, which would be refunded for the part of the resulting oil and meal that is exported. While by law this should be reimbursed to the crusher within three months of exporting the products, this clearly is not happening. Therefore, the crusher must at best bear the financing costs of the VAT payment until the Government reimburses, and, at worst, write off the VAT as bad debt.

(xxv) Diagram 4 presents our calculation of the crushing margins for domestic production, for exports when the VAT payment on seeds is reimbursed, and for exports when it is not reimbursed.

(xxvi) The diagram reveals that the export VAT refund is critical for crushers, even during the relatively benign market of the last few years. Without reimbursement, crushing margins on exports can fall to low and even negative levels, as witnessed in 2001/02 and 2002/03. Though domestic and export margins have, on average, been very healthy recently, even without VAT refunds, the strength of export margins without VAT refunds is largely a result of the strong global markets in 2003/04. There are also inherent risks involved in crushing in Ukraine, with exchange rate risk, lack of transparency and financing difficulties common. The uncertainty about VAT reimbursements itself increases costs to crushers, for example employing resources with the sole task of chasing up the company's VAT entitlements.

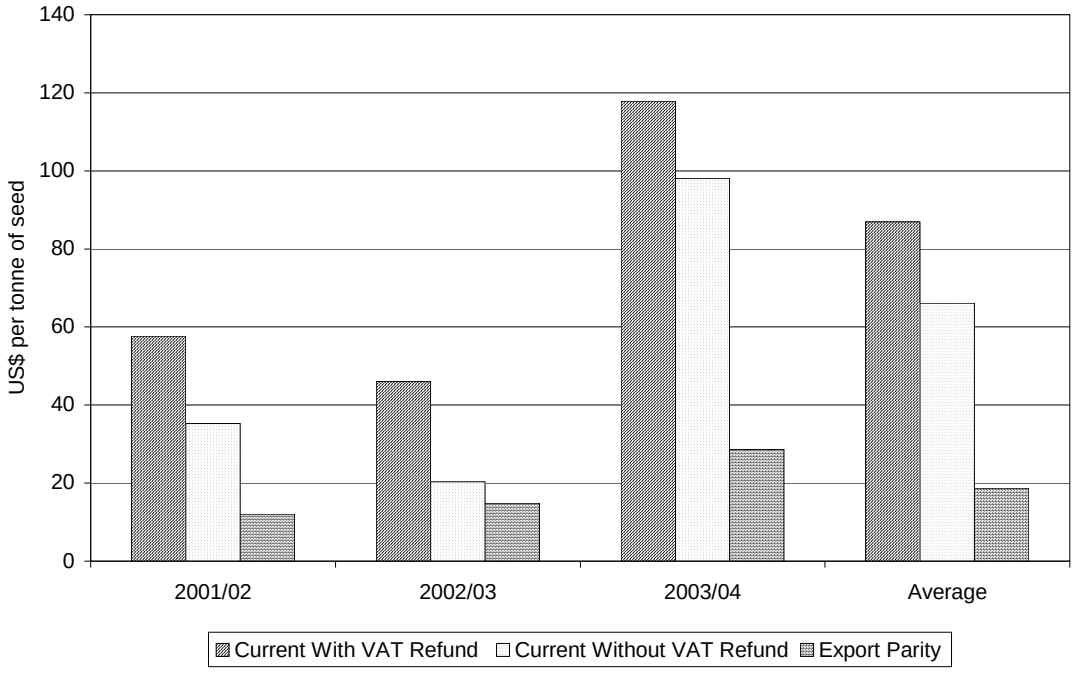
Diagram 4: Crushing Margins for Domestic Market and Exporters of Oil and Meal, with and without VAT Reimbursements



(xxvii) In practice, when evaluating the VAT losses of individual crushers, it has to be borne in mind that most crushers sell onto both domestic and export markets, and are able to offset some of their VAT refunds against VAT charged on sales in the domestic market, which should be reimbursed to the Government. In Diagram 5, we present overall crushing margins with and without VAT refunds for 2001/02 to 2003/04, weighted by sales into domestic and export markets. The diagram compares the actual margins received with the margins that would have prevailed if prices of seed, oil and meal in Ukraine reflected tax-free export parity conditions.

(xxviii) Under the tax-free export parity scenario, crushers receive a notably lower and more stable margin than is currently the case. This is especially true when they receive the full VAT refund paid on time, though even without the VAT refund Ukrainian margins are higher than they would be under export parity conditions. Thus, though the current system of non-refunding export VAT is penalising the crushing industry, it is nevertheless clear that there has been a significant incentive for investment into the crushing sector in recent years.

Diagram 5: Average Crushing Margins with and without VAT Reimbursements versus Indicative Tax-Free Export Parity Crushing Margin



Conclusions

- *Strong crushing margins have encouraged investment in the processing sector, and created a surplus of capacity over and above potential seed production for the near term.*

- *In conditions of deficit seed production, competition between crushers is likely to bid up domestic seed prices to around 5-10% below tax-free export parity prices.*

- *The export tax of 17% acts to depress local seed prices, but by far less than the full 17% in years of seed deficits. Therefore, in most years, and for the foreseeable future, a far lower export tax would be sufficient to protect crushers and guarantee seed supplies.*

- *In years of potential surplus seed production, perhaps following a rationalisation of current capacity, seed prices may reflect the full extent of any export tax. In these circumstances, with a lower export tax, farmers would be the biggest winners via higher seed prices, and, though crushers would be worse off than currently, they are likely to be better off than during years with seed deficits.*

- *It is possible that a lower export tax will accelerate rationalisation of the domestic crushing sector. This would occur as seed prices are likely to rise, especially in years of seed surpluses. Margins will fall, thus squeezing out less-efficient crushers.*

Recommendations for Mid-Term Sunflower Strategy

(xxix) The sunflower sector has been substantially reinvigorated over the past five years, and any reforms carried out should be cautious of hindering what has become a successful commercial sector. In the crushing sector, seed supplies have been reliable since the introduction of the 17% export tax on seeds, crushing margins have been strong and crushing costs have declined toward world-class levels. In the farm sector, growers continue to rely upon sunflower to provide liquidity to the farm system, and sunflower remains typically the single most profitable crop in the rotation.

(xxx) Nevertheless, the transition of the sector has been concentrated on reforms in the crushing sector, with the growing sector lagging far behind in terms of competitive performance. Recovery of seed output has been concentrated on area expansion, and this has caused declining yields as sub-optimal rotational practices become widespread.

(xxxi) Two aspects of policy are of crucial importance to the sector, and meaningful mid-term reform should concentrate on these:

- *The VAT system;*
- *The export tax system.*

(xxxii) To support reform in these sectors, we would recommend a further policy initiative:

- *Introduce direct area payments for growers.*

(xxxiii) In addition, one facet of the oilseed sector is of overriding importance in improving technical performance:

- *Access to credit for farmers.*

(xxxiv) Before setting out recommendations for reform of the key policy interventions, we first turn to this crucial aspect of farm performance.

Access to Credit

(xxxv) Access to credit will become increasingly crucial in driving reform of the farm sector. This remains the single greatest impediment to farm's technical performance, and, if this problem is successfully addressed, many other objectives will fall into place. However, the key actions that would improve farmers' access to credit are bound up in wider aspects of the farm system, and the range of the reforms suggested in these areas goes far wider than the sunflower sector.

(xxxvi) There are a number of areas where policy and practice has an impact on the sunflower sector, and where meaningful reform would be beneficial. In essence, farmers will be able to access credit successfully only when they have recognisable assets to offer as collateral. In terms of improving farm technical performance, having a physical asset to lose will also act as a spur to on-farm progress. Areas for improvement critically include:

- *Enforce ownership rights to land, so that land can be used as collateral.*

- *Implement a legally-enforced system of warehouse receipts, so that seed in storage can be used as collateral.*

(xxxvii) Establishing physical collateral for farmers is likely to develop significant sequential benefits. First and foremost, access to credit will improve, as described above. Whether this occurs via loans or in the form of pre-financing of crops by crushers, or, as is most probable, a combination of both, the most significant development should be yield improvements. Land ownership should also develop a more long term responsibility toward rotational practices and input usage as farmers will act to preserve the value of their land assets.

Value-Added Tax

(xxxviii) We would make the following recommendations for the sunflower VAT system:

– *VAT for sunflower oil and meal sales to remain at current levels;*

– *VAT for sunflower seed to be reduced to zero;*

– *Farmers' VAT exemption to be removed, though in practice zero-rating of VAT on seed would effectively eliminate this benefit irrespective of the exemption.*

(xxxix) The effective loss of income experienced by farmers would be compensated for by the introduction of direct area payments, discussed below. At the same time, the VAT situation in other agricultural sub-sectors, and the feasibility of introducing similar reform measures should be explored by the Ministry of Finance, to avoid creating new distortions.

Seed Export Tax

(xl) Our analysis has shown that the seed export tax would have the same effective impact on domestic prices within the sector even if the export tax rate were considerably reduced. Reducing the export tax would have the benefit of achieving the Government's goals for higher agricultural prices while also quietening the objections of trade partners and donors.

(xli) We recommend that, while the VAT system is being reformed, the export tax be maintained at 17%.

(xlii) The rapid build-up in crushing capacity should ensure that seed production is lower than domestic demand for the next two to three years. Under conditions of seed deficit, we have seen that prices tend to settle at levels just below tax-free export parity. Thus, the farmer is not significantly disadvantaged in these circumstances, and, though the export tax has little effect, it seems sensible at this stage to concentrate government capacity in ensuring VAT reform is carried through effectively.

(xliii) With successful VAT reform, we would recommend:

– *A reduction of export tax to 10% in two to three years, and to 5% in five years.*

(xliv) This gradual process may ease the inevitable period of rationalisation in the crushing sector. Once a rationalisation of capacity has occurred in the crushing sector, seed surpluses will become more likely, and farmers should benefit from the higher seed prices that would occur with a lower export tax. The impacts of this reform on crushers' seed supply and farmgate seed price levels should be closely monitored following the reduction to 10%. If these conditions are met, with stable adequate seed supplies and margins for crushers, and remunerative seed prices for growers, we recommend the second reduction, to 5% be undertaken.

(xlv) This would balance the needs of providing support to crushers without penalising farmers at times of high production. In the long run, as the domestic industry develops and its competitiveness enhances, no tax on seed export should be necessary.

Direct Area Payments to Growers

(xlvi) The current system of support to Ukrainian agriculture, based on agricultural taxation, VAT exemptions and interest subsidies, is problematic in many respects. Moreover, zero-rating of VAT will reduce payments to farmers. Though some of this is likely to be recouped via higher seed prices and less discounting by crushers for VAT uncertainty, this will not fully compensate farmers for the decline in revenue. In this light, and taking into account Ukraine's WTO and EU accession policies, it is advised that the country considers moving towards a system of direct income support to agricultural producers on an area basis.

(xlvii) Clearly, severe budget constraints in Ukraine limit the Government's capacity to provide direct support to agriculture. However, a system of direct payments would carry the following advantages:

- *It would be more transparent and less distorting than some of the policies currently in place.*
- *As direct income subsidies are not production-related, the new policy would not distort farmers' crop choice.*
- *Unlike price support, it would also be compatible with WTO membership as a so-called "green box" measure under the Agreement on Agriculture (i.e., not subject to any budgetary or quantitative limitations).*
- *It would bring Ukraine closer to the EU system where farmers receive a subsidy in the form of a fixed payment per hectare on the area they cultivate, irrespective of the type of crop.*
- *aZIt would function as a kind of economic and social safety net for the Ukrainian farmers who are still suffering from lower competitiveness than EU, US and other (subsidised) Western producers.*

(xlviii) As such, a policy of direct income subsidies would help the agricultural sector in Ukraine to move forward in its transition process and to enhance productivity through modernisation.

(xlix) Increased availability of financing for the agricultural sector could come from various policy changes, including:

- *Reforming the system of favourable taxation to agriculture (fixed agricultural tax), making the tax burden on agriculture more proportional to that of other sectors of the economy.*

- *Reforming the subsidised interest payments and diverting some funds to direct support of agriculture, such as direct area payments.*

- *Increasing government revenue and lowering expenditure by zero-rating VAT on sunflower seeds.*

(l) Besides adequate resources, farm support via direct payments also requires strong Government capacity to implement and monitor the system. The gradual move towards new support measures should thus be accompanied with efforts to strengthen these capacities in Ukrainian administration, in particular within the Ministry of Agriculture and at local government levels.

1. INTRODUCTION

Rationale for the Report

1.1 In 2002, the EBRD/FAO produced the report "*Ukraine: Review of the Sunflower Oil Sector*". This report presented the current situation of the sunflower industry, identifying constraints within the sector, and pinpointing areas of relative strength and weakness. Moreover, the report made some initial recommendations for improvements within the sunflower sector. Subsequently, a seminar was held in July 2004, where stakeholders within the sector were invited to further identify and discuss the issues most important to the sector's continued revitalisation. This report provides an update to the 2002 sector review, and addresses some of the key issues identified at the stakeholders' seminar in July 2004.

1.2 The purpose of the assignment is to:

- Provide a clear picture of the present situation of the Ukrainian sunflower oil sector;
- Elaborate on future sector trends;
- Propose a clear plan to address selected structural issues.

1.3 The issues identified and the recommendations made within this report are designed to provide a medium term strategy reference document for the Ukrainian Ministry of Agrarian Policy (MAP) and professional organisations involved in the sunflower sector. The medium term time period considered for the strategy is the next 5 to 10 years.

1.4 This updated report was compiled following a fieldwork mission to the Ukraine in mid November 2004. The mission met with stakeholders representing all industry sectors, with data provided by local sources and consultants.

Issues Covered

1.5 The report addresses the following key areas:

- *Current Situation*: We present the technical performance and cost competitiveness of the industry, and contrast current performance with key indicators of sector potential.
- *Policy*: We review the major relevant government polices as they impact upon the sunflower sector and its competing crops. The review addresses both domestic support policy and trade policy. The review analyses the impact of current policy on the sector, and its stakeholders, and recommends future directions for effective policy reform.

- *Institutional Framework:* The report reviews the role played by the main agricultural institutions and stakeholders involved in the sunflower sector, including crushers, farmers, government and research institutes.

Structure of the Report

1.6 As mentioned above, this report represents an update of the 2002 sector review. Therefore, the report should ideally be read in conjunction with the more extensive original review. Nevertheless, we have attempted, as far as possible, to present the report in such a manner that it can be read as a stand-alone document. In order to achieve this, we have included sections of the previous report where relevant. For instance, we have retained the information pertaining to production up to 2002 from the original review, and extended these series to include the two additional years to 2004, rather than merely presenting results from the past two seasons. We hope this approach provides clarity and context for the reader.

1.7 The main report comprises five chapters, as follows:

– Chapter 1: Introduction

– Chapter 2: Overview of the Sunflower Sector

– Chapter 3: Government Intervention in the Domestic Oilseed Market

– Chapter 4: Impact of Export Tax and VAT on the Sunflower Sector

– Chapter 5: Recommendations for Mid-Term Sunflower Strategy

2. OVERVIEW OF THE SUNFLOWER SECTOR

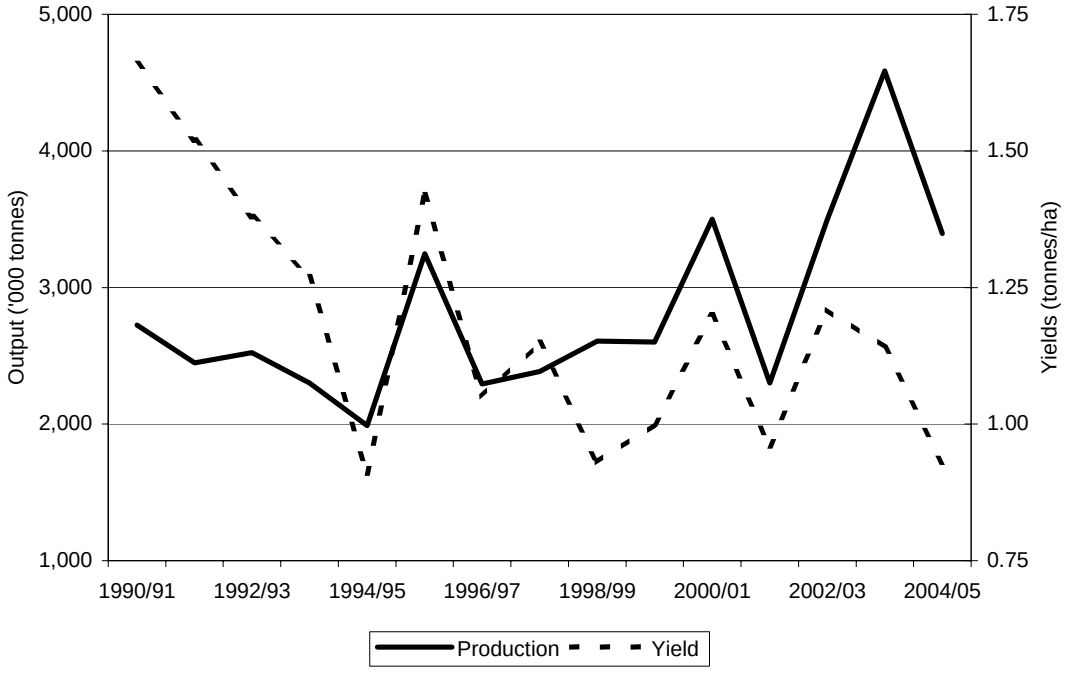
Production of Sunflower Seed

2.1 Sunflower seed is by far the most important oilseed produced in Ukraine, and the country ranks consistently in the three largest producers in the world, along with Argentina and Russia.

2.2 Between 1986 and 1990, sunflower seed output was relatively stable at an average level of 2.6 million tonnes. The average yield in Ukraine during this period was 1.65 tonnes per hectare, compared to 1.4 tonnes in Argentina, 2.3 in France and 1.3 in Russia. During the next five years, between 1991 and 1995, yields in Ukraine declined sharply due a shortage of fertilisers and chemicals.

2.3 Diagram 2.1 shows the level of sunflower seed production and yields since 1990. The figures for the current (2004/05) crop year are a forecast.

Diagram 2.1: Sunflower Production and Yields in Ukraine, 1990/91-2004/05



Source: State Statistics Committee

2.4 The diagram reveals that sunflower production has grown over the period, with crops in excess of three million tonnes produced in four of the past five years, yet only once in the previous ten years. However, sunflower seed yields have moved in the opposite direction, with yields of over 1.25 tonnes per hectare achieved in five of the first six years of the period, yet not

once since that time. Therefore, given that production has risen while yields have declined, the driving force behind increases in output must have been the area of sunflower seed harvested. Table 2.1 presents sunflower seed area harvested, alongside production and yield data. The table also presents five year averages for each of the indicators.

Table 2.1: Harvested Area, Yield and Production for Sunflower Seed, 1990/91-2004/05

	Area Harvested ('000 ha)	Yield (tonne/ha)	Production ('000 tonnes)
1990/91	1,636	1.66	2,725
1991/92	1,601	1.52	2,448
1992/93	1,641	1.38	2,523
1993/94	1,629	1.27	2,301
1994/95	1,725	0.91	1,989
1995/96	2,008	1.42	3,247
1996/97	2,026	1.05	2,292
1997/98	2,001	1.15	2,386
1998/99	2,431	0.93	2,607
1999/00	2,680	1.00	2,600
2000/01	2,920	1.20	3,500
2001/02	2,395	0.96	2,300
2002/03	2,890	1.21	3,500
2003/04	4,020	1.14	4,586
2004/05	3,650	0.93	3,395
Five Year Averages			
1990/91-1994/95	1,646	1.35	2,397
1995/96-1999/00	2,229	1.11	2,626
2000/01-2004/05	3,175	1.09	3,456

Source: State Statistics Committee

2.5 Table 2.1 reveals that the area harvested has increased considerably over the period. Indeed, the average area harvested in the most recent five year period is close to twice that of 1990/91 to 1994/95[1]. By contrast, yields have fallen over each consecutive five year period, though by less than the increase in area. Thus, the effect of increasing sunflowerseed area has more than offset the decline in yields, and explains the observed increase in output.

Over Cropping of Sunflower

2.6 The combination of increasing area and declining productivity are related. Without a significant improvement in technological, varietal and input applications, the Ukrainian Academy of Agrarian Sciences' estimate of the optimal area under sunflower is 9-10% of the tillable area,

[1] The 2003/04 sunflower seed season was exceptional in terms of area and production. The primary reason for this was the failure of the winter wheat crop, due to unusual and extreme weather conditions. This led to a great deal of winter wheat area being replanted to spring crops in 2004, of which sunflower seed was one of the main beneficiaries.

equal to approximately 1.6-1.8 million hectares[1]. This compares with a harvested area averaging around 3.2 million hectares, or approaching 20% of tillable area, for the past five years. In some localities in the sunflower heartland, the problem is worse. In 2003, for example, the proportion of the total farm area under sunflower in Dnipropetrovsk was 32%, and in Donetsk 42%.

2.7 Such large acreages reflect the profitability of sunflower production and its importance to farmers for providing farm liquidity. Many farmers are encouraged by high sunflower seed prices to plant sunflower in shorter rotations than would be sustainable in the long term.

2.8 Deep-rooted sunflower plants place a heavy demand on soil nutrients, and a reduction in the period between sunflower crops in the crop rotation is usually associated with declining soil fertility. This effect is exacerbated in conditions where too few nutrients are being added to the soil in fertiliser applications. Both these conditions apply to Ukraine, where a classic crop rotation may plant sunflower once in five to seven years[2]. Because of the inherent profitability of the sunflower crop, this period has commonly been reduced to three or even two years in many parts of the Ukraine sunflower belt in recent years, contributing significantly to a detrimental impact on yields.

2.9 The rotation system is critical for two reasons:

- *Soil fertility:* It is especially useful in this regard if forage crops are grown in some years of the rotation; at the least, a long rotation does not deplete soil fertility as rapidly, because the different crops each have different levels of nutrient requirements.

- *Control of soil-borne diseases:* This is achieved by lengthening the interval of availability of diseases preferred host species. Reducing the rotation interval allows rapid build-up of the pathogen in the soil, and presents the opportunity for a devastating outbreak of that particular disease, and loss of the entire crop. Some sunflower diseases can be present in the soil for up to twelve years, although local disease-resistant varieties are available that reduce the necessary inter-crop period to six to seven years under optimal conditions.

2.10 As well as sub-optimal rotational practices, increasing planting densities of sunflower are having similarly negative effects on soil fertility. The *Institute of Plant Production* in Kharkiv estimates that an optimal planting density for sunflower in local conditions would be 50-60,000 plants per hectare; however, there is evidence that some growers are planting at twice this recommended density, but are not applying herbicides or fertilisers. This is a major cause of soil fertility decline, and contributes to low yields, along with shorter rotations.

2.11 There is considerable pressure to reduce the rotation interval, and thereby increase the frequency of planting sunflower. In addition to the cash crop imperative, the system of leasing land on a short-term basis without adequate enforcement of legislation regulating land use also

[1] An estimate based on the suitability of climatic, soil and other agronomic conditions and the need to maintain soil fertility through crop rotation.

[2] Institute of Plant Production, National Centre for Plant Genetic Resources of Ukraine, Kharkiv, Ukraine.

discourages the practice of long-term rotation, and instead encourages year-on-year production of sunflower for short-term gain as a cash crop.

2.12 The current system of land leasing on relatively short-term contracts, typically five years, has led to short-term views on private investment in the land resource. If the farmer is unsure that he will be farming the same land in five years time, the economic incentives to invest in maintaining soil fertility are far less clear. It may, therefore, be economically rational to reduce investment in fertiliser inputs, in rotational practices, in introducing crops with rotational benefits, and in investing in irrigation or drainage systems where appropriate.

2.13 It is possible to improve soil fertility through application of commercial fertilisers. However, even though fertiliser is being produced in Ukraine, it is often being exported as a source of hard currency. Much of the fertiliser that is available on the market is accessible only to larger-scale producers who have adequate monetary resources. The small-scale farmer with fewer funds is thus forced to rely on longer rotation intervals for the maintenance of fertility, although he is in the least favourable monetary position, and therefore the least likely to do so.

Reasons for Low Sunflower Yields

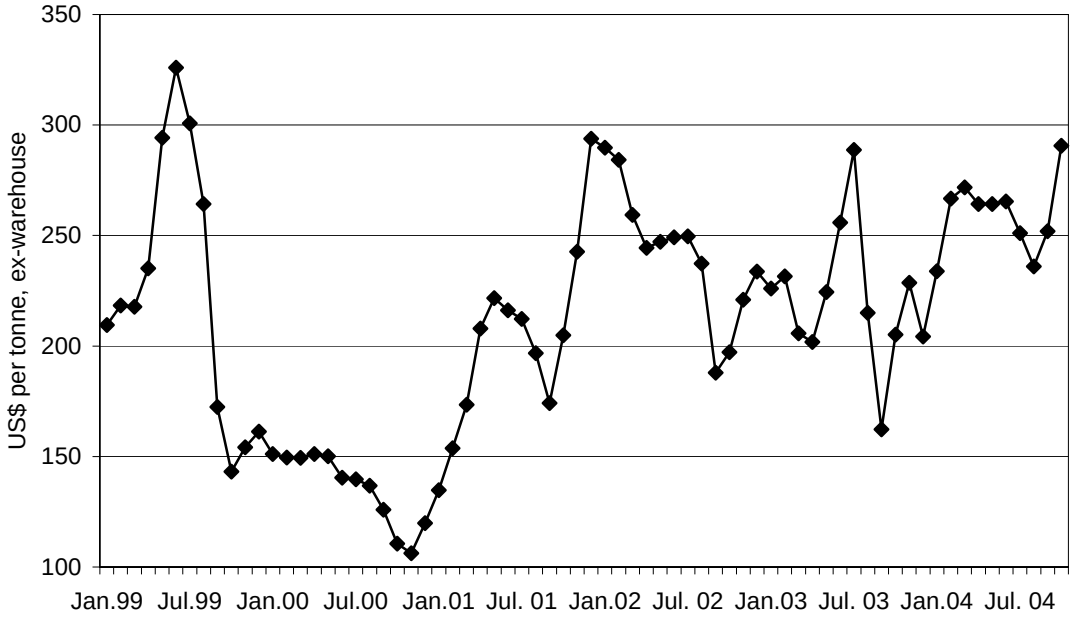
2.14 Many reasons are proposed for the reduction in sunflower yields described above. The most important among these include:

- The reduction in the period between sunflower crops in rotation;
- Uncertainties regarding land tenure;
- Difficulties in accessing credit and finance;
- Reductions in the use of fertiliser and chemical inputs;
- Poor agricultural practices;
- Inappropriate seeds, and lack of diffusion of hybrid varieties.

2.15 Also, difficulties with land ownership and credit have reduced the replacement of farm equipment, and as a result the average age of agricultural machinery in the Ukraine is high.

2.16 Furthermore, the necessity of repaying credit often determines the *timing* of the sale of the harvest, and this may limit growers' opportunities for maximising their crop revenue. Sunflower provides liquidity as well as profitability to the farm, with many farmers with a credit burden often compelled to sell sunflower seed early in the season, irrespective of price, in order to repay credit loans. The credit imperative therefore often undermines the optimum release of the sunflower seed crop. Diagram 2.2 illustrates the seasonality of price movements for sunflower seed over the past five years, and reveals that, as would be expected, prices tend to be low during harvest in September and October, and to rise in the remainder of the year.

Diagram 2.2: Average Monthly Sunflower Seed Prices, 1999-2004



Source: State Statistics Committee, UkrAgroConsult, LMC International Ltd.

Potential Solutions

2.17 Over the past two years, particularly in the 2003/04 season, sunflower has expanded its area significantly, and many commentators within the sector feel that the area cultivated with sunflower in this period represents the approximate limits of the sunflower area. Over the medium term, therefore, there appears little potential in expanding acreages significantly. The main prospect for increases in future production thus lies with increased yields.

2.18 Though average yields are low and declining, the experience of some farms suggests that sunflower seed yields can improve significantly. Clearly, the most appropriate measures for addressing the problem of low farm productivity are the reversal of the constraints outlined above. Above all, industry participants and observers considered two overriding constraints to be of paramount importance:

- Farm finance;
- Application of technology.

2.19 Taking this a step further, it could be argued that, if the problem of farm finance was addressed suitably, then this would have a directly beneficial effect on the application of technology. Thus, growers' access to credit is of fundamental importance to the future success of the field sector.

2.20 Two main streams of credit provision are typically available to growers in the sunflower sector worldwide. These are:

– Prepayment extended by crushers;
– Credit extended by banking sector.

2.21 Prepayment and credit provided by crushers has been adopted at some point by many crushers in Ukraine over the past five years. However, crushers' experiences of this provision are almost universally negative. Where crushers have extended credit or provided inputs in exchange for part of the crop, defaults have been common, and provision of credit in any form from crusher to grower is currently negligible in Ukraine. Several crushers maintained that they were not averse to the system in principle, and that they would be prepared to offer prepayment terms in future if several constraints were addressed, notably:

- *Land ownership:* If land could be offered as collateral to guarantee loans, this would increase lending.

- *Legal enforcement*: Where loan conditions were not honoured, crushers felt that the legal system offers little potential for redress.

- *Crop guarantees*: Credit was usually provided against the guarantee of a seed supply from the grower. However, growers often did not honour agreements, and sold seed to the highest offer following harvest.

- *Farm resources:* Better resourced farms were more likely to be offered credit. Though this is something of a circular problem, several crushers mentioned that they would be more prepared to offer credit to farms run as joint ventures with overseas backing.

Future Production

2.22 As we mentioned above, the limits to expansion of land under sunflower have been approached in recent years. Therefore, to a large extent, the future size of the sector will depend on the evolution of sunflower seed yields. This will in turn depend significantly on the success of the sector in addressing the problems described in the previous section. We anticipate that, over the next decade, the sunflower seed sector may evolve towards the output presented in Table 2.2. These estimates are based on the following assumptions:

- *Area harvested:* Over the next five years, the sunflower area is likely to decline slowly from the average of the past five years, as better farm practices, particularly with regard to crop rotation, evolve. We therefore expect the area to decrease by 10% to 2010. By 2015, we expect land management, land ownership and rising yields to have reduced the over cropping of sunflower, and the harvested area to have returned to its late 1990's level of around 2.3 million hectares.

- *Yield:* With improved technological applications and practices, we expect yields in 2010 to have returned to their Soviet era potential of around 1.5 tonnes per hectare. By 2015, land ownership and modern farming methods may have increased this further to approach the realistic average potential of 2.5 tonnes per hectare envisaged by the *Institute of Plant Production* in Kharkiv. To be cautious,

Table 2.2 assumes that yields merely bridge half the gap, to stand at 2.0 tonnes per hectare in 2015. Even this level is somewhat optimistic, and depends heavily on the pace of reform in the sector, but approximates future potential. Crucially, several industry observers expressed the view that water availability is a key to future yield development.

- *Output:* Given these outcomes, output levels would increase to 4.3 million tonnes in 2010, and 4.5 million tonnes in 2015.

Table 2.2: Medium Term Estimates of Harvested Area, Yield and Production for Sunflower

	Area Harvested ('000 ha)	Yield (tonnes/ha)	Output ('000 tonnes)
Average 1990/91-1994/95	1,646	1.3	2,397
Average 1995/96-1999/00	2,229	1.1	2,626
Average 2000/01-2004/05	3,175	1.1	3,456
2010/11	2,858	1.5	4,286
2015/16	2,229	2.0	4,458

Source: LMC estimates; Institute of Plant Production, Kharkiv

Production of Other Oilseeds

2.23 Of the alternative oilseeds produced in Ukraine — soybean and rapeseed — soybean in particular has witnessed rapid growth in production in the last three years. Table 2.3 presents the trends in the output of oilseed crops, with estimates of future production.

Table 2.3: Oilseed Output and Forecasts, 1992/93-2011/12 ('000 tonnes)

	Soybean	Sunflower	Rapeseed
1992/93	120	2,523	110
1993/94	61	2,301	44
1994/95	31	1,989	18
1995/96	22	3,247	40
1996/97	15	2,292	23
1997/98	18	2,386	44
1998/99	36	2,607	92
1999/00	64	2,600	148
2000/01	74	3,500	130
2001/02	98	2,300	134
2002/03	209	3,500	61
2003/04	260	4,586	51
2004/05	290	3,395	121
Five Year Averages			
1990/91-1994/951	71	2,271	57
1995/96-1999/00	31	2,626	69
2000/01-2004/05	186	3,456	99
Projected Output			
2010/11	350	4,286	150
2015/16	450	4,458	200

Source: LMC International Ltd., Oil World; UkrAgroConsult

2.24 As the table reveals, we expect that continued accelerated growth will occur in soybean output, with more moderate levels of growth occurring in rapeseed output. These estimates assume that biodiesel production does not receive government fiscal incentives in Ukraine over the period in question. If sufficient fiscal incentives were implemented for biodiesel production from oilseed crops, this would provide a major boost to these two alternative oilseed crops, with sunflower continuing to underpin the food use market.

2.25 The potential for soybean and rapeseed may be even greater than our estimates suggest, with soybean cultivation favoured under irrigation in Southern Ukraine, and rapeseed in the North West. However, soybean may be constrained by the investment required in irrigation, which will make it a relatively expensive crop to cultivate in the areas where it has highest yield potential. Rapeseed may be constrained by the lack of experience of domestic farmers in the crop, the initial investment required, and by the likelihood that the EU biodiesel market incentives, which currently draws in vegetable oil imports, will increasingly be re-designed to maximise EU farming objectives, rather than transferring some benefits outside of the EU.

2.26 The reasons for the expected increase in both soybean and rapeseed crops are in large part similar to those explained above for sunflower seed, as these affect all farmers as opposed to sunflower seed in particular. In addition, a further reason for the assumed increase is that rotation patterns for sunflower cropping are sub-optimal at present, with sunflower occurring too frequently in the rotation. Other oilseed crops may, therefore, provide an alternative to sunflower in the rotation and provide agronomic benefits against disease development. Although both

alternative oilseeds are susceptible to similar diseases as soybean, notably sclerotinia, they do not penetrate soil as deeply as sunflower. In the case of soybean, it is estimated that the nitrogen-fixing properties of the crop can add up to 100 kilograms of nitrogen per ha under soybean. This is why winter wheat and other grains perform well when following soybean in crop rotations. It is estimated that winter wheat yields increase by 0.4 to 0.6 tonnes per hectare when following soybean in Ukraine[1].

2.27 We expect soybean output to increase at a faster rate than rapeseed in Ukraine. The evidence of the past two years suggests this phenomenon has already begun. There are several reasons for this, among the most important of which are:

- *Growth in livestock meal markets:* The poultry market in Ukraine, for which soymeal is ideally suited due to its high amino acid and energy content, has observed growth of approximately 15-20% per annum over the past few years. This and other livestock feed markets remain underdeveloped in Ukraine, and there is evidence that livestock numbers are showing signs of significant recovery from the lows of the 1990s. From a small base, we expect growth in livestock numbers to underpin significant growth in meal demand in Ukraine. Due to its relatively high meal content, soybean is likely to be the main beneficiary of this development.

- *Yields:* Unlike sunflower seed, soybean yields have been increasing in Ukraine recently, and the development of early ripening local varieties suggests further improvement is probable. With irrigation in southern areas, the soybean yield potential could be as high as 3 to 4 tonnes per hectare[2], though the current realistic potential is perhaps closer to 2 tonnes per hectare by 2010. Current yields average between 1.2 and 1.5 tonnes per hectare with early ripening varieties. Moreover, soy can be grown in shorter rotations than is recommended for sunflower, which is of significance for farmers wishing to take advantage of high oilseed prices without degrading sustainable soil fertility.

- *Production Costs:* Local soybean varieties are disease resistant, and require fewer chemical inputs than sunflower production. Therefore, without irrigation, soybean is less expensive to cultivate than sunflower. As access to credit for inputs continues to represent a major impediment to farmers, this may spur soybean cultivation.

Profitability and Costs of Production of Sunflower Seed and Alternative Crops

2.28 The 2002 review of the sunflower sector in Ukraine produced an assessment of gross and net margins of sunflower seed production. The review concluded that sunflower was by a considerable margin the most profitable crop in the regions where it is grown in Ukraine, generating gross margins of around US$100 per hectare. By contrast, winter wheat generated margins of US$80 per hectare, with barley and maize between US$50 and US$60 per hectare.

[1] Ukraine Soya Association, Institute of Agriculture, Chabany, Kiev Region, Ukraine.

[2] Ukraine Soya Association, Institute of Agriculture, Chabany, Kiev Region, Ukraine.

2.29 Table 2.4 updates the gross margin information provided in the 2002 review, using average prices and yields from the past three seasons[1].

Table 2.4: Gross Margins of Major Crops, Average 2001/02-2003/04

	Sunseed (Spring)	Wheat (Winter)	Maize (Spring)	Barley (Spring)
Average Revenue (US$/ha)	264	252	299	186
- Price (US$/tonne)	*239*	*100*	*107*	*91*
- Yield (tonnes/ha)	*1.1*	*2.5*	*2.8*	*2.1*
Variable Cost (US$/ha)	72	105	163	88
- Seeds	*26*	*55*	*23*	*50*
- Fertilisers	*10*	*15*	*29*	*12*
- Pesticides/Herbicides	*15*	*12*	*33*	*3*
- Fuel	*17*	*19*	*39*	*19*
- Others	*4*	*4*	*10*	*4*
- Costs of Driers	*0*	*0*	*29*	*0*
Gross Margin (US$/ha)	**192**	**147**	**136**	**98**

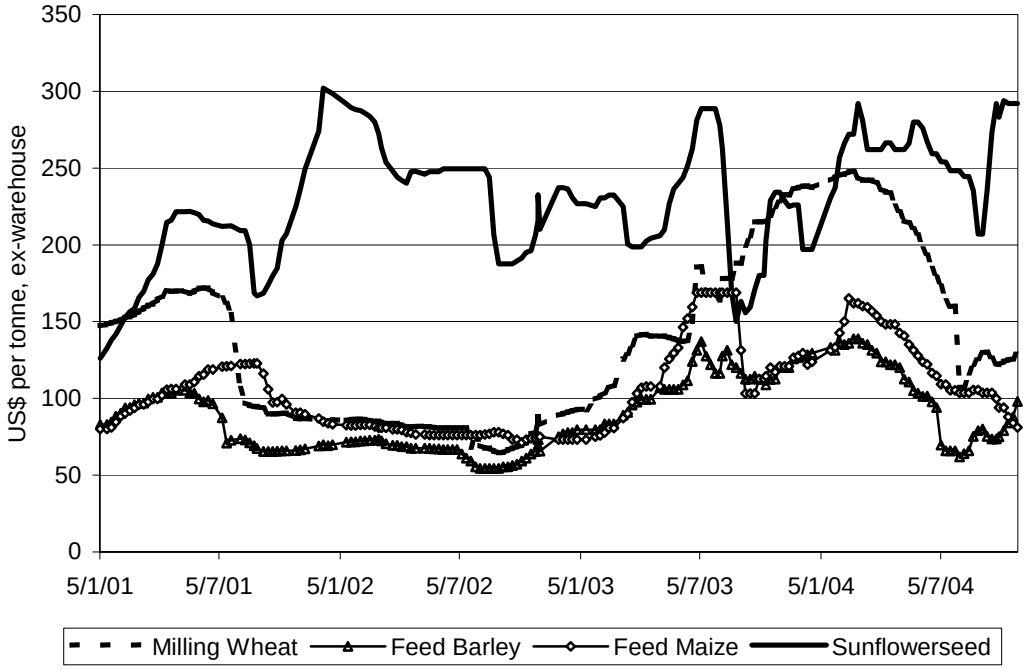
Note: Exchange rates used are averages of US$1:UAH 5.43 for 2001/02, US$1:UAH 5.33 for 2002/03, and US$1:UAH5.14 for 2003/04.
Source: LMC International Ltd., UkrAgroConsult

2.30 The gross margins of all major crops have improved compared with the 2000/01 to 2001/02 period. Sunflower remains the most profitable crop by a significant margin, and requires lower inputs than grain alternatives and therefore has further benefits for liquidity in the farm system.

2.31 Much of the explanation for larger margins lies with the relatively high crop prices. Grain shortages in Ukraine following the failure of the 2003/04 winter wheat crop are reflected in high grain, especially wheat, prices in 2003/04. Oilseed prices have moved upward in the past year after the very large crop (spurred on by high plantings following the winter wheat failure) depressed prices somewhat in 2003/04. Overall, sunflower seed prices have been relatively buoyant over the past three years, inflated by positive world market conditions. Diagram 2.3 presents domestic crop prices from 2001/02 to 2003/04.

[1] Costs are assumed to remain the same in nominal US dollar terms as the 2002 review.

Diagram 2.3: Domestic Crop Prices, 2001/02-2003/04



Source: UkrAgroConsult

2.32 Further attractions of sunflower production are derived from the relative reliability of the crop under adverse weather conditions due to its drought tolerance, and the prompt and reliable payment system operated by many crushers. Sunflower is valued because it is relatively insensitive to negative variations in the growing environment. Even in a dry growing season, yields may be reduced by less than one-third, while yields of maize may be lowered by 60% or more.

2.33 Lastly, the importance of sunflower in the farm rotation is of underlying importance for the continued harvesting of the crop. A classic five-year rotation in the sunflower regions of the steppe zone is wheat, wheat, maize, sunflower and fallow. Farmers with less immediate credit arrears would typically follow this rotation, even extending to an optimum six years the period between sunflower crops. However, those farmers with more onerous credit commitments often reduce the period between planting sunflower to three or even two years, due to its inherent profitability. There is evidence that rotations of less than three years may reduce yields by as much as 0.5 tonnes per hectare.

2.34 The current relative profitability of sunflower may be gradually eroded in the future. There are three main reasons for this:

- Sunflower represents a favourable crop in conditions of low-input farming, where yields are more resilient than those of other crops. Such conditions are witnessed in Ukraine at present. However, as access to inputs increases over time and farming methods intensify, other crops, notably cereals, are likely to respond

more effectively than sunflower, and current margin differentials are likely to be eroded. Nevertheless, sunflower is likely to remain profitable in the rotation.

- The frequency of sunflower in many current rotation practices is too high, and may be unsustainable without altered techniques. However, the intensification of farming methods may reduce the relative profitability of sunflower and lower the frequency of replanting, as described above.

- World market conditions in recent years have been positive for oilseeds generally, with prices above trend. As world oilseed prices return to trend, the prices available for domestic sunflower seed sales are likely to decline.

2.35 Despite these possible future erosions of the *relative* profitability of sunflower, it is highly likely that sunflower will remain a profitable crop for growers in the foreseeable future.

Summary of Sunflower Balance

2.36 Tables 2.5 to 2.7 present a summary of production, domestic consumption and exports of the sunflower complex in Ukraine in 1992/93-2004/05. Figures for 2004/05 are forecasts.

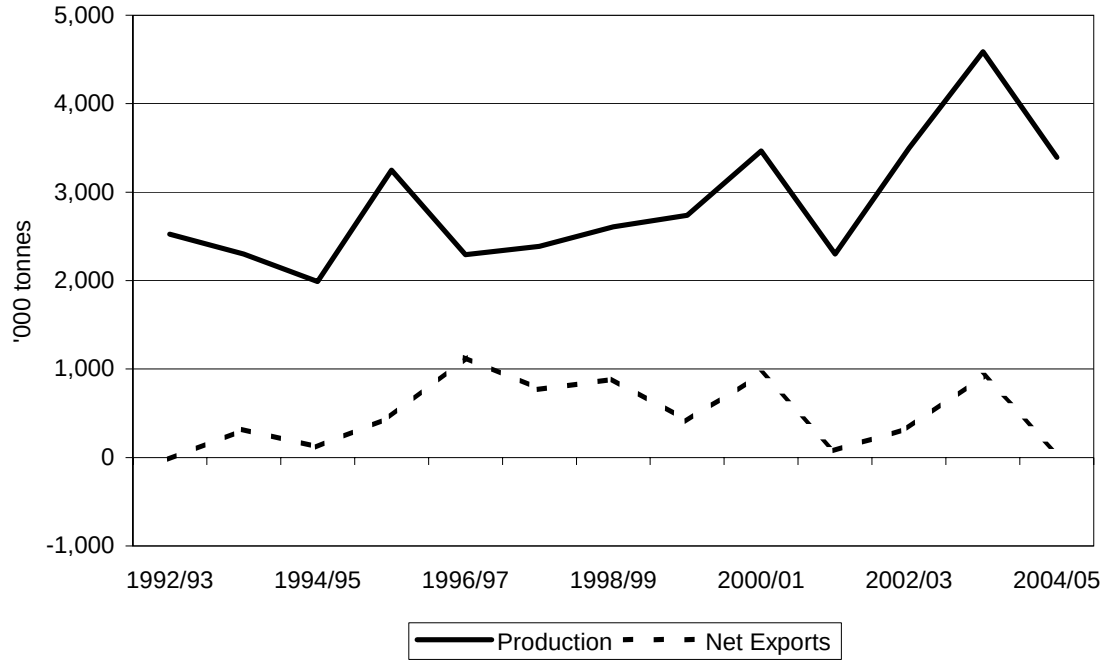
Table 2.5: Ukraine Sunflower Seed Balance 1992/93-2004/05 ('000 tonnes)

	Production	Crushing	Net Exports
1992/93	2,523	1,656	-19
1993/94	2,301	1,640	316
1994/95	1,989	1,440	116
1995/96	3,247	1,414	466
1996/97	2,292	815	1,130
1997/98	2,386	1,011	770
1998/99	2,607	1,101	884
1999/00	2,740	1,709	411
2000/01	3,466	1,866	949
2001/02	2,300	2,040	77
2002/03	3,500	3,215	336
2003/04	4,586	3,558	927
2004/05	3,395	3,270	60

Source: UkrAgroConsult; State Statistics Committee

2.37 Table 2.5 shows the trend towards increased seed production, particularly from 2000 onwards, described at the beginning of this chapter. Though seed exports have, on the whole, declined from the higher levels of the mid to late 1990s, following imposition of the seed export tax, exports increased with the large crop surplus in 2003/04. Diagram 2.4 illustrates how seed exports have tracked production in recent years.

Diagram 2.4: Sunflower Seed Production and Net Exports, 1992/93-2004/05



2.38 As to sunflower oil (Table 2.6), production has increased sharply since the mid-1990s.

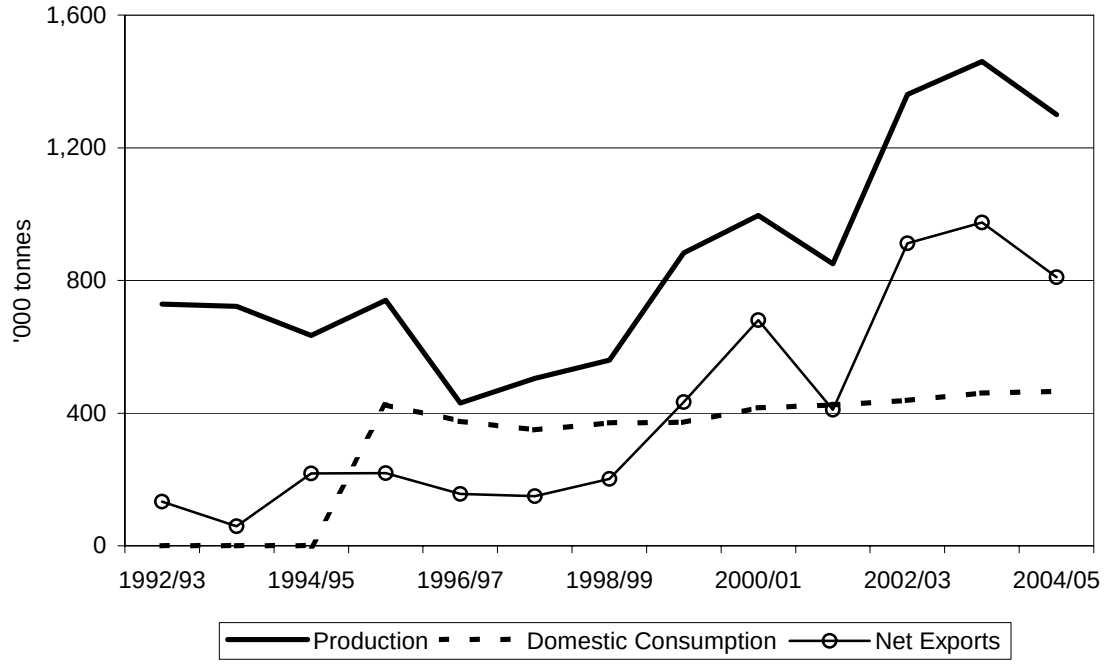
Table 2.6: Ukraine Sunflower Oil Balance 1992/93-2004/05 ('000 tonnes)

	Production	Domestic Consumption	Net Exports
1992/93	728	n/a	134
1993/94	722	n/a	59
1994/95	634	n/a	218
1995/96	740	426	219
1996/97	430	375	156
1997/98	505	349	149
1998/99	560	371	202
1999/00	883	372	433
2000/01	996	416	680
2001/02	850	425	410
2002/03	1,361	438	912
2003/04	1,460	460	975
2004/05	1,300	465	810

Source: UkrAgroConsult; State Statistics Committee

2.39 As domestic consumption growth has been slow, averaging only 1.0% growth per annum since data became available in 1995/96, the increase in production has fed directly into net exports of sunflower oil. This is effect is illustrated in Diagram 2.5. The share of exports in total production shows a growing trend, climbing from around one third of production in the mid 1990s to two thirds of production in recent years.

Diagram 2.5: Sunflower Oil Production, Consumption and Net Exports, 1992/93-2004/05



2.40 Sunflower meal (Table 2.7) follows a similar pattern, with production reaching historically high levels in the past three years. Net exports have grown to two thirds of production.

Table 2.7: Ukraine Sunflower Meal Balance 1992/93-2004/05 ('000 tonnes)

	Production	Domestic Consumption	Net Exports
1992/93	878	n/a	-
1993/94	869	n/a	1
1994/95	763	n/a	4
1995/96	749	300	137
1996/97	432	303	129
1997/98	536	301	236
1998/99	583	358	225
1999/00	906	505	332
2000/01	989	301	409
2001/02	942	344	597
2002/03	1,407	535	852
2003/04	1,698	580	1,099
2004/05	1,455	540	900

Source: UkrAgroConsult; State Statistics Committee

Oilseed Crushing Sector

2.41 Sunflower crushing in Ukraine has increased significantly since 2000/01, reflecting the large amount of investment that has flowed into the sector. Sunflower crushing has exceeded three million tonnes in the past three years. Sunflower is by far the dominant source of oil in the country, with crushing of soybean and rapeseed still at low levels, though soybean in particular has increased its crushing level quickly in recent years.

Table 2.8: Oilseed Crushing in Ukraine, 1992/93-2004/05 ('000 tonnes)

	Sunflower	Soybean	Rapeseed
1992/93	1,656	87	64
1993/94	1,640	36	16
1994/95	1,440	17	6
1995/96	1,414	15	28
1996/97	815	13	9
1997/98	1,011	17	22
1998/99	1,101	25	46
1999/00	1,709	56	93
2000/01	1,866	72	40
2001/02	2,040	107	50
2002/03	3,215	164	37
2003/04	3,558	195	17
2004/05	3,270	215	41

Source: UkrAgroConsult; Oil World

2.42 The increase in sunflower crushing activity, and in sunflower oil output shown in Table 2.6, expanded after the imposition of a 23% export duty on sunflower seeds in October 1999. However, a loophole exploited by exporters, which enabled them to export seed under tolling contracts with foreign crushers, eroded the effectiveness of this tax. Under this arrangement, exporters were able to arrange for seed to be crushed overseas under the condition that the products or revenue from sales were returned to Ukraine. Many exporters thus sold the oil products overseas and returned the revenue to Ukraine without paying the export tax. In reality, therefore, exporters succeeded in continuing to export seed and avoid the taxation.

2.43 In July 2001, under pressure from donors including the IMF, the export tax was reduced to 17%, but, at the same time, overseas tolling arrangements were banned. Therefore, while the tax was lower, it became more effective in limiting seed exports, as illustrated in Diagram 2.6. Nevertheless, though the export tax had an immediate impact on reducing seed exports, the abnormally large domestic crop of 2003/04 generated a surplus of seed that necessitated exports, paying the export tax. Increases in capacity and a smaller 2004/05 crop have, however, reduced seed exports once again to very low levels. Overall, exports of sunflower seed from Ukraine in the past three to four years appear to reflect the surplus of seed supply over effective crushing capacity.

Diagram 2.6: Sunflower Seed Exports, 1992/93-2004/05

Source: UkrAgroConsult, LMC International Ltd.

Crushing and Processing Facilities

2.44 There are 23 major oil factories in Ukraine, almost all of which crush sunflower seed. The design capacities of the individual plants vary greatly, ranging from around 30,000 tonnes of

seed crushed per annum to 600,000 tonnes. Moreover, additions to capacity are occurring frequently at existing facilities, and further new plants are likely to be added in the near future.

2.45 Total design capacity in the industry has risen sharply, from around three million tonnes in 2001/02 to around five million tonnes in 2004/05. By 2005/06, this has the potential to increase further, to 6.3 million tonnes. These plants produce upwards of 90% of Ukraine's overall sunoil output. The remaining 10% or so of production occurs in minor crushing enterprises or at small on-farm crushers who press oil for village level consumption in the rural areas. The total capacity of these minor facilities is 250-350 000 tonnes of seed per year and they operate at 33-35% capacity.

2.46 Table 2.9 presents the capacities of the major sunflower oil plants in Ukraine.

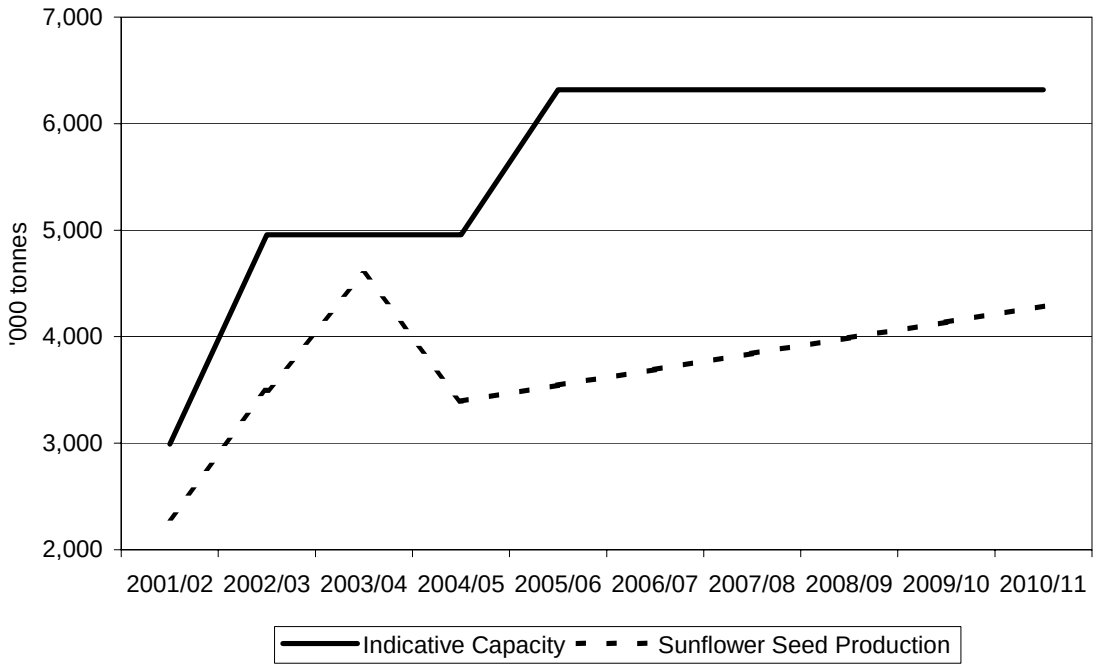
Table 2.9: Capacity of Major Crushing Plants in Ukraine ('000 tonnes of seed per annum)

Plant	**2004/05**	**2001/02**
KirovohradOlia	600	227
Cargill Plant	500	350
Polohy Oil-Extracting Company	450	338
Dnipropetrovsk Oil-Extracting Company	600	281
Zaporizhzhia Oil and Fat Company	252	252
SlavOliya	246	246
Odesa Oil-Extracting Company	240	230
Chumak	330	110
Mironovskiy Oil-Extracting Company	180	
Vinnytsia Oil and Fat Company	160	167
Agroexport	170	
Vovchansk Oil-Extracting Company	141	142
Poltava Oil-Extracting Company Soniashnyk	260	142
Svatove Oil-Extracting Company	126	126
Chernivtsi Oil and Fat Company	146	109
Prikolotne Oil-Extracting Company	150	77
Melitopil Oil-Extracting Company	77	77
Troitske Oil-Extracting Company	70	64
Milove Company of Vegetable Fats and Protein	80	55
Nezhin Oil and Fat Company	30	
Others (Sonola, Kiev-Atlantic, Kerch)	150	
Total	**4,958**	**2,993**
Potential Additional Capacity 2005/06		
Illichevsk Oil Extracting Company (Bunge)	*600*	
ADM/RisOil	*150*	
WJ (Kherson)	*460*	
Dergachi, Kharkiv regions	*150*	
Total	***1,360***	
Potential Capacity 2005/06	**6,318**	

Source: UkrAgroConsult

2.47 The revitalisation of the crushing sector in Ukraine has given rise to a problem of under-utilisation of capacity in the sector. As Table 2.1 revealed, production of sunflower seed is typically 3.5 million tonnes per annum at present. In order to illustrate the scale of the emerging problem, we have prepared Diagram 2.7. This diagram contrast the capacities presented in Table 2.9 with sunflower seed production. We have assumed a step change in total capacity from its previous to its current level, and have assumed all potential capacity becomes available for 2005/06. For future seed production, we have taken the 2010/11 forecast from Table 2.2, and assumed straight-line growth to this level from 2004/05.

Diagram 2.7: Crushing Capacity versus Sunflower Seed Production, 2001/02-2010/11



2.48 The diagram reveals that increases in seed production have not kept pace with the additions to capacity in recent years. In the near future, the capacity gap, and hence capacity utilisation, which is an important determinant of industry costs, is set to widen further. Though profitable crushing margins have attracted a great deal of investment into the sector, as margins return to a more sustainable level (which we discuss in the following sections), the industry may respond to overcapacity in several ways. These include:

- Closure of capacity.
- Increase domestic seed production.
- Import seed.

2.49 Considering each of these possibilities in turn, we would make the following observations:

- *Closure of capacity:* The industry has proved itself extremely resistant to closures in the past. Despite severe difficulties in the mid-1990s, when seed exports were common, all the original crushing and refining plants remain in operation.

- *Increase domestic seed production:* The problems of declining yields and increased sun area have been discussed above. Without significant yield improvements, which would require major changes in the farming system, it seems unlikely that sunflower seed production can increase substantially above its forecast level.

- *Import seed:* The Ukraine Oil Processors' Association, *Ukrolia,* has recently proposed that the Ukraine parliament abolish the import duty on sunflower. This might involve creating a seed import quota to satisfy the domestic deficit requirement. The current import duties on sunflower are €500 per tonne.

2.50 One counter-argument often advanced to the problem of overcapacity is that the capacities presented are design capacities, and that various infrastructural, logistical and technical considerations make effective capacity far lower, perhaps by as much as one million tonnes at present. However, the most efficient factories are operating at close to 100% capacity at present, and therefore it seems clear that these problems can be overcome.

2.51 Although domestic seed production is sufficient to support a relatively large crushing industry, the industry is currently over-capitalised. We estimate that an optimistic output of four million tonnes per year would be sufficient to support domestic crushing from a maximum of 13 to 14 crushing plants, each with a capacity of around 1 000 tonnes per day, which is towards the lower end of the scale found in Western Europe, and would be the minimum that would enable the sector to remain competitive as trade barriers to Western Europe are reduced over time.

Processing Costs

2.52 In the late 1980s and early 1990s, Ukraine had a very competitive crushing industry. However, problems of under investment in the sector as a whole during the 1990s have reduced the industry's ability to compete internationally, primarily because of the small scale of the operations and in many cases low capacity utilisation.

2.53 Table 2.10 presents the results of our calculations of average sunflower crushing costs in Ukraine from 2000/01 to 2002/03. These costs are compared with key international competitors. The costs have been calculated using a model developed by LMC International, which applies an engineering approach to costing. Starting from the detailed and disaggregated listing of the inputs that are used to process oilseeds, we have attached local prices to each of the inputs, to arrive at a true cost estimate. The base case scenario presented in the table assumes that capacity utilisation for the industry as a whole is reasonably high since the imposition of the export tax, at around 70%. In order to illustrate the potential for the industry, we have also included some sensitivity analysis, where we consider the average crushing cost if capacity utilisation increased 90%, and secondly if average factory size increased to 1,500 tonnes of seed crushed per day.

2.54 The table reveals that Ukraine's processing costs are, on average, similar to those in France and Russia, but somewhat higher than Argentina. Nonetheless, average Ukrainian costs have fallen considerably over the past five years, and with further improvements in capacity utilisation will equal costs in Argentina. Moreover, if factory size were to increase, Ukrainian costs would be lower than its international competitors.

2.55 An important point to bear in mind here is that, for many of the modern large scale plants in Ukraine, these capacities and scale parameters have already been achieved, and therefore costs are likely to be at or even below the levels presented in Table 2.10. Moreover, if some of the surplus capacity currently present within the industry were to close, the average costs would quickly approach the levels presented here as capacity utilisation and, presumably, factory size, would improve (assuming smaller factories closed in the rationalisation process).

Table 2.10: Sunflower Crushing Costs (per tonne of seed), Average 2000/01-2002/03

	Capital and Sundries	Fuel and Chemicals	Labour	TOTAL	*of which variable costs:*
Ukraine					
Base Case	11.7	6.6	6.2	**24.5**	10.6
90% Capacity Utilisation	8.4	6.3	6.2	**20.9**	9.6
Average Daily Capacity of 1,500 tpd	4.8	6.0	5.6	**16.4**	7.6
Argentina	12.4	6.9	1.6	**20.9**	9.9
France	14.0	7.4	3.8	**25.3**	11.3
Russia	12.4	6.2	5.8	**24.4**	10.3
Spain	20.3	8.8	7.0	**36.1**	14.9

Note: The model assumes 5% real interest rate.
Source: LMC International Ltd.

Crushing Margins

2.56 Production costs should be viewed in the light of crushing margins. Table 2.11 presents both domestic and export crushing margins for the Ukraine for 2001/02 to 2003/04. We have also included the EU average margin for comparison. Ukrainian crushers pay VAT of 20% on purchases of domestic sunflower seeds. When they export sunflower products, they are due a full refund of the VAT paid on the equivalent amount of seed raw materials. However, as we discuss in more detail in Chapters 3 and 4, this VAT refund is not always forthcoming. With this in mind, we present crushing margins for exports both with and without the VAT refund.

Table 2.11: Sunflower Seed Crushing Margins, 2001/02-2003/04 (US$ per tonne of seed)

	2001/02	2002/03	2003/04	Average
Ukraine				
- Domestic	69	64	92	77
- Export, with VAT Refund	49	36	131	93
- Export, without VAT Refund	10	-4	101	60
EU	7	10	25	14

Source: UkrAgroConsult; LMC International.

2.57 The table reveals the influence of the export refund on crushing margins. While margins are strong for sales in the domestic market, where VAT is not refunded on export sales margins can collapse. This is highlighted for 2001/02 and 2002/03, where margins were around or below comparable EU averages without VAT refunds. The strong margins enjoyed in 2003/04 are something of an aberration, as Ukrainian crushers benefited from both extremely favourable world market conditions (as illustrated by the high EU margins in 2003/04 and the higher returns available from exports), and the lower price of domestic seed following unusually high domestic production.

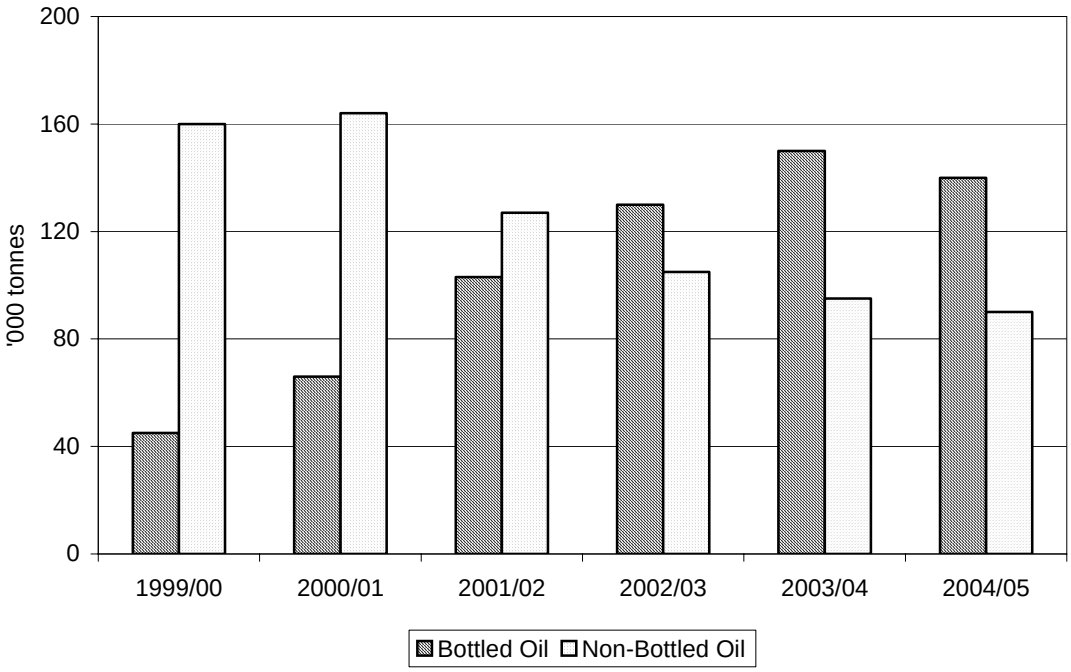
2.58 The high average margins enjoyed by the industry recently are generally unsustainable, and, in economic terms, would provide a signal to companies to enter the crushing sector. In Ukraine in recent years, this is exactly what has happened. In order to compete away high margins, the resulting excess capacity should bid up seed prices to the point where margins shrink back to levels that cause some crushers to exit the industry. Clearly, if margins approach the recent EU average of around US$15 per tonne of seed, only the most efficient crushers in the Ukraine will survive, as current average costs are substantially above this level (Table 2.10).

Domestic Oil Consumption

2.59 Having discussed the production and processing of sunflower seed, we now turn to the consumption of oil within Ukraine.

2.60 Sunflower oil is traditionally the favoured cooking oil in Ukraine. Although many Ukrainian consumers still prefer filtered unrefined oil for its colour and flavour, the market for refined oil is increasing quickly, with growth centred on larger urban areas where incomes are rising. As Diagram 2.8 illustrates, the market shares of bottled and non-bottled sunflower oil in household consumption have completely reversed in recent years, with bottled oil now accounting for over 60% of household oil consumption.

Diagram 2.8: Household Sunflower Oil Consumption, 1999/00-2004/05



2.61 A significant part of the market, in particular rural consumers, is still supplied by small-scale or on-farm oil factories producing lower quality oil at prices corresponding to the weak purchasing power of the population. However, the evolution of consumer preferences revealed in Diagram 2.8 is likely to strengthen the position of major crushers, driving small-scale oil factories out of the market.

2.62 Rapeseed and soybean oils are not significant market players among domestic consumers, as Table 2.12 reveals. Refined palm oil consumption in Ukraine has been increasing recently, because of a growing consumption of palm products by the food industry, particularly in margarine and confectionery manufacture.

Table 2.12: Vegetable Oil Consumption, 1995/96-2004/05 ('000 tonnes)

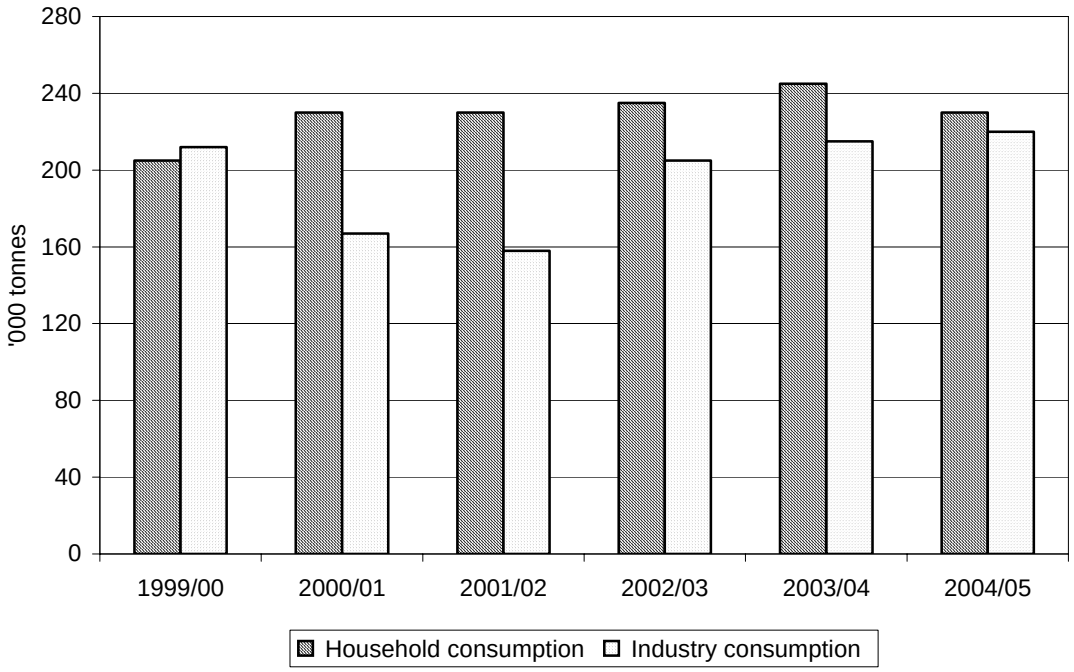
	Soybean	Sunflower	Rapeseed
1995/96	3	426	13
1996/97	3	375	4
1997/98	6	349	11
1998/99	6	371	19
1999/00	4	385	35
2000/01	9	425	19
2001/02	14	425	24
2002/03	16	438	14
2003/04	19	460	14
2004/05	25	465	24
Consumption Forecast			
2010/11	30	555	29
2015/16	35	644	33

Source: UkrAgroConsult, Oil World, LMC International Ltd.

2.63 Oil consumption worldwide has a high income elasticity of demand. With steady economic growth, we expect a reasonable increase in oil demand, of around 3.0% per year over the next decade. This is nonetheless below the average annual long run global increase in oil demand over the past 25 years, which averaged 3.5%, because Ukraine has a difficult period of adjustment ahead, which will limit demand growth.

2.64 The breakdown between industrial and household consumption of sunflower oil produced by the main crushers on the domestic market is presented in Diagram 2.9.

Diagram 2.9: Sunflower Oil Consumption by Sector, 1999/00-2004/05



Domestic Meal Consumption

2.65 The key domestic consumers of sunflower meal are compound feed mills. The Ukrainian compound feed industry has only a limited ability to pay premium prices for high protein feeds because of the collapse of the collective farms' livestock and poultry operations that were the major buyers. Livestock numbers declined throughout the 1990s, although there is some evidence of increases in some sector in the past few years, especially in the poultry sector. Poultry is favoured for investment at present due to the shorter turnover of livestock associated with the sector, relative to cattle, sheep and pig farming. The poultry sector has expanded by as much as 50% in the past three years, and current optimistic forecasts are for livestock sector growth of up to 15% per annum over the next three years.

2.66 Table 2.13 presents estimates of meal consumption in Ukraine. The table reveals that total consumption has grown significantly in the past three to four years, with the expansion in consumption focused in the sunflower and soybean meal sectors. Over the entire period, total consumption has grown by an average of 9% per annum. If this rate of expansion were to continue to 2010/11, domestic meal consumption would be around 1.2 million tonnes, and would expand to almost 1.9 million tonnes by 2015/16. The forecasts for sunflower seed production presented in Table 2.5, assuming 50% of sunflower seed production converts to meal production, would give domestic sunflower meal production of 2.1 million tonnes in 2010/11 and 2.2 million tonnes in 2015/16. Therefore, sunflower seed alone is forecast to be sufficient for forecast domestic meal consumption, and Ukraine is likely to remain a net exporter of meal over the medium term.

2.67 However, growth in meal demand is likely to favour soybean meal, which, being higher in amino-acid content than sunflower meal, is more appropriate for feed use, particularly in the poultry sector, and this is likely to be supplied from increased production in domestic soybeans and crushing of imported soybeans.

Table 2.13: Meal Consumption, 1995/96-2004/05 ('000 tonnes)

	Soybean	Sunflower	Rapeseed
1995/96	43	300	4
1996/97	43	303	3
1997/98	27	301	11
1998/99	26	358	17
1999/00	27	505	42
2000/01	87	301	39
2001/02	146	344	12
2002/03	161	535	9
2003/04	175	580	6
2004/05	189	540	15

Source: UkrAgroConsult

3. GOVERNMENT INTERVENTION IN THE DOMESTIC OILSEED MARKET

3.1 Our original review of the sector, in 2002, presented government policy relevant to the oilseed sector, and sunflower in particular. The vast majority of this policy is unchanged. We have, however, reproduced policy in this chapter as it relates to the sector, in order that this updated report can be read as a stand-alone document. In Chapter Four, the impact of these policies on sunflower seed production and the crushing sector is analysed in more detail, and conclusions about the effectiveness of the policies are presented.

3.2 The Government does not give direct subsidies to oilseed or vegetable oil production. Instead, the thrust of recent policy in the sector has been aimed at:

- Applying border protection measures to deter imports of some oilseeds and products.
- Reducing the tax burden on agriculture.
- Subsidising agriculture implicitly via VAT exemptions.
- Protecting the domestic sunflower seed crushing industry through export taxes on seed.

Land Reform

3.3 Land reform in Ukraine has now reached its third stage.

- At the first stage of the reform, land was transferred from the Government to collectives.
- During the second stage, the collectives issued land share certificates to their members, giving each member the right to a given number of hectares.
- The third stage, which is underway, is titling, namely, the allocation of land plots on the basis of the land share certificates.

3.4 Despite this apparent progress towards land ownership, legislation to put in place an internal land market, due for January 2005, has not materialised. In October 2001, parliament adopted the Land Code, establishing the right of private ownership to land. The Land Code allowed for sale of agricultural land from 1 January 2005, but a Presidential veto has postponed this to January 2007. Moreover, private or legal persons can acquire ownership of a maximum of only 100 hectares until 2010.

3.5 The lack of clarity regarding land ownership remains a major constraint to the development of land markets and farms' access to credit. The completion of land reform and the creation of land markets can be expected to facilitate the break-up of large, former state-owned,

farms in Ukraine. In the longer term, a wider variety of farms of different sizes is likely to result from the process, which should also lead to improvements in sector efficiency. In the short term, the possibility of using land as collateral will improve significantly farmers' access to credit and thus alleviate many of the most serious farming constraints, as discussed in Chapter 2.

Taxation of Agriculture

3.6 Between 1991 and 1999, farms were part of the general tax system in Ukraine, with some exclusions, such as an exemption from profit tax. Since 1999, the Government has supported farmers through a favourable system applying a single tax on farms, combined with the exemption on taxes on profits. This system remains in place.

Fixed Agricultural Tax

3.7 In 1999, the fixed agricultural tax (FAT) integrated twelve taxes (including taxes on land, profit, automobiles, and income, as well as pension, social security and unemployment payments) previously paid by the farms. Those eligible to pay the FAT are enterprises for which agricultural production accounts for over 50% of their revenues. The tax base is the value of agricultural land, which was fixed in July 1997, and takes into account the potential productivity of the land.

3.8 The tax rates are specified for two types of agricultural land:

- 0.5% of the value of arable land, hay meadows and pastures.
- 0.3% of the value of perennial plantations.

3.9 In several regions, where the land is considered to be less productive than average, the tax rates are lower than this.

3.10 The FAT is in effect a farm subsidy because it places a much lower tax burden on farms than on other sectors of the economy. According to the Ministry of Agricultural Policy of Ukraine, the estimated annual tax privilege of the FAT in 2002 was worth around UAH 1,400 million ($265 million).

3.11 This favourable tax system improves farmers' margins for all crops relative to the tax levied on other industries. However, it does not have an impact on farmers' decisions to grow sunflower vis-à-vis other crops, and therefore does not provide a direct benefit for crushers.

Value-Added Tax

3.12 Agricultural enterprises in Ukraine have special provisions for the payment of value-added tax (VAT). VAT is charged on sales of sunflower seed at 20% of the purchase price, yet farms continue to be exempt from paying this VAT to the national budget. The accumulated VAT from sales of seeds must be deposited in special bank accounts and used by the farmer only to purchase five specially approved classes of agricultural production inputs. Many industry observers feel this technicality is not observed in reality, and that VAT receipts were in effect

simply a subsidy, or transfer, to farmers' overall income. The VAT system works in the following way:

- *Crushers pay VAT on seeds when they buy directly or from traders.* For example, if crushers pay UAH 1,200 for seeds, UAH 1,000 is the farmgate price and UAH 200 is VAT. The farmer is paid the full UAH 1,200, but with *two invoices.*

- *The crusher is entitled to a refund of the VAT paid on seed for products that are subsequently exported.*

- *Crushers charge 20% VAT on domestic oil and meal sales, but export at zero VAT.*

- *Crushers are able to offset VAT receipts from domestic product sales against purchased seed VAT refunds due on exported products.* In other words, VAT reimbursement is made on the basis of balance between received VAT and paid VAT. Therefore, if the export refund to which the processor is entitled exceeds the amount of VAT they receive from domestic sales, the exporter does not pay any VAT to the national budget but is refunded by the Government.

- *The law on exports says that VAT should be reimbursed to exporters within three months.* However, government arrears on VAT are considerable, and in reality exporters have to wait longer to be reimbursed, if, indeed, they are reimbursed at all.

3.13 The VAT exemption of the agricultural sector is an implicit but significant subsidy. It is financed by domestic consumers, by the government (with refunds to exporters), and by those exporters who are not reimbursed by the government. When assessing the level of this subsidy, it should be taken into account that farmers pay the regular 20% VAT on agricultural inputs that they purchase with their VAT revenue.

3.14 Table 3.1 presents the revenues of farmers and crushers, based upon an average of the 2001/02 to 2003/04 seasons. Seed prices are presented including VAT, as this reflects the reality for farmers, who are able to retain VAT paid on seed. Oil and meal prices are presented excluding VAT, on an ex-elevator basis, with f.o.b. export prices adjusted for the cost of internal freight. An interesting observation emerges.

3.15 The domestic oil price reveals a slight (4%) discount against equivalent export prices. This may reflect a preference on the part of crushers to sell into the domestic market, to lessen the issue of VAT refunds on seeds for exported products.

3.16 These calculations form the basis of the subsequent VAT calculations in Table 3.2. This table presents the VAT picture from the viewpoint of various sector stakeholders. For farmers, they are able to retain the total VAT from seed sales, i.e. one-sixth of the seed revenue in Table 3.1 (as revenue is VAT inclusive, and VAT is 20%). For crushers, they charge VAT on domestic sales of oil and meal at 20% of the prices shown in Table 3.1. As oil and meal prices in Table 3.1 exclude VAT, this is simply 20% of domestic sales revenue. This figure is important to crushers, as they can offset this amount against VAT on seed purchases. Lastly, for government, there is a gap in the national budget for sunflower VAT finances. The VAT received by farmers is

not forwarded to government, yet the government must refund crushers for the proportion of oil and meal sales that are exported. The difference between the income on seeds (retained by farmers) and the outgoing expenditure on VAT refunds is the last figure in Table 3.2.

Table 3.1: Farmer and Crusher Revenues from Sunflower Seed, Oil and Meal, Average 2001/02-2003/04

Farmers (VAT Inclusive)	
Seed Sales ('000 tonnes)	3,462
Seed Price (US$ per tonne)	237
Seed Revenue (US$ million)	822
Crushers (Excluding VAT)	
Oil Sales ('000 tonnes)	
- *Domestic Market*	*441*
- *Exports*	*766*
- Total	1,207
Oil Price (US$ per tonne)	
- *Domestic Market*	*518*
- *Exports*	*540*
Oil Revenue (US$ million)	
- *Domestic Market*	*228*
- *Exports*	*414*
- Total	642
Meal Sales ('000 tonnes)	
- *Domestic Market*	*486*
- *Exports*	*850*
- Total	1,336
Meal Price (US$ per tonne)	
- *Domestic Market*	*91*
- *Exports*	*84*
Meal Revenue (US$ million)	
- *Domestic Market*	*44*
- *Exports*	*72*
- Total	116

3.17 Table 3.2 presents the VAT payments and receipts derived from the revenues in Table 3.1.

Table 3.2: VAT Payments and Receipts, Average 2001/02-2003/04

VAT (US$ million)	
Received by Farmers	137
Received by Crushers on Oil Sales	
- *Domestic Market*	*46*
- *Exports*	*0*
- Total	46
Received by Crushers on Meal Sales	
- *Domestic Market*	*9*
- *Exports*	*0*
- Total	9
Annual Net Budgetary Cost of VAT System in Sunflower Sector	87

3.18 Table 3.1 and Table 3.2 reveal that approximately two-thirds of the VAT paid out on seed purchases by crushers is eligible for refunds as products are exported. This creates a significant difficulty for government, because this potential expenditure is not matched by incomes, as farmers are entitled to retain the VAT received on seed, rather than transferring this to government. The government's VAT income and expenditure account, therefore, reveals a net deficit of averaging US$87 million per annum over the past three years. At its peak, in 2003/04, when volumes proportions of oil and meal were exported, this reached over US$100 million.

Disadvantages of VAT System

3.19 The implications, both advantages and disadvantages, of the VAT system are manifold. Significant among the disadvantages are the following:

- *Crushing margins:* As we saw in Chapter 2, crushing margins in Ukraine are significantly reduced, and in some cases negative, if VAT reimbursements are not given to crushers. In the current 2004/05 season, several crushers claim that margins are again negative without VAT refunds. Where crushing margins are reduced to levels corresponding to the EU equivalent, this may be unsustainable as it does not take into account the higher risks of crushing in Ukraine.

- *Cash flow*: In terms of cash flow, it is as if the crushers give the government an interest-free loan during the period between the purchase of the seed and any subsequent reimbursement of VAT. Furthermore, crushers are generating costs by committing resources to VAT recovery that could be better employed elsewhere. It is highly plausible that seed prices are discounted to reflect the losses experienced on VAT refunds by crushers, although overcapacity in the crushing sector will have dampened this effect recently. Nevertheless, industry participants expressed the view that seed prices might be in the region of 3% to 5% higher if

VAT were fully and quickly recoverable. There is evidence that grain exporters have in the past discounted local grain prices to make up for their losses caused by VAT refund arrears.

- *Tax administration*: The accumulation of overdue VAT refund requests puts pressure on the VAT administration. The Tax Authorities have no central budget for VAT, and rely instead on the revenues from the regional offices and their regional budgets. The regional budgets, in turn, are determined by an incentive system that establishes the offices' expenditures as a proportion of their tax receipts. This causes additional problems in the poorer regions, which tend to depend most heavily on agriculture. They do not receive VAT from farmers but have to pay out VAT refunds on exports as a net cost. In agriculture-dominated areas, VAT refunds can correspond to a sizeable share of the authority's budget. These regional authorities thus have weak capacity, and little incentive, to reimburse VAT due on exported products.

3.20 The system also punishes oil exporters (since VAT is received for domestic sales) and is thus contradictory to the seed export tax policy, which aims to favour sunflower oil exports. The policy thus discriminates between crushers in the following ways:

- Crushers selling mainly for domestic markets are in a better position than exporting crushers.Competitive, low cost, crushers are in a better position to manage the risk of non-refund than non-competitive crushers.

- Crushers who are located in economically prosperous areas, have headquarters in the capital, or have good relations with local tax authorities, may receive their refunds more easily than other crushers.

3.21 These problems effectively reduce the subsidy enjoyed by the farmers under the current system. In 2003/04, the government attempted to address the issue of VAT arrears by issuing two rounds of Treasury Bills to crushers with arrears. These issues were designed to wipe out the debt overhang, allowing the government to concentrate on timely payment of current VAT refunds. However, while the take-up of government bonds was good, the inherent weaknesses in the system meant that the problem of VAT refunds has since resurfaced, to the extent that some crushers claim the scale of arrears is now greater than ever.

3.22 The policy of VAT refunds on exports, and the problem of the government's VAT arrears, applies to all Ukrainian exporters, not only those of the agricultural sector. Government's failure to reimburse VAT has been strongly criticised by international financing institutions, in particular the International Monetary Fund (IMF), which decided to withhold a multi-million dollar loan tranche because of the Ukrainian government's inability to resolve problems in the fiscal sphere.

3.23 Agricultural VAT exemptions are considered as a subsidy by the World Trade Organisation (WTO), which Ukraine seeks to join in the near future. The level of total Aggregate Measurement of Support (AMS) for the farming sector in Ukraine is not fixed yet. If, as seems

probable, the Government accepts a low farm support level as the base level, the pressure to reduce tax exemptions is likely to be high.

Advantages of VAT System

3.24 Despite the significant drawbacks of the current VAT system, some sectors do derive some benefits from the present situation.

3.25 *Farmers' subsidy:* The main benefit of the current system accrues to farmers, who receive a sizeable implicit subsidy through the VAT exemption. Under the current system, this subsidy is financed partly by domestic consumers, partly by the government (amount equivalent to the refund), and partly by exporters who are not refunded. However, the incentive for the crushers to discount farmgate prices reduces the value of the subsidy. Furthermore, farmers are officially constrained to use the VAT revenues only for agricultural input purchases.

Trade Policy

Export Taxes

3.26 In 1998/99, about 35% of the harvested sunflower seed in Ukraine was exported, primarily to the EU. The openness of the sunflower seed market had a detrimental impact on Ukrainian vegetable oil processors, which could not afford to buy sunflower at export prices. In order to protect the local oilseed-processing sector, the Ukrainian Government introduced a 23% tax on sunflower seed exports in October 1999. The IMF opposed this duty, which was considered to introduce market distortions, and made its loans to Ukraine conditional on the reduction of this duty to no more than 10%.

3.27 However, almost all sunflower seed exporters managed to avoid the duty legally, using either tolling contracts with Western European buyers or the opportunities provided by bilateral free trade agreements with Georgia and other Former Soviet Union (FSU) countries, under which export tariffs were not applied. Under the tolling contracts, Ukrainian exporters shipped seed duty-free to Western Europe for processing, with payment due, not at the time of export, but within 90 days of export of the seeds, when the final oilseed products had been produced and sold.

3.28 In July 2001, a new law was approved, lowering the export tax to 17% of the FOB customs cost. The law also rescinded the duty-free status formerly granted to exports made under tolling contracts. With the duty-free status no longer available, the 17% export duty immediately cut back exports of Ukrainian sunflower seed in 2001/02. Therefore, while the tax was lower, it became more effective in limiting seed exports. This is illustrated in Diagram 3.1, reproduced from Chapter 2. Nevertheless, though the export tax had an immediate impact on reducing seed exports, the abnormally large domestic crop of 2003/04 generated a surplus of seed that necessitated exports, paying the export tax. Increases in capacity and a smaller 2004/05 crop have, however, reduced seed exports once again to very low levels. Overall, exports of sunflower seed from Ukraine in the past three to four years appear to reflect the surplus of seed supply over effective crushing capacity.

Diagram 3.1: Sunflower Seed Exports, 1992/93-2004/05

Source: UkrAgroConsult, LMC International Ltd.

3.29 There are no export duties on sunflower oil or meal exports.

Import Duties

3.30 The schedule for import duties in 2004 is summarised in Table 3.3. These have not changed since the previous report in 2002. Unlike Poland and Romania, Ukraine does not have preferential import duties for imports from the EU. Imported commodities are also subject to 20% VAT.

Table 3.3: Ukraine — Import Tariffs for the Oilseed Complex, 2004

ITEM	MFN Tariff
Seed	
Soybeans	0
Rapeseed	EUR 20 /tonne
Sunflower Seed	EUR 500 /tonne
Meal	
Soymeal	0
Sunmeal	EUR 400 /tonne
Rapemeal	EUR 400 /tonne
Oil	
Crude Soy Oil	EUR 300 /tonne
Refined Soy Oil	EUR 300 /tonne
Crude Palm Oil	0
Refined Palm Oil	0
Crude Sunflower Oil	EUR 800 /tonne
Refined Sunflower Oil	EUR 800 /tonne
Crude Rapeseed Oil	EUR 150 /tonne
Refined Rapeseed Oil	EUR 150 /tonne
Coconut Oil	0
Selected Downstream Products	
Margarine	EUR 1,000 /tonne
Shortening	30%

Note: The only countries that are not MFN are Israel and Taiwan.
Source: Directorate-General Trade, European Commission.

3.31 Despite excess crushing capacity, Ukraine has not yet considered lowering the existing import duties on oilseeds. The Ukraine Oil Processors' Association, *Ukrolia*, has recently proposed that the Ukraine parliament abolish the import duty on sunflower. This might involve creating a seed import quota to satisfy the domestic deficit requirement. Therefore, softseed imports are mainly limited to seeds for sowing. While soybeans have a 0% import duty, the difficulty of access to finance has largely prevented traders from importing beans for crushing, preferring to import soymeal (also with 0% duty) because of the faster capital turnover. However, with new crushing capacity likely to be developed on the Black Sea in the next couple of years, it is likely that these crushers will import soybeans for crushing to increase factory utilisation and supply the growing meal markets in Ukraine.

3.32 Sunflower oil also receives very high protection on the domestic market, with an import duty of €800 per tonne. As would be expected, this virtually eliminates sunflower oil imports. The less favoured rapeseed and soy oil are also protected on the domestic market by a high duty of €150 and €300 per tonne, respectively. Palm oil and coconut oils, which are not considered to be direct competitors to sunflower oil, are imported free of tariff.

3.33 Unlike Poland, for example, Ukraine also provides significant protection for downstream processed products, and the duty on imports of hard fats, such as shortening, is 30%.

3.34 Future developments regarding import duties are likely to be linked to Ukrainian WTO and other trade negotiations discussed in the next section.

Regional Trade Agreements

3.35 Free trade arrangements are evolving between Ukraine, Russia and Belarus. At present, the agreement between Ukraine and Russia does not cover trade of sunflower seed, nor does it affect export taxes. Therefore, Ukrainian sunflower seed exporters have to pay 17% export tax when shipping sunseed from Ukraine to Russia, as they would for other destinations. Moreover, Russian sunflower seed exporters also have to pay the Russian export duty of 20% if delivering sunseed to Ukraine.

4. IMPACT OF THE EXPORT TAX AND VAT ON THE SUNFLOWER SECTOR

4.1 In the previous chapters, we have introduced the current situation in the Ukraine sunflower sector, and the most important issues affecting stakeholders at present. Foremost among these are two overriding policy interventions:

– The 17% export tax payable on sunflower seed exports.

– The VAT refund due on sunflower seed purchases for that proportion of products destined for export.

4.2 In this chapter, we address these two issues in detail, considering the impact they have on stakeholders in the sector.

Export Tax

4.3 The 17% export tax has had a marked impact on the sunflower sector. Among its most important effects have been:

- Lowering the domestic price of seed.

- Increasing the availability of sunflower seed to domestic crushers.

- Raising capacity utilisation in domestic crushing plants.

- Reducing sunflower seed exports, but increasing sunflower oil exports.

- Encouraging investment in domestic crushing and refining facilities.

4.4 Success in the last of these factors, encouraging investment in domestic crushing facilities, has in fact lessened the impact of the export tax on improving capacity utilisation. Nevertheless, seed exports now tend to occur only when there is a surplus of seed production over effective domestic crushing capacity, as in 2003/04, and capacity utilisation in several crushing facilities is at or near 100% utilisation.

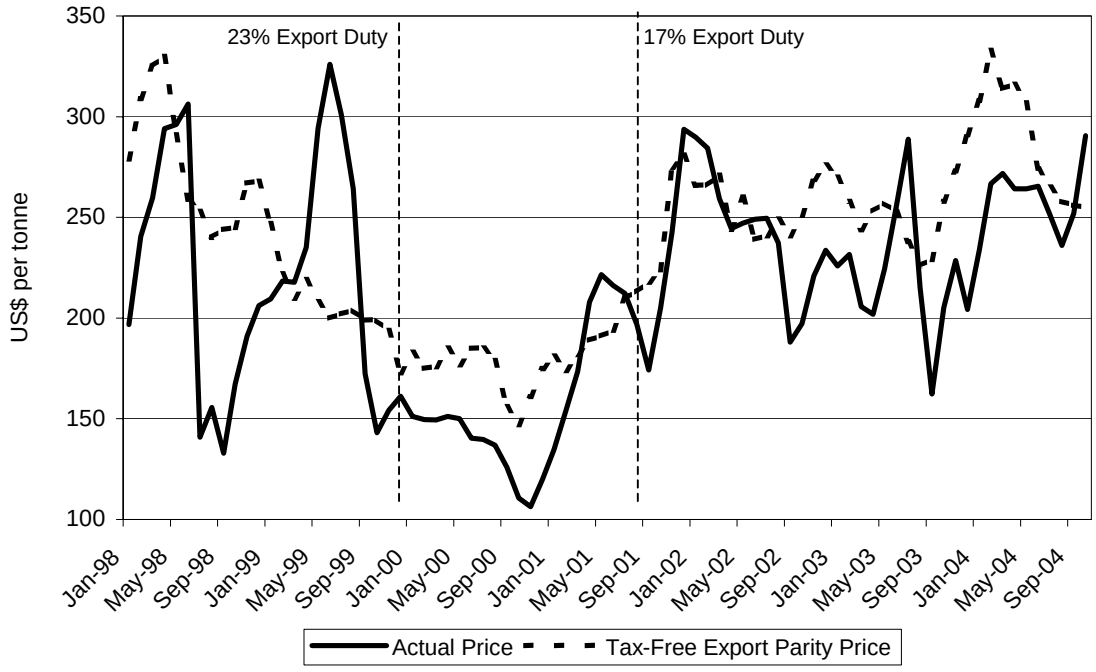
Seed Prices

4.5 The export tax has had a major part to play in reinvigorating the Ukraine sunflower sector. However, a major argument levelled against the export tax is that it depresses sunflower seed prices paid to farmers. According to economic theory, when there is a surplus of seed, domestic prices should reflect the price available for seed exports, less the costs of making exports — the export parity price. In the case of the Ukraine, the cost of making exports includes a 17% export tax payable on sunflower seed, thereby lowering domestic seed prices.

4.6 Diagram 4.1 compares actual Ukraine seed prices with the price that should prevail in the absence of export taxes, i.e., the tax-free export parity price. The tax-free export parity price is calculated as follows:

- EU seed price, c.i.f. Lower Rhine
  Less
- Indicative c.i.f. costs (US$10 per tonne)
  Less
- Fobbing costs (US$23 per tonne, including US$15 land freight and US$8 port charges and loading costs)

Diagram 4.1: Sunflower Seed Prices in Ukraine (including VAT) Compared with Tax-Free Export Parity Price



4.7 When there is a surplus of seed available for domestic crushers, as in 2003/04, with an export tax of 17%, we would expect actual domestic prices to settle around 17% below the tax-free export parity price. Diagram 4.1 reveals that this is very close to what actually happened, with domestic prices in fact averaging 21% below the indicative tax-free export price. In these circumstances, therefore, the domestic seed price reflects in full the export tax payable. This is because there is no need for crushers to bid up seed prices above the maximum prices that exporters can afford to pay, which is 17% below the export price. In effect, with a domestic seed surplus, exporters determine the domestic seed price. In fact, the price often falls more than 17% below the tax-free export parity price, due to the selling imperative of farmers early in the season in order to raise cash. Such distress selling is associated with the September troughs in the Ukraine seed price.

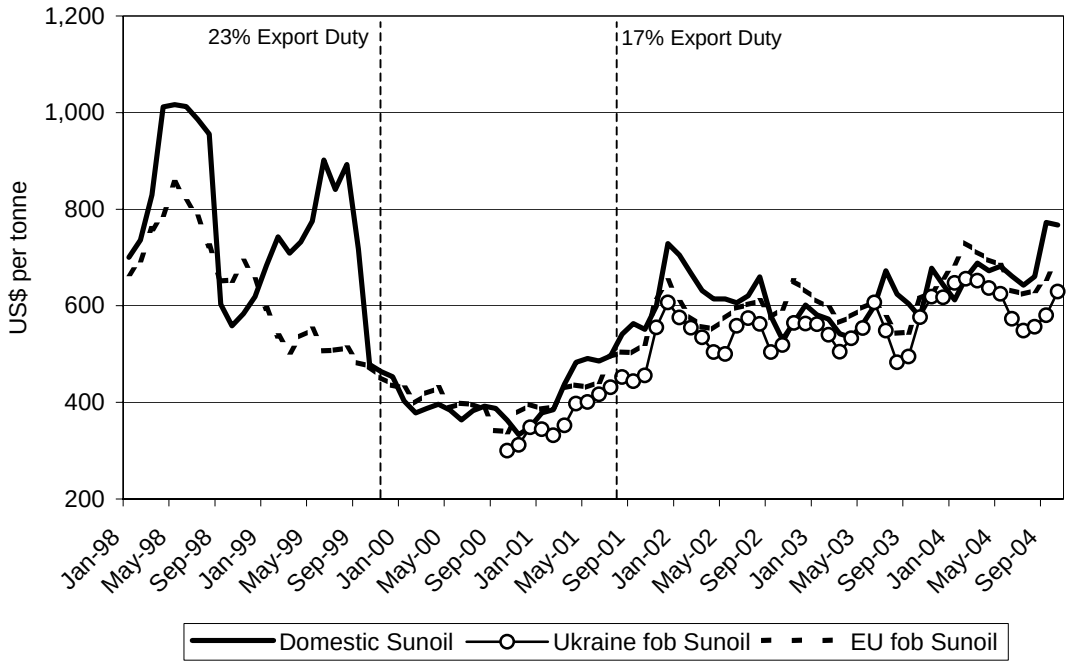
4.8 This situation contrasts with 2001/02, when there was no domestic surplus of seed available. This situation is likely to arise again in the 2004/05 season. In these circumstances, competition for seed between domestic crushers serves to bid up domestic seed prices, as revealed by Diagram 4.1. In 2001/02, domestic prices averaged only 3% below tax-free export parity prices. Thus, when domestic seed supplies are scarce relative to effective crushing capacity, domestic seed prices are bid up close to the prices that would prevail if there were no export tax in operation. Any remaining differential possibly reflects the increased risks associated with crushing in Ukraine. In conditions of seed deficits relative to crushing capacity, therefore, the export tax is largely inconsequential. With domestic crushing capacity now significantly in excess of potential seed production, this situation is likely to prevail in the near future.

4.9 Since the introduction of the 17% export tax and ban on tolling in July 2001, the domestic seed price has on average been 11% less than it would have been under tax-free export parity conditions.

Oil Prices

4.10 Since the introduction of a seed export tax, domestic sunflower oil prices have moved much more closely in line with world market export prices. There have also been less dramatic seasonal price swings in the domestic price of sunflower oil since the tax was introduced.

Diagram 4.2: Sunflower Oil Prices in Ukraine and EU



4.11 These impacts are illustrated by Diagram 4.2. In addition, it is interesting to note the impact of the initial 23% export tax on oil prices. In the period before its imposition, only the strongest crushers were able to supply the market during certain months of the year, and during these months the domestic price for oil was very high.

Crushing Margins

4.12 We have noted that the export tax reduces seed prices, particularly during years with domestic seed surpluses. On average, however, the export tax reduces prices by much less than 17%. This is especially true during years of deficit seed production, and this is increasingly likely to approximate the Ukrainian situation in the near future following the large build-up of crushing capacity. This suggests that a much lower export tax would be sufficient to have the desired effect of protecting the crushing industry.

4.13 In the absence of free trade in oil, consumers in Ukraine may benefit in the short term from the imposition of the export tax on seed, since higher capacity utilisation has reduced crushers' operating costs. However, as Diagram 4.2 revealed, the price of oil in Ukraine is increasingly determined by international conditions, and therefore an export tax on seed has little impact on the domestic price of oil.

4.14 The extent to which domestic seed and oil prices filter through into crushing margins depends on the distribution of oil sales and the current application of the VAT system. The refund, or otherwise, of the VAT paid on seed processed into exported products is crucial in determining the crushing margin available. It is to the issue of VAT refunds that we now turn.

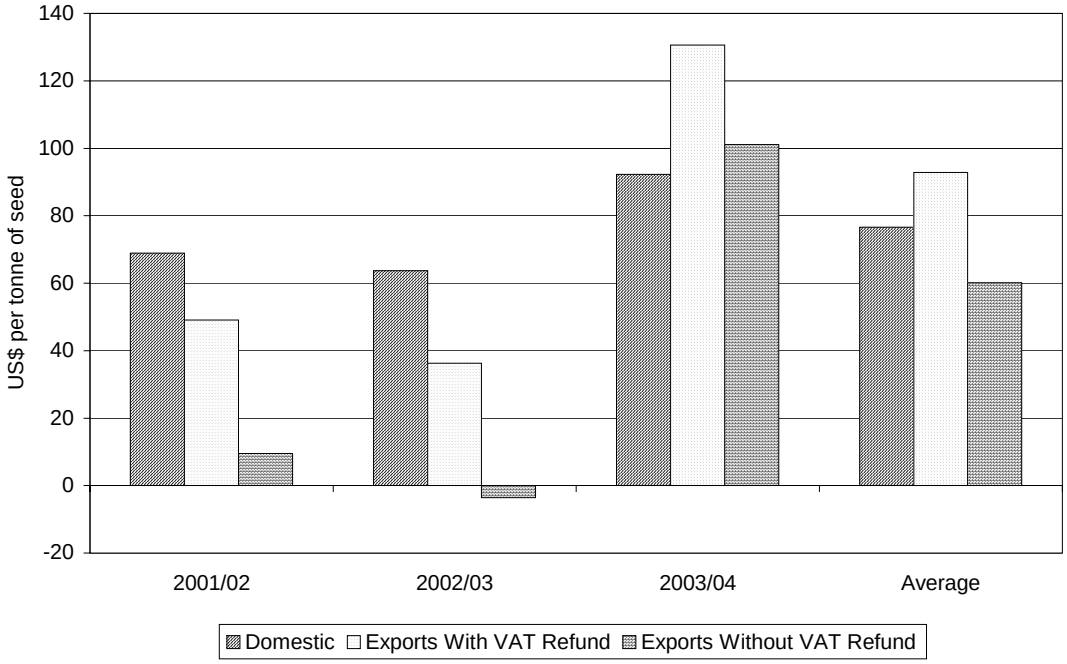
Value-Added Tax

4.15 The average sunflower seed price in 2003/04 was US$239 per tonne. This implies that the average VAT payment on sunflower seed was US$40 per tonne. For a crusher procuring 300,000 tonnes of seed, this means a total VAT payment per year of almost US$12.0 million, which would be refunded for the part of the resulting oil and meal that is exported. While by law this should be reimbursed to the crusher within three months of exporting the products, this clearly is not happening. Therefore, the crusher must at best bear the financing costs of the VAT payment until the Government reimburses, and, at worst, write off the VAT as bad debt.

4.16 Diagram 4.3 presents our calculation of the crushing margins for domestic production, for exports when the VAT payment on seeds is reimbursed, and for exports when it is not reimbursed.

4.17 Diagram 4.3 reveals that the export VAT refund is critical for crushers, even during the relatively benign market of the last few years. Without reimbursement, crushing margins on exports can fall to low and even negative levels, as witnessed in 2001/02 and 2002/03. Though domestic and export margins have, on average, been healthy recently, even without VAT refunds, the strength of export margins without VAT refunds is largely a result of the strong global markets in 2003/04. There are also inherent risks involved in crushing in Ukraine, with exchange rate risk, lack of transparency and financing difficulties common. The uncertainty about VAT reimbursements itself increases costs to crushers, for example employing resources with the sole task of chasing up the company's VAT entitlements.

Diagram 4.3: Crushing Margins for Domestic Market and Exporters of Oil and Meal, with and without VAT Reimbursements

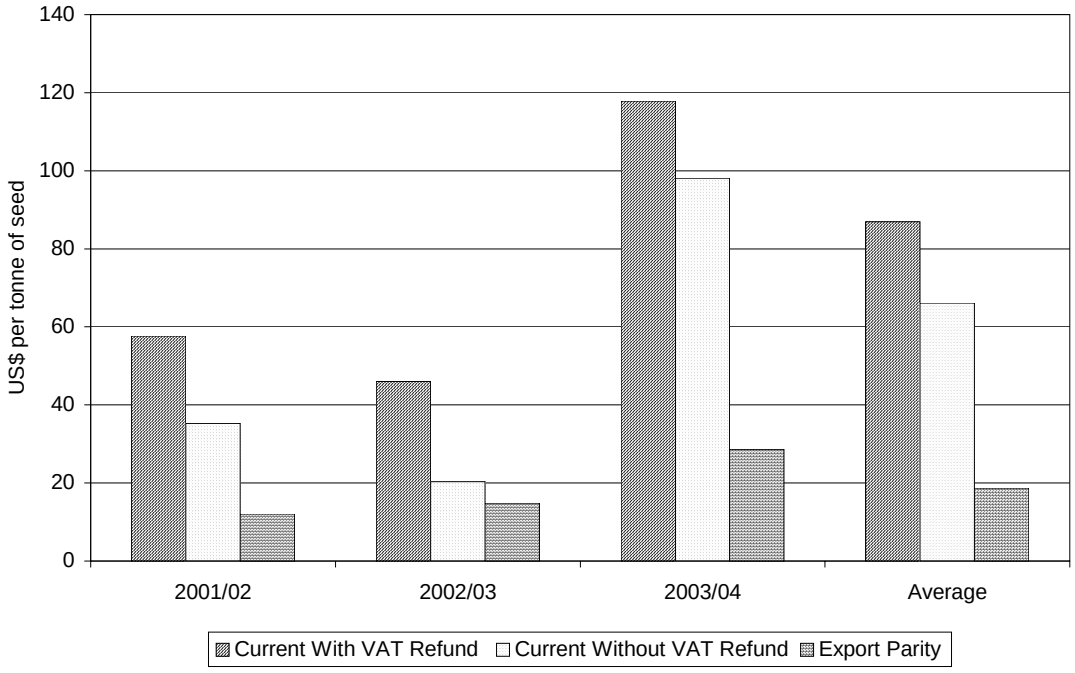


4.18 In practice, when evaluating the VAT losses of individual crushers, it has to be borne in mind that most crushers sell onto both domestic and export markets, and are able to offset some of their VAT refunds against VAT charged on sales in the domestic market, which should be reimbursed to the Government. In Diagram 4.4, we present overall crushing margins with and without VAT refunds for 2001/02 to 2003/04, weighted by sales into domestic and export markets. The diagram compares the actual margins received with the margins that would have prevailed if prices of seed, oil and meal in Ukraine reflected tax-free export parity conditions.

4.19 The crushing margin calculated under the assumption of internationally competitive prices in Ukraine, i.e., in the absence of the export tax and with no VAT, is based on c.i.f. Rotterdam prices. From this basis, Ukrainian farmgate prices for seed, and factory prices for oil and meal, are calculated by subtracting an estimated $10 freight cost from Rotterdam to Ukraine, and deducting a further $8 loading cost and $15 internal freight cost.

4.20 Under the tax-free export parity scenario, crushers receive a notably lower and more stable margin than is currently the case. This is especially true when they receive the full VAT refund paid on time, though even without the VAT refund Ukrainian margins are higher than they would be under export parity conditions. Thus, though the current system of non-refunding export VAT is penalising the crushing industry, it is clear that there has been a significant incentive for investment into the crushing sector in recent years.

Diagram 4.4: Average Crushing Margins with and without VAT Reimbursements versus Indicative Tax-Free Export Parity Crushing Margin



Government Finances with Zero VAT

4.21 Chapter 3, Table 3.2, presented the gap in government finances caused by the exemption of farmers from paying VAT on seed sales, while the government is obliged to refund crushers for the 20% VAT paid on seeds processed into exported products. The deficit was estimated at an average of US$87 million per annum for the past three years. In Table 4.1, we present VAT finances with zero-rated VAT on seed purchases, and with 5% VAT on seed purchases. The table assumes that VAT on domestic oil and meal sales remains at 20%.

Table 4.1: VAT Scenarios, Average 2001/02-2003/04 (US$ million)

VAT (US$ million)	20% VAT	0% VAT	5% VAT
Received by Farmers	137	0	39
Received by Crushers on Oil Sales			
- *Domestic Market*	46	46	46
- *Exports*	0	0	0
- Total	46	46	46
Received by Crushers on Meal Sales			
- *Domestic Market*	9	9	9
- *Exports*	0	0	0
- Total	9	9	9
Annual Net Budgetary Cost of VAT System in Sunflower Sector	87	0	25

4.22 The table reveals that the US$87 million per annum deficit is eliminated with zero-rated VAT. The position for crushers on domestic sales is unchanged, though clearly crushers stand to benefit by the fact that there is no longer a need to reclaim VAT refunds for exported products. The biggest losers are farmers, who currently receive 20% VAT on seed sales, but are exempt from paying this over to the national budget. With a 20% VAT payable on seed sales at present, farmers receive around US$137 million per annum as, in effect, an indirect farming subsidy from sunflower. This is reduced to zero with zero-rated VAT.

Conclusions

- Strong crushing margins have encouraged investment in the processing sector, and created a surplus of capacity over and above potential seed production for the near term.

- In conditions of deficit seed production, competition between crushers is likely to bid up domestic seed prices to around 5-10% below tax-free export parity prices.

- Due to the circumstances described above, the export tax of 17% acts to depress local seed prices, but by far less than the full 17% in years of seed deficits. Therefore, in most years, and for the foreseeable future, a far lower export tax would be sufficient to protect crushers and guarantee seed supplies.

- In years of potential surplus seed production, perhaps following a rationalisation of current capacity, seed prices may reflect the full extent of any export tax. In these circumstances, with a lower export tax, farmers would be the biggest winners via higher seed prices, and, though crushers would be worse off than currently, they are likely to be better off than during years with seed deficits.

- It is possible that a lower export tax will accelerate rationalisation of the domestic crushing sector. This would occur as seed prices are likely to rise, especially in years of seed surpluses. Margins will fall, thus squeezing out less-efficient crushers.

4.23 In the light of the analysis and conclusions presented here, in Chapter 5 we present our mid-term strategy for the industry.

5. RECOMMENDATIONS FOR MID-TERM SUNFLOWER STRATEGY

5.1 The sunflower sector has been substantially reinvigorated over the past five years, and any reforms carried out should be cautious of hindering what has become a successful commercial sector. In the crushing sector, seed supplies have been reliable since the introduction of the 17% export tax on seeds, crushing margins have been strong and crushing costs have declined toward world-class levels. In the farm sector, growers continue to rely upon sunflower to provide liquidity to the farm system, and sunflower remains typically the single most profitable crop in the rotation.

5.2 Nevertheless, the transition of the sector has been concentrated on reforms in the crushing sector, with the growing sector lagging far behind in terms of competitive performance. Recovery of seed output has been concentrated on area expansion, and this has caused declining yields as sub-optimal rotational practices become widespread.

Recommendations

5.3 Two aspects of policy are of crucial importance to the sector, and meaningful mid-term reform should concentrate on these:

- The VAT system
- The export tax system

5.4 To support reform in these sectors, we would recommend a further policy initiative:

- Introduce direct area payments for growers

5.5 In addition, one facet of the oilseed sector is of overriding importance in improving technical performance:

- Access to credit for farmers

5.6 Before setting out recommendations for reform of the key policy interventions, we first turn to this crucial aspect of farm performance.

Access to Credit

5.7 Access to credit will become increasingly crucial in driving reform of the farm sector. This remains the single greatest impediment to the farm's technical performance, and, if this problem is successfully addressed, many other objectives will fall into place. However, the key actions that would improve farmers' access to credit are bound up in wider aspects of the farm system, and the range of the reforms suggested in these areas goes far wider than the sunflower sector.

5.8 There are a number of areas where policy and practice has an impact on the sunflower sector, and where meaningful reform would be beneficial. In essence, farmers will be able to access credit successfully only when they have recognisable assets to offer as collateral. In terms of improving farm technical performance, having a physical asset to lose will also act as a spur to on-farm progress. Areas for improvement critically include:

- Enforce ownership rights to land, so that land can be used as collateral.
- Implement a legally-enforced system of warehouse receipts, so that seed in storage can be used as collateral.

5.9 The current system of land leasing on relatively short-term contracts, typically five years, has led to short-term views on private investment in the land resource. If the farmer is unsure that he will be farming the same land in five years time, the economic incentives to invest in maintaining soil fertility are far less clear. It may, therefore, be economically rational to reduce investment in fertiliser inputs, in rotational practices, in introducing crops with rotational benefits, and in investing in irrigation or drainage systems where appropriate. One idea for improving this situation in the future would be to tie any future direct farm support payment to sustainable environmental agricultural practices, as is increasingly the case. Specifically, this would include observing sustainable rotational requirements. While we firmly believe land reform and objective legal enforcement of contract would be singularly beneficial to the sunflower sector, these measures could be countenanced only as part of much wider-ranging general systemic reform.

5.10 In this regard, the efforts of the Ministry of Agriculture should be concentrated on furthering progress towards land reform in parliament, adding their weight to the progress of legislation. This would require rescinding the veto currently blocking land reform, and making default on warehouse receipting a criminal offence, in order that farms have meaningful collateral for accessing loans. While, in principle, a reasonable warehouse receipting system is in place, and significant efforts are in place to improve the system, the problems encountered this year by Bunge, among others, who have experienced seed losses from elevators, highlights the necessity for official pressure to be applied to make these laws enforceable.

5.11 Ukroliyaprom also have a role to play in this process, and should draw official attention to losses from the system this year, and the lack of enforcement of current contractual obligations that has occurred. As crushers stand to gain from any improvement in farm performance, Ukroliyaprom should also contribute to the lobbying process for land reform, highlighting the issue of access to credit and yield decline as symptomatic of the problem of lack of collateral.

5.12 In part, the internal market for storage capacity is addressing some of the problems caused by poorly enforced warehouse receipting. Major crushers and traders are rapidly buying up elevator storage capacity. For example, Glencore now own over 40 elevators. This demand has pushed the price of acquiring storage up to US$40 per tonne from US$16 two years ago. This development should go some way towards protecting the rights of warehouse depositors, and to upgrading storage quality and service, and should be monitored by the Ministry of Agriculture.

5.13 With these reforms in place and successfully enforced, evidence from many of the Central European transition economies suggests that credit markets will become far more accessible to farmers, and at lower rates of interest.

5.14 Establishing physical collateral for farmers is likely to develop significant sequential benefits. First and foremost, access to credit will improve, as described above. Whether this occurs via loans or in the form of pre-financing of crops by crushers, or, as is most probable, a combination of both, the most significant development should be yield improvements. This will develop in various ways, among the most important of which are:

- High quality seed will be more affordable
- Inputs, such as fertiliser and plant protection, will be applied more intensively
- Farm management systems will improve, and the benefits of high-quality local research and seed development will be more easily unlocked

5.15 Land ownership will enhance these prospects, and will develop a more long-term responsibility toward rotational practices and input usage as farmers will act to preserve the value of their land assets.

5.16 One barrier to pre-payment by crushers is the negative experiences previously encountered in the sector, where farmers receiving finance have often not provided crops after harvest despite obligations to do so. The role of the Government is of paramount importance in providing security for loans. In addition to land reform, some form of government guarantee, perhaps providing a compensatory fund for crushers where defaults occur, would seem required to stimulate crop finance by crushers. Farms defaulting on crop guarantees could be made subject to fines by way of reductions in government farm support measures.

Research and Extension Services

5.17 With regard to research and extension services, the research institutes in Ukraine produce a high standard of hybrid seeds. For example, the Plant Breeding Institute in Kharkiv alone has 21 different hybrids adapted to local conditions with different maturity rates. These seeds are widely grown in Ukraine, being planted on over one million hectares of sunflower area. However, in the view of the Plant Breeding Institute, the potential of the seeds is not fully realised due to the lack of technology and inputs applied on the vast majority of farms in Ukraine, and the reduction in rotation intervals. As a particular example, the oil content of farm-produced seed does not reach Institute trial levels. One reason is because chemical dryers are not used to dry seeds, leading to increased humidity. This is due to the difficulty of sourcing affordable chemicals without good access to credit. Therefore, with access to credit addressed, the valuable research of the research institutes will be more successfully translated into yield improvements.

5.18 One problem associated with the research institutes is that their work is concentrated on the production of seed varieties. This is primarily due to the increasing burden of financing the institutes, with declining central funds. Seed development offers a financial return greater than other aspects of extension services, such as promoting good crop management. Interestingly, poor crop practices are a main factor that the Institutes claim inhibits the potential of their seeds. Clearly, there is more potential for the Institutes to become involved directly in promoting good crop management and crop practices via extension services provided direct to farms. A specialised body devoted to extension on oilseeds could be established within the existing Institutes, with programmes decided and administered by the stakeholders of the sector.

5.19 The main tasks of the extension services devoted to the oilseed sector could be:

- Establishing a continuous diagnosis on the oilseed crops and identifying the ways to improve their competitiveness.
- Testing the various inputs (including varieties).
- Disseminating results and scientific knowledge on crop management.

5.20 Such a programme requires funding. Commonly, such Institutes, where not directly state-financed, are funded via a small compulsory levy on seed and oil sales, administered by the industry itself but enforced in law. This should promote responsibility and accountability within the industry, and ensure relevance in the Institutes. It may be beneficial for the Ministry of Agriculture to retain an auditing role of the Institutes, in order to maintain discipline and ensure that their work does not become too focused on the needs of the more powerful (usually larger) farms and lobbyists.

5.21 This could be considered as a potential focus for unlocking farm potential in Ukraine, although the credit constraint would remain a primary obstacle to farm technology and input applications. Any extension services provided by the Institutes should be aware of these constraints and structured according to current conditions, while promoting improvement of input applications as a way forward. Nevertheless, extension services are likely to become far more beneficial once the credit constraint has been successfully addressed.

Value Added Tax

5.22 VAT policy is an issue for the Ministry of Finance to address. However, it is important that the Ministry of Agriculture and Ukroliyaprom increase awareness of the overwhelming importance of the problems associated with reclaiming VAT refunds. The recent attempt to reduce reimbursable VAT arrears by issuing Treasury Bills was a qualified success, but the subsequent re-emergence of the problem highlighted the inadequacies of the current system. All participants in the sector are agreed that the current system is not sustainable. Again, ensuring swift VAT refunds probably requires wide-ranging governmental and societal reform, and we therefore recommend reform of the sunflower VAT system specifically as the most effective measure for addressing this difficulty in the mid-term.

5.23 We would make the following recommendations for the sunflower VAT system:

- VAT for sunflower oil and meal sales to remain at current levels.
- VAT for sunflower seed reduced to zero.
- Farmers' VAT exemption to be removed, though in practice zero-rating of VAT on seed would effectively eliminate this benefit irrespective of the exemption.

5.24 The effective loss of income experienced by farmers could be compensated for in the medium term by the introduction of direct area payments, discussed below. At the same time, the

VAT situation in other agricultural sub-sectors, and the feasibility of introducing similar reform measures, should be explored by the Ministry of Finance to avoid creating new distortions between crops. It is important to view the changes in VAT reform and any subsequent direct farm support measures as pan-agricultural, as reforms in any one sector may artificially distort the crop choice for farmers.

5.25 A possible alternative reform, perhaps as a transitory measure, would be for crushers to be allowed to offset VAT refunds due against their total tax liability. This would alleviate the need for refunds in many cases. Furthermore, any reform on taxation should simplify the current system for taxes generally, which is complicated and subject to too much alteration. Stability and transparency should, therefore, be sought in taxation policies governing the sector.

Seed Export Tax

5.26 Our analysis in Chapter 4 has shown that the seed export tax would currently have the same effective impact on domestic prices within the sector even if the export tax rate were considerably reduced. Our analysis shows that, in the case of deficit sunflower seed production, farmgate prices are only 3% below tax-free export parity. Reducing the export tax would have the benefit of achieving the Government's goals for higher agricultural prices while also quietening the objections of trade partners and donors.

5.27 We recommend that, while the VAT system is being reformed, the export tax be maintained at 17%.

5.28 The rapid build-up in crushing capacity should ensure that seed production is lower than domestic demand for the next two to three years. Under conditions of seed deficit, we have seen that prices tend to settle at levels just below tax-free export parity. Thus, the farmer is not significantly disadvantaged in these circumstances, and, though the export tax has little effect, it seems sensible at this stage to concentrate government capacity in ensuring VAT reform is carried through effectively.

5.29 With successful VAT reform we would recommend:

– A reduction of export tax to 10% in two to three years, and to 5% in five years.

5.30 This reform would be undertaken by the Ministry of Finance. This gradual process may ease the inevitable period of rationalisation in the crushing sector. Once a rationalisation of capacity has occurred in the crushing sector, seed surpluses will become more likely, and farmers should benefit from the higher seed prices that would occur with a lower export tax.

5.31 The impacts of this reform on crushers' seed supply and farmgate seed price levels should be closely monitored following the reduction to 10%. If these conditions are met, with stable adequate seed supplies and margins for crushers, and remunerative seed prices for growers, we recommend the second reduction, to 5% be undertaken.

5.32 This would balance the needs of providing support to crushers without penalising farmers at times of high production. In the long run, as the domestic industry develops and its competitiveness enhances, no tax on seed export should be necessary.

5.33 ***Note***: The government has recently proposed a reduction of export taxes by 1% per annum from 1 January 2007 to 2013, taking the export tax down to 10%. This would be a slow and cautious reform, but would take Ukraine towards WTO compatibility on this issue. However, the pace of this reform may disadvantage farmers, as the rationalisation of capacity by 2013 is likely to leave Ukraine as a net exporter of seed, and domestic seed prices are likely to again reflect the full extent of the export tax.

WTO Compatibility

5.34 WTO accession is a broadly accepted policy objective in Ukraine. Under WTO rules, export tax is, in principle, considered to be a trade-distorting measure but is not explicitly ruled out by the WTO, as disciplines on this issue are not clearly defined. The reasons for this include:

- Industrialised countries have tended not to adopt export taxes, and they have had no pressing need to carry cases against other industrialised countries to the WTO in the past.

- Many developing countries utilise export taxes for raw commodity exports as a reliable method of raising revenue. As developing countries are granted concessions by the WTO, there is no formal pressure to abandon these taxes.

5.35 Export tax, therefore, tends to only become an issue if the importing country raises it. The proposed reform, a gradual reduction of the seed export tax, would thus bring Ukrainian seed export policy closer to WTO-compatibility. It is significant that Russia is currently under pressure to schedule export tax reductions on a number of raw commodities as part of its WTO entry negotiations. Similar conditions were also imposed on China as a precondition for entry.

Import Taxes

5.36 To further reduce processing costs, which are already low in comparison with those of many international competitors, it seems important for the crushing sector as a whole to increase the level of utilization of capacities in crushing activities. Although several facilities operate at near full capacity, many operate at low utilisation rates.

5.37 Improving the overall industry capacity utilisation rate could be achieved in several ways. First, under the current industry environment, surplus capacity is likely to reduce naturally as unprofitable crushing facilities exit the industry. This is likely to remove more outdated plants from the sector. Without intervention, this is the most likely current scenario, as seed import tariffs are prohibitive and domestic production is unlikely to rise substantially in the foreseeable future. In the longer term, even as yield improvements occur, these are likely to coincide with a reduction in the sunflower area, and therefore seed production is unlikely to grow significantly from recent levels, and is extremely unlikely to reach even the current planned crushing capacity of six million tonnes.

5.38 A second alternative is to open a tariff rate quota at zero-rate duty, equivalent to the annual surplus of capacity over domestic seed production. A potential drawback of such a mechanism is that it provides no guarantee that underutilised facilities will gain access to imported seed. It is quite possible that access to greater seed supplies will stimulate further

expansion of the more profitable modern facilities in the crushing sector. If this occurred, the more outdated plants may continue to experience difficulties.

5.39 For the sector as a whole, therefore, a shake-up of processing capacity may be inevitable, and the introduction of a tariff-rate quota for seed imports is not an immediate priority. This is especially true when one considers the potential impact on domestic seed prices, which have been bid up towards export parity only when domestic crushers have had to compete more vigorously for limited seed supplies.

Direct Area Payments to Growers

5.40 As discussed throughout this review, the current system of support to Ukrainian agriculture, based on agricultural taxation, VAT exemptions and interest subsidies, is problematic in many respects. Moreover, zero-rating of VAT will reduce payments to farmers. Though some of this is likely to be recouped via higher seed prices and less discounting by crushers for VAT uncertainty, this will not fully compensate farmers for the decline in revenue. In this light, and taking into account Ukraine's WTO and EU accession policies, it is advised that the country considers moving towards a system of direct income support to agricultural producers on an area basis.

5.41 It must be stressed that implementing and administrating a direct area payment system represents a considerable undertaking for government, as recent experience in Central Europe suggests (see case studies below). Therefore, this should be viewed as a medium term objective, to be implemented as government capacity grows. Clearly, severe budget constraints in Ukraine limit the Government's capacity to provide significant direct support to agriculture at present. However, a system of direct payments would carry the following advantages:

- It would be more transparent and less distorting than some of the policies currently in place.

- As direct income subsidies are not production-related, the new policy would not distort farmers' crop choice.

- Unlike price support, it would also be compatible with WTO membership as a so-called "green box" measure under the Agreement on Agriculture (i.e., not subject to any budgetary or quantitative limitations).

- It would bring Ukraine closer to the EU system where farmers receive a subsidy in the form of a fixed payment per hectare on the area they cultivate, irrespective of the type of crop.

- It would function as a kind of economic and social safety net for the Ukrainian farmers who are still suffering from lower competitiveness than EU, US and other (subsidised) Western producers.

5.42 As such, a policy of direct income subsidies would help the agricultural sector in Ukraine to move forward in its transition process and to enhance productivity through modernisation.

5.43 Increased availability of financing for the agricultural sector could come from various policy changes, including:

- Reforming the system of favourable taxation to agriculture (fixed agricultural tax), making the tax burden on agriculture more proportional to that of other sectors of the economy.

- Reforming the subsidised interest payments and diverting some funds to direct support of agriculture, such as direct area payments.

- Increasing government revenue and lowering expenditure by zero-rating VAT on sunflower seeds.

5.44 If we consider only the third of these sources, the savings on refunded VAT on sunflower seeds, the following amounts will theoretically be available for area payments to sunflower producers:

– Table 4.1 reveals that, with zero-rated VAT, the gap in government finances reduces from an average US$87 million per annum to zero. Thus, in theory, US$87 million is available for area payments to producers without affecting the budget. However, this should be funded from central taxation receipts, unlike the current VAT system.

– Table 2.1 shows an average sunflower area of 3.175 million hectares between 2000/01 and 2004/05.

– This gives an area payment equivalent to US$27.4 per hectare. It is misleading to compare this directly with area payments elsewhere, as a hectare of land in the EU, for instance, is far more productive than a hectare of land in Ukraine.

– Converted to an equivalent payment per tonne of output, at an average yield of 1.09 per hectare (Table 2.1), this gives a payment of around US$25 per tonne of sunflower seed in Ukraine. This compares with payments of around US$190 per tonne of sunflower in France. In Serbia, however, where area payments are also employed, sunflower seed producers receive approximately US$30 per tonne of output. This seems a reasonable indicator for the Ukraine situation.

5.45 Besides adequate resources, farm support via direct payments also requires strong Government capacity to implement and monitor the system, as we discuss below with reference to the Polish experience. The gradual move towards new support measures should thus be accompanied with efforts to strengthen these capacities in Ukrainian administration, in particular within the Ministry of Agriculture and at local government levels.

5.46 Moreover, direct farm support measures are designed to be non-distorting in terms of crop choice. Therefore, it is crucial that direct support measures are implemented for farms as a whole rather than as a support to sunflower producers, and that a single system embraces the range of alternative broadacre crops available to farmers. The ongoing balance of crop production should be monitored carefully with the implementation of such a mechanism.

Direct Area Payments: Case Studies

5.47 The responsibility for considering the affordability and level of any area payment system rests with the Ministry of Finance. Implementation and disbursement of payments tends to rest with the Ministry of Agriculture. In Poland, prior to and following EU accession, implementation and disbursement of new area–based direct income support payments to farmers became the responsibility of a dedicated Ministry of Agriculture agency named the *Agency for Restructuring and Modernisation of Agriculture* (ARMA).

5.48 In Poland, the difficulties of introducing area payments were somewhat more complicated than would be the case in Ukraine (following land titling) because of the small average size of farms in Poland. ARMA prepared the area payment system, which was implemented at three levels of administration — parish or borough, district and regional. Farmers submitted application for arable area payments to the district office, based upon arable area farmed in a defined reference period.

5.49 These applications were then passed to the district offices, which were computerised, to be checked against the national database, including the database of the department of Home Affairs and the cadaster (the national land and building register). Compilation of the cadastre survey was the most important step underpinning and reinforcing land titling and private land ownership.

5.50 After checking at the district level, information was sent to the regional level for on-the-spot control, such as physical checks and aerial photographic checks. The applications were then finally submitted to the central ARMA agency for disbursement of the payments. The responsibility for setting up an equivalent system in Ukraine would rest with the Ministry of Agriculture.

5.51 An alternative system, but one that has received some internal criticism, is applied in Serbia. In this case, area payments are allocated to growers via processors in the oilseed, grain milling and sugar beet sectors. In turn, payments are administered and disbursed to processors by an Industrial Crops Processors' Association. The system is, therefore, open to abuse, especially through delayed payments, as is undermined because there has been no prior land registry system equivalent to the Polish cadaster.

5.52 The question of land titling is an important one for area payment disbursement. The difficulties become apparent in the case of tenant farmers, who do not hold titles to the land. In the EU, this problem is dealt with by making the owner of productive arable land eligible for area payments, and not the tenant farmer. However, tenancy agreements are uniformly altered to pass the benefits accruing from area payments onto the tenant farmer.