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Production Effects of the European Union's Single Farm Payment

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Abstract

Since 1992, reform of the EU's Common Agricultural Policy has involved several rounds that have gradually changed the method of support from market based intervention purchases to direct producer payments. The change in the method support provides less production incentives and is less trade distorting. The Single Farm Payment (SFP) is the latest policy instrument which is the most decoupled from production decisions. This study examines the SFP in terms of its production effects, its compliance with the Annex 2 of the WTO Agreement on Agriculture, and the implications for Canadian agricultural policy reform.

JEL Classification: Q17, Q18

Keywords: Common Agriculture Policy, decoupled payments, WTO green box

Production Effects of the European Union's Single Farm Payment

Reform of agricultural policy in Brussels may seem remote and irrelevant to Canadian agricultural policy makers and interest groups but the European reform can have external effects on both Canadian agricultural markets and on the Canadian agricultural policy process. In the spring of 2008 the agreements that form the basis for Canada's Agricultural Policy Framework expire. Negotiations are now underway for further reform of Canadian agriculture and agri-food policy. One possible avenue of reform involves direct payments to producers as a way of continuing income support with fewer distortions to production. In 2003 the European Union (EU) introduced the Single Farm Payment (SFP) as method of decoupling income support from production decisions.

The EU's change in the method of providing domestic support affects Canadian agriculture in two ways. First, if EU agricultural production declines Canada may face less competition in international export markets and to the extent that restrictive border measures allow, the EU may also increase their imports. Second, the change in the way that domestic subsidies are delivered may provide valuable lessons for policy reform in Canada.

The EU has certain similarities to Canada with respect to making agricultural policy. Although the European system appears more centralized member state agriculture ministers collectively make decisions about policy reform. A central administration (the European Commission) has to convince regional governments (member states) to agree to the policy reform. The reform requires the unanimous consent of a group of nations far more diverse than Canada's ten provinces. Europe and Canada face some of the same pressures for change – budgetary and positioning for trade negotiations – but other pressures such as enlargement of the

union and also a change in focus away from production agriculture to rural development and also to consumer focused issues are more unique to Europe.

The focus of this paper is the SFP, which is the centrepiece of the recently reformed Common Agricultural Policy (CAP). The main objective of the paper is to determine the impact of the SFP on production decisions and trade. The production response to any program depends on two interrelated factors: the incentives associated with the characteristics of the program and the structural features of the farming sector in the region where the instrument is to be applied (Antón, 2005). The study will address both incentive and structural factors affecting agricultural supply response.

The paper starts by describing the previous and current policy landscape in the European Union. The next section of the paper defines decoupling, asks whether production neutral payments are possible and outlines the implications of fixed entitlement based direct payments. Conceptual models of the old and new policy regimes are developed and the impact of the SFP is measured as the difference between regimes. Several empirical studies are reviewed to determine the quantitative impacts of the SFP regime in the context of the conceptual model developed in this paper. The next section describes the World Trade Organization (WTO) criteria for notification of support that is not subject to reduction commitment and examines whether the SFP meets these criteria. The paper concludes with a discussion of how the European experience might affect Canadian agriculture policy.

Background on the Provision of Subsidies

The Common Agricultural Policy of the EU has recently undergone three rounds of progressive reform. Until the initial reform in 1992, the largest share of producer support came through direct price support with a system of intervention purchases. With the 1992 reform of the CAP,

intervention prices were reduced and compensation was provided to farmers in the form of direct payments that were still coupled to specific commodities. The direct payments were partially tied to both current area allocation decisions and to historic criteria such as past yields. New supply control measures were required because the direct payments were only partially decoupled. For the cereal, oilseed and protein crop sectors, these supply controls were land set-asides. For beef and sheep production the controls were in the form of maximum stocking densities and compensation was provided with headage payments (EC, 1992). A second round of CAP reform took place in 2000 further reducing intervention prices, but only compensated farmers with direct payments for half of the reduction in the support prices (Kelch, 1999).

In June of 2003, the EU's Council of Ministers adopted a third reform package (EC 2003). Since many of the intervention prices were sufficiently low to escape additional reform, the focus of the liberalization exercise shifted to the manner in which the direct payments are disbursed. Intervention prices were reduced for rice and dairy products and eliminated for rye but remained unchanged for other Common Market Organization (CMO) commodities¹. The new system of compensation changed from one that is at least partially tied to the production of specific commodities to one providing whole farm payments independent of current production. The compensation, the SFP, is described as “decoupled” because it is not tied to current production. Payments are to be based on farmers’ 2000-02 historic payments². To be eligible for the SFP, farmers are required to own a payment entitlement, but are not required to produce specific crops, the entitlements are tradable and farms may produce any crop with the exception

¹ Direct payments to dairy producers were introduced in 2004 and were paid per tonne of quota held on March 31st 2004. The dairy premium increased from 8.15€/tonne in 2004 to 16.31€/tonne in 2005 and 24.49€/tonne in 2006. Member states are obliged to incorporate the dairy premium into the SFP not later than 2007 (EC 2003).

² Members can opt for a *regionalized* scheme under which all the payments for a particular region would be paid on a flat-rate rate per hectare basis. This issue is addressed in the conclusion but for the time being this form of the payment should not affect the incentive to produce.

of permanent crops (grapes), fruit and vegetables and some potatoes (EC, 2003). There are cross-compliance conditions attached to these payments that relate to regulations for food safety, animal welfare, health and occupational safety standards, and environmental stewardship as well as requirements to keep farmland in good condition (EC, 2003).

Member states retain significant discretion in implementing the SFP. They may choose to retain a portion of the compensatory payments as product-specific aid payments. This dual payment type of approach is described in the EU as “partial decoupling”. The following options are open to member states:

- *Arable crops*: Member states can retain 25% of the cereals, oilseeds, and protein crops component of the decoupled premium and continue to provide coupled product specific payments.
- *Sheep and goats*: Member states can continue to provide coupled payments for up to 50% for the SFP associated with these animals.
- *Beef*: Member states may opt to retain some payments, in full or in part, as coupled to beef production. For example they are allowed to maintain 100% of the suckler cow premium if they only keep 40% of the beef slaughter premium. Alternatively, they could keep 100 % of the current beef slaughter premium or, other combinations of coupled and decoupled support (EC, 2003).

Individual member states are also allowed to grant additional payments to their producers “for the purposes of encouraging specific types of farming which are important for protection or enhancement of the environment and of improving the quality and marketing of agricultural products” (EC 2003). These payments, however, must not exceed 10 % of each country’s overall national aid entitlement.

Finally there will be a reduction in direct payments for larger farms. The program known as “modulation” of the SFP is a tax on the SFP for farmers receiving more than €5,000 in SFPs. Initially their SFP was reduced by 3% in 2005. By 2007 the tax had grown to a maximum reduction of 5%. The funds from modulation would be largely retained by the member state that

imposed the levy and the savings would be redirected to rural development and financing further reforms (Kelch and Normile, 2004).

Decoupling: Definitions and Implications

The European Commission has sold one of the major benefits of the SFP to be the further decoupling of domestic income support from production decisions. This reaction is primarily in response to demands by the EU's trade partners for domestic support reforms. The SFP should allow the EU to switch a considerable amount of its direct payments from the blue box, which can potentially be disciplined, into the green box which should not be subject to domestic support disciplines³ (Swinbank and Daugbjerg, 2006).

There is no single definitive definition of decoupling. In the most general sense the idea is that the government payment should not affect the decision to produce. Cahill (1997) defines *effective decoupling* to occur when “the provision of the compensatory payment package results in production that for any crop does not exceed the level that would exist without compensation”. This is an *ex post* definition that (with some difficulty) can be empirically tested but provides no predictive advice for new policies.

Ex ante definitions of decoupling typically rely on the economic concept of a lump sum transfer. A lump sum transfer is one where the recipient cannot affect the size of the transfer by changing his behaviour in any manner. In an agricultural context, the idea is that if the producer cannot affect the size of the government payout, he will respond to market signals. In theory

³ The “blue” and “green” boxes are colloquial terms for WTO classifications of notification requirements for different types of agricultural domestic support. The blue box involves direct payments that are conditional on production limiting programs and are currently not subject to reduction commitments. Green box programs are minimally trade distorting programs that must be government financed and cannot involve price support. Green box payments are exempt from reduction commitments.

lump sum transfers do not distort an economy's resource allocation because they do not alter agents' incentives.

An administrative definition of decoupling is contained in paragraph 6 of Annex 2 (the green box) of the Uruguay Round WTO Agreement on Agriculture. Decoupled support involves payments that are financed by the government and do not have the effect of providing price support. The payments are not to be related to current production, factor use, or prices and the eligibility criteria for the support are to be clearly defined and to be based on fixed historic reference periods. Since the direct payments are based on a past fixed-base period, farmers cannot affect the size of the payment and as a result they should respond to market signals (Rude, 2001).

So when isn't a lump sum payment neutral with respect to production decisions? Efficiency arguments for decoupled payments only hold in a first-best world. Lump sum payments will not correct for externalities, positive or negative, and the opportunity cost of raising funds may itself be distorting.⁴ Furthermore, the transfer of money may have indirect effects that can affect production decisions. There has been a significant amount of research attempting to determine and measure the indirect effects of decoupled payments on production. OECD (2001) reviews and categorizes many of these studies. The indirect effects involve risk-related effects and dynamic effects.

If the producer is risk neutral then the standard optimization for profit maximization results in a solution where decoupled payments are independent of production decisions. The addition of risk aversion⁵ introduces two effects: an insurance effect and a wealth effect. If the government payment affects the risk faced by the producer, then an insurance effect will

⁴ Moschini and Moro (1994) claim that the distortions from raising new taxes are smaller than the welfare gain from decoupling.

⁵ A risk averse individual believes that a euro lost in a bad year is worth more than one gained in a good year.

influence production decisions. A pure decoupled transfer will not affect the risk faced by a producer but it will provide a wealth transfer. A large wealth effect may decrease producers less risk averse and in turn affect production decisions. Hennessey (1997) shows that if the producer has decreasing absolute risk aversion preferences (or constant relative risk aversion) then increased wealth will make the producer less risk averse and this induces more production.

A wealth effect also has a potential impact in a dynamic setting. The effect is best studied in a model of household production/consumption behaviour. In the absence of any input market distortion, the household will optimize in a recursive fashion. The agent first maximises profits to determine output and income, and then maximises utility to allocate life-time consumption subject to a lifetime budget constraint. The recursive optimization process assures that decoupled direct income transfers affect consumption but not production. Introducing factor market imperfections, such as constraints related to debt and off-farm employment, changes the optimization process to a simultaneous solution problem. The result is that decoupled payments will affect production decisions. In the case of labour market distortions, direct payments increase leisure and thereby reduce production (Benjamin 1992). From an investment perspective direct payments can relax a debt constraint and this can allow more funds to be allocated to future production (Phimister 1995). These factor market distortions are more likely to be applicable to production decisions in the new Eastern European members of the EU.

Other dynamic implications include the impact of direct payments on the producer's decision to exit the industry. If the amount of the direct payment exceeds the loss associated with a particular productive activity, then there may be a cross subsidization effect that will keep that producer in business (Gohin, Guyomard and Le Mouël 2001). This effect will only hold if production is required in order to receive the payment. Eligibility for the SFP does not require

production, but the cross-compliance conditions with respect to “acceptable” production practices may have a similar effect as a production requirement and influence exit decisions. Another dynamic effect is an expectations effect. The idea behind this effect is that producers may anticipate that current production will form the baseline for a future or revised program. Income support programs that are directly based on prior production have a dynamic aspect in that the producer can affect future payments with today’s production decisions.

So there are a number of avenues where decoupled payments may distort production decisions. Individually wealth effects associated with risk, wealth effects in an investment context, expectation effects about future program eligibility, and effects on entry and exit decisions each appear to have minimal potential to distort production decisions, and by implication, trade. Collectively these indirect production effects may not be negligible but the impact will be nonetheless small.

This suggests an approach to conceptually account for the production effect of the SFP. If coupled subsidies are replaced with payments that are totally decoupled from production, then production should fall to a level similar to that which would exist without any subsidies. The analysis should examine two scenarios: the first describes the production effects of old system of compensatory payments; the second scenario assumes no production distorting incentives. The effect of the SFP is difference between these scenarios.

Effects of the Single Farm Payment: Modelling the Older Regime

The following simplistic, stylized model attempts to isolate the effect of per unit compensation payments on production decisions between two activities (c) and (o). For illustrative purposes the decision is assumed to involve a cropping decision by a producer who

grows cereals (c) and oilseeds (o). However, the illustration could involve common market organization (CMO) crops versus non-CMO crops or a cropping versus a livestock activity. In the case of CMO crop production, the per hectare compensation payments are based on a fixed euro value times a fixed historic regional yield. The producer receives a fixed per hectare compensation payment, s_i , which is independent of yields and specific to each crop. The producer is a price taker in both the output and variable input markets. The producer's problem is to select the level of variable inputs, x_i for each of the crop types (separate variable inputs for each crop type are assumed in order to avoid jointness in production aside from a land constraint), and to allocate total available land holdings (H) among crops h_i . Total area is fixed at H and λ is the Lagrange multiplier on the constraint limiting the sum of the h_i 's to no more than the total available area H .⁶ The production function by crop type is $f^i(h_i, x_i)$. Since production is equal to area times yield, $h_i \cdot y_i$, yield is defined as $y_i = f^i(h_i, x_i)/h_i$. With the introduction of the 2003 CAP reform, the crop specific compensation payments (s_i) are replaced with a payment based on historic payments received in the 2000-2002 period ($s_c \cdot \bar{h}_{c \text{ base period}} + s_o \cdot \bar{h}_{o \text{ base period}}$). The term s_{SFP} acts as a regime switch and is equal to zero before reform and equal to 1 after reform.

The producer maximizes profit by choosing the area allocated to each crop, the variable inputs and the shadow value of land (λ) so the optimization problem becomes:

$$\max_{h, x, \lambda} \Pi = p_c f^c(x_c, h_c) + p_o f^o(x_o, h_o) - w_c x_c - w_o x_o + s_c h_c + s_o h_o + \lambda(H - h_c - h_o) + s_{SFP} \cdot (s_c \cdot \bar{h}_{c \text{ base period}} + s_o \cdot \bar{h}_{o \text{ base period}}) \quad (1)$$

After some manipulation and combination the first order conditions become:

⁶ For illustrative convenience this area can be thought of as net the set-aside without compromising the results.

$$p_c \partial f^c / \partial h_c + s_c = p_o \partial f^o / \partial h_o + s_o \quad (2)$$

$$p_c \partial f^c / \partial x_c - w_c = 0 \quad (3)$$

$$p_o \partial f^o / \partial x_o - w_o = 0 \quad (4)$$

$$H - h_c - h_o = 0 \quad (5)$$

Equation (2) shows that prior to the 2003 CAP reform the producer would assign the mix of land such that the profitability of a hectare of cereals plus the cereals per-hectare payment will equal the profitability of a hectare of oilseeds plus the oilseeds per hectare payment. The first thing to note from equation (2) is that if the compensation payments s_i were equal and not specific to a crop type, cereals or oilseeds, then the subsidy would cancel out. The potential neutrality of crop specific payments is a direct result of the land constraint, which imposes interdependence in production (i.e. joint production).

However, in the 1992 regime, the compensation payments were not equal across crops (EC 1992). The per hectare payment for cereals was 54.34 euro/tonne multiplied by the average historic yield; the protein crop payment was 78.49 euro/tonne multiplied by the average historic yield; and the oilseed payment was 433.5 euro per hectare.⁷ Agenda 2000 introduced a non-crop specific area payment of 66 euro/t (multiplied by the regional-reference yields from the 1992 reform) (Kelch, 1999). When crops that were not subject to the compensatory payments (mainly fodder crops), are compared to eligible crops, it can be seen that the program crops are more likely to be grown.

Equations (3) and (4) equate the value of the marginal product of the variable inputs, for each crop type, to the price of the inputs. The absence of the compensation payment, s_i from these equations implies that input use, and hence yields, are independent of the payments. The fixed per hectare payment effectively decouples the payment from yield. A producer cannot

⁷ Revenue per hectare from these payments is 250 ECU/ha for cereals, 361 ECU/ha for protein crops, and 433.5 ECU/ha for oilseeds (which may be reviewed during the marketing year). In addition, a compensation payment of 69.83 ECU/t multiplied by the regional cereals reference yields was paid on land which was set-aside.

affect the size of his payment by changing yields and therefore he has no incentive to expand yields beyond what market conditions would dictate.

Equation (5) repeats the constraint on the total use of land. This constraint is shown as binding and the resulting jointness in production creates potential neutrality for non-product specific payments. However, this constraint may not hold as an equality. For instance, the constraint is an aggregate land constraint on a regional or national basis. However, the individual producer may not recognize this constraint. If the regional base area is exceeded, the per unit subsidy is pro-rated downwards in equal proportion for all farmers in the region. Individually farmers have an incentive to maximise their share of the compensatory payments by growing more if the payments are pro-rated downwards (Baffes and de Gorter, 2004).

In order to determine the effect of s_c and s_o on the crop mix decision comparative static analysis can be conducted on the system of first order equations. The details of this analysis are not shown (see Rude, 2000) but the results of this analysis are as expected: an increase in s_i increases the area allocated to h_i and decreases the area allocated to competing crops. The presence of negative cross effects creates the possibility of offsetting effects. Cahill (1997) finds effective decoupling for wheat, rapeseed, and soybeans because of the offsetting effects of the cross compensatory payment effects.

The livestock sector is more difficult to model. Beef production received compensatory payments but pork and poultry production did not. Beef and dairy production are closely related because culled dairy animals become beef. As part of Agenda 2000, a dairy premium was introduced to compensate for the reductions in the intervention prices for butter and skim milk powder, and the increases in milk production quota (Kelch, 1999). The dairy premium is to be

decoupled and included in the SFP after 2007. Most direct payments to beef producers were not based on historical numbers but on maximum stocking densities (Baffes and de Gorter, 2004).

Headage payments are available for suckler cows (cows with calves) to promote the conversion from dairy farming to beef cattle farming and "extensification" premiums were available to promote further reductions in stocking densities. These premiums are limited by maximum stocking densities. Beef slaughter premiums available for eligible calves, bulls, steers and heifers are even less decoupled because there are no explicit limits on the amount of offered slaughter premiums (EC, 1992).

Whereas the compensatory payments used in the crop sector are input subsidies, most of the livestock premiums (except for the suckler cow premium) would more appropriately be defined as output subsidies. Payments based on outputs create an incentive to increase production by proportionately increasing all inputs. Payments based on land inputs create an incentive to use more land relative to other inputs (a substitution effect). If the land supply is inelastic, then the incremental effect on output will be more muted than if all inputs are increased proportionately (Antón, 2005).

For this reason, the payments that have been made in the livestock sector are generally perceived to be more coupled than the payments to the crop sector (OECD 2004). The number of eligible animals is not limited to the number on farms prior to the introduction of compensatory payments in 1992. This created an incentive for farmers to increase animal numbers up to the stocking limits (Baffes and de Gorter 2004). Furthermore the payments also represent a larger share of net farm income in the livestock sector than for crops and often contributed more than 100 percent of some farmers' net incomes (Binfield *et al.*, 2004). This

further increases the degree to which the payments may be coupled with production in the farmer's mind.

Effects of the Single Farm Payment: Modelling the New Regime

Returning to equations (2) to (5), it should be noted that the single farm payment s_{SFP} does not show up in any of the equations. This implies that the payment is decoupled from production decisions in a static deterministic setting. The wealth effects associated with reduced risk preferences, as well as other indirect effects are minimal in terms of their potential to affect production decisions (Antón 2005). The degree of coupling in the second scenario depends on the share of existing coupled payments that the member states choose to retain (the degree of partial decoupling). In the case of the EU-15 - England, Germany, Ireland, Luxembourg, Northern Ireland and Wales - have all chosen to fully implement decoupling; Austria, Belgium, Denmark, the Netherlands, Portugal, Scotland, and Sweden have chosen full decoupling for crops and partial decoupling for livestock; and Italy, Greece, Spain and France have chosen partial decoupling for both the crops and livestock sectors (Balhausen and Banse, 2007). The newly accessed Eastern European members of the EU are required to adopt a decoupled Single Area Payment Scheme where farmers receive a uniform regionalized premium per hectare.

Interactions between the crop and livestock sectors make it unclear what will happen to production. Decoupling area payments will raise the relative gross margins of crops that were not subject to the older coupled payments (fodder crops) inducing livestock production, but decoupling livestock premiums will have the opposite effect of reducing beef and sheep production. This complex set of interactions is complicated by regional differences in agricultural structures and the methods of SFP implementation. Appropriate modelling requires

a multi-product framework that accounts for interactions between factor and product markets. This has resulted in a broad variety of approaches that are discussed in the next section.

Effects of the Single Farm Payment: Review of Empirical Studies

Previous methods of modelling the impacts of the 2003 CAP reform and the SFP have taken a variety of forms. The models have been both partial equilibrium and general equilibrium approaches. General equilibrium models (Gohin and Latruffe, 2006) account for all factor and product markets; both supply and demand sides of the land market are included and it is easier to connect subsidies to land entitlement. Most partial equilibrium models represent crop production with separate yield and land demand equations. Therefore it is easier to decouple yield while leaving area coupled. With the exception of the OECD Aglink model⁸ most of the models do not incorporate risk directly. Wealth effects and indirect income effects (associated with household production) are assumed to be small and are not accounted for in any of the models addressing the 2003 CAP reform. Likewise, none of the models account for investment decisions, although the CGE models account for capital movements through their inclusion of all factor markets. None of the models account for a subsidy expectations effect.

Each modelling approach makes different assumptions about how effectively the SFP is decoupled as well as the other factors affecting the 2003 CAP reform. All of the models consider the 1992 area and headage payments to have an impact on production. In some models (Aglink and FAPRI⁹), yields are treated as decoupled but area selection is affected by compensatory payments. Other studies (ESIM) treat the compensatory payments as fully

⁸ The OECD used two models to assess the 2003 CAP reform. The models PEM and Aglink and their results are described in OECD (2003)

⁹ A description of the FAPRI model and its results can be found in Binfield *et.al.* (2004)

coupled¹⁰. The OECD PEM model accounts for commodity supply with an explicit production function. It has separate markets for each of the factor inputs entering the production function. PEM treats the compensatory payment as a subsidy to land owners affecting the supply of land. The impact on the supply of land then affects production decisions; however, inelastic land supply reduces the impact. The OECD Aglink model uses an adjustment factor to incorporate the PEM rate of supply response to the incidence of area payments on land returns in the area response equations. Gohin and Latruffe (2006), in a CGE model treat arable crop payments partly as a subsidy to land and partly as a subsidy to other factors of production. Gohin and Latruffe treat the livestock headage premiums partly as input subsidies and partly as output subsidies. For instance the suckler cow premium is treated as a subsidy for the use of the suckler herd.

The single farm payment is assumed to be fully decoupled in a number of the models: Gohin and Latruffe, and ESIM. However, as not all of the older headage and area payments have been converted into the SFP in all regions, the decoupling is only partial. Different models assume different degrees of “partial decoupling”. PEM expands the number of alternative uses that are eligible for the broad based payment which significantly dilutes the impact of the SFP as a subsidy to land owners.

Table 1 provides a summary of the impacts of the SFP on the production of different commodities in the EU (15) for a representative sample of prior studies.

¹⁰ ESIM is a multi-country multi-commodity partial equilibrium model used by the European Commission (2003) to assess CAP reform

Table 1: Change in EU-15 Production : New versus Old Regime
(percentage change)

	Cereals	Oilseeds	Beef	Dairy
OECD (PEM)	-0.7 ↔ -0.3	-0.7	Na	Na
OECD (Aglink)	-0.5 ↔ 0.1	-0.4	-0.6	-6.2 ↔ 1.2
Gohin & Latruffe	-9.1 ↔ -8.7	-6.4	-4.2	-10.0 ↔ 4.4
ESIM	-2.6	-2.9	-2.7	-6.6 ↔ 1.7
FAPRI	-0.6 ↔ -0.4	-0.6 ↔ -0.2	-2.6 ↔ -0.2	

Table 1 shows ranges of results between the double-arrowed lines. For cereals the range covers the impact across various cereals (wheat, coarse grains, etc.); for dairy products the range covers the impact across different types of dairy products. In the case of the FAPRI results the ranges represent scenarios with maximum and minimum degrees of decoupling (see Binfield *et al.*, 2004 for details).

All of the studies show modest changes to production. The CGE models show a bigger change than the partial equilibrium studies. There are a variety of results because of a variety of different modelling assumptions with respect to program implementation, regional implementation, supply response, and a variety of other modelling differences. What is noticeable is how similar the results are. Overall the impact of implementing the SFP appears to be small regardless of the modelling approach.

If the impact on production is modest will the SFP be considered eligible for notification as green box support to the WTO? How is the program similar and different from other programs that have been notified as green box programs?

Relationship of SFP to WTO Annex 2 and Other Direct Payments

Prior to the 2003 reform the EU notified roughly € 20 billion in green box payments, or approximately 20% of their domestic support was not subject to potential reduction

commitments (Blandford and Josling 2007). If the SFP does not significantly affect production decisions then the EU can claim that the program has “no, or at most minimal, trade-distorting effects or effects on production” and it should qualify as a green box program for WTO notification. The program already complies with the two basic requirements for the green box: that the program must be government funded and that the support must not have the effect of providing price support to producers. In addition it must meet policy-specific criteria for direct payments to producers (paragraph 6 of Annex 2). If it is consistent with these criteria, then the EU can notify the program as green giving itself more leeway in notifying future domestic support relative to their current commitments. This also provides leverage in future negotiations on domestic support disciplines. Blandford and Josling (2007) claim that the EU would then be able to notify 42% of its domestic support as Annex 2 eligible if 80% of the support provided under the SFP is assumed to qualify for the green box.

The ability of the EU to notify the SFP as green depends on the experience of other countries in notifying green support. The best known green box direct producer payment program is the US Direct Payment (DP) [previously known as the Production Flexibility Contract (PFC)]. Although these payments were made on a crop by crop basis, producers are not required to plant and are not restricted to any particular crop. The payment is independent of current production and farmers are free to allocate their land to any crop on “contract acres” with the exception of fruit and vegetables; producers are however required to keep the land in agricultural use (Baffes and de Gorter, 2004).

The European SFP has several similarities to the US DP program in that it depends on historic entitlement, is paid to land, and does not require production. There are also important differences. The SFP is more generally available than the DP program in that it applies to both

crops and livestock, and as such, would be expected to be more production neutral. The European program also has a mandatory land set-aside in which farmers producing over 92 metric tonnes of grain must adhere. Although these differences may make the European program more neutral, what matters to the WTO is consistency with paragraph 6 of Annex 2.

The United States has been successfully challenged with respect to the notification of the DP program as green. The case was brought by Brazil against U.S. upland cotton subsidy practices. One of the conclusions by the WTO panel was “that PFC payments, DP payments, and the legislative and regulatory provisions which establish and maintain the DP programme, do not fully conform with paragraph 6(b) of Annex 2 of the Agreement on Agriculture” (WTO 2004). Paragraph 6(b) says that the payments shall not be related to production undertaken after the base period. The problem was that US DP was not to be paid to the owners of the land on which fruits and vegetables were grown. The potential European problem is that Article 51 of Council Regulation #1782/2003 requires that land upon which an SFP is paid may not be used for the production of fruit and vegetables. This requirement is presumably something that could be easily changed if necessary.

Swinbank and Tranter (2005) argue that the SFP would not just violate paragraph 6(b) but also paragraph 6(d). This paragraph states that the amount of the payments is not to be related to factors of production employed in any year after the base year. Article 5 of Council Regulation #1782/2003 requires that land receiving payments should be kept in good agricultural and environmental condition. “Good agricultural condition is generally interpreted to mean that the land will not be abandoned and environmental problems such as erosion will be avoided” (Kelch and Normile, 2004, p. 7). This requirement could be interpreted as re-establishing the link between the payment and the factors of production employed (land management practices)

and ultimately, current production. Perhaps the most obvious linkage to current factors of production is a criterion for minimum stocking rates for livestock (Blandford and Josling, 2007).

Swinbank and Tranter (2005) also argue that the partial decoupling schemes would not fit the green box. The coupled component would presumably remain in the blue box; while the decoupled SFP component would be notified as green. Swinbank and Tranter question whether this arrangement would go unchallenged in the WTO. This is the same problem that the Canadian government faces when it decides how the Canadian Agricultural Income Stabilization (CAIS) program will be notified. Some individuals propose that part of the CAIS payment (the disaster assistance portion) would be notified as green while the remaining CAIS payments would be notified as AMS.

Finally, Blandford and Josling (2007) suggest that requirement that areas already under permanent pasture must remain so, in order to receive the SFP, may become subject to challenge. The reason is that this requirement will induce livestock production.

Possible Lessons for Canada

The decoupling process has linked producer payments to land (and the associated entitlement) rather than to production. As a model for potential Canadian reform there are lessons to be learned. However, the lessons probably have more to do with the process of making the reform rather than the actual content of the reform.

The first lesson is that there may be unanticipated consequences associated with providing direct payments. As a method of income redistribution, lump sum transfers are the preferred approach (Rude 2001). However, once the process of income redistribution begins, there may be unintended and unanticipated consequences for the recipients. Redistribution

sometimes begets further redistribution. The European farm policy process has always been viewed as a centralized process; after all, it is the Common Agriculture Policy. With that being said, the 2003 CAP reform may have started a decentralizing trend that may also redistribute monies away from primary agriculture.

The 2003 CAP reform may have introduced an element of re-nationalization in the European policy process. The member states have been allowed to deploy diverse schemes to implement the SFP, leaving them with considerable flexibility for partial decoupling. The SFP payment may be paid either on the basis of individual historic farm entitlement or a regionalized scheme under which all payments for a particular region would be paid on a flat-rate per hectare basis to producers. This introduces an element of redistribution among farmers rather than maintaining an individual farmer's entitlement. Furthermore the process of modulation from commodity support to rural development is another form of redistribution. The lesson for Canadian policy makers and interest groups is that attempts to transfer money to primary agriculture can lead to further redistribution among producers, away from production agriculture towards rural development and even among regions.

Swinbank and Daugbjerg (2006) argue that the driving force behind the 2003 CAP reforms was the linking of trade policy concerns with broader lobby of interests concerned with more sustainable farming practices, consumer concerns with food safety, food quality and animal welfare. Cross-compliance conditions were mandatory with Agenda 2000, but the 2003 reform reinforced their importance.

Canadian agricultural programs currently don't require cross-compliance conditions to receive payments, nor has Canada moved in the direction of redistributing money away from primary agriculture to other uses such as rural development. However, because Canadian policy

makers face similar challenges as their European counterparts the direction of reform may take a similar course as EU policy. The unintended consequences of reform do not just relate to how the policies are implemented but also the direction that future policies may take.

The second lesson is that reform is possible and it is possible to make the reform less distorting over time. The EU has accomplished a lot since 1992. Generally the reform has proceeded in one direction that is less distorting and more acceptable to its trading partners. The European Commission has stuck to a single objective of seeking reforms to market distortions and then compensating producers in a manner that is less distorting. The Canadian agricultural policy experience has been far less consistent. The record is one of continually changing safety nets, without clear indication of whether the government's objective is to stabilize income or to redistribute income to the primary production sector.

Concluding Remarks

The reform of the CAP with a movement away from coupled production subsidies to more neutral support represents a significant step on the road to policy reform. However, this paper argues that the reform has been evolutionary and gradual and that the impacts, of the most recent reform, on the decision to produce will not be large. From a Canadian perspective this means that the impact of domestic support reforms on international agricultural markets will be modest. The largest potential gains are through improved market access. So what remains to be liberalized is the EU's import regime. Real reform will require an aggressive form of market access liberalization if the WTO members are eventually able to reach a new agreement on agricultural trade.

There are economic and legal definitions for decoupling. The economic definitions relate back to the question of whether the program affects production, while legal definition is based on the fulfilment of the criteria in paragraph 6 of Annex 2. Satisfying the legal definition does not necessarily guarantee that compliant programs will not affect output. The common thread, however, between definitions appears to be the idea of a lump sum payment. The idea of fixing the payment based only on past criteria relates to the concept of a lump-sum payment. However, while a lump-sum payment is the best instrument when it comes to a direct income transfer, it is not the appropriate instrument when addressing market failures.

Imposing cross-compliance conditions brings forth the issue of environmental externalities. Cross-compliance conditions raise the question of green box compliance. The cross-compliance conditions tie the payment to current factors of production. This linkage may cause some WTO members to challenge the notification of the SFP as a green box program. Whether the challenges will occur and whether they will be successful are not known at this time. Green box (in)compatibility may be viewed as a limitation, but the potential limitations probably have more to do with the Annex 2 criteria themselves than with the any program designed on entitlement-based direct payments (Blandford and Josling 2007).

There are lessons for Canadian policy makers from the European experience. A consistent set of policies, with clearly stated objectives, are possible even in a jurisdiction as diverse as the EU. There will be forces that move Canadian agriculture policy away from support of primary production agriculture towards broader issues of rural development and a focus on consumer driven agriculture. Reforms in Europe may yet be an accurate predictor of future Canadian policy reform.

References

Antón, J. (2005). "Modeling Production Response to 'More Decoupled' Payments" International Agricultural Trade Consortium Annual Meetings, San Diego.

Baffes, J. and H. de Gorter (2004). "Experience with Decoupling Agricultural Support", in *Global Protection and Trade in Agriculture*, editors A. Akog and J. Beghin, Oxford University Press.

Balkhausen, O. and M. Banse (2007). "The Impact of Decoupling and Modulation in the European Union: A Sectoral and Farm Level Assessment", Deliverable No. 18 IDEMA Project, University of Göttingen.
http://www.sli.lu.se/IDEMA/WPs/IDEMA_deliverable_18_rev.pdf

Benjamin, D. (1992). "Household Consumption, Labour Markets, and Labour Demand: Testing for Separation in Agricultural Farm Household Models", *Econometrica* 60(21):287-322.

Binfield J., T. Donnellan, K. Hanranhan, C. Hart, and P. Westhoff (2004). "CAP Reform and the WTO: Potential Impacts on EU Agriculture", selected paper AAEA annual meetings, Denver, Colorado.
http://www.fapri.missouri.edu/outreach/publications/2004/FAPRI_UKC_Report_08_04.pdf

Blandford, D. and T. Josling (2007). "Should the Green Box be Modified?" International Policy Council, IPC Discussion Paper, www.agritrade.org

Cahill, S. (1997). "Calculating the Rate of Decoupling for Crops under CAP/Oilseeds Reform" *Journal of Agricultural Economics*, 48:349-378.

EC (1992), Council Regulation (ECC) No. 1765/92, "Establishing a Support System for Producers of Certain Arable Crops", *Official Journal of the European Communities*, No. L181:12-29.

EC (2003), Council Regulation (EC) No. 1782/2003, "Establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers", *Official Journal of the European Union*, No. L270:1-69.

Gohin, A. and L. Latuffe (2006). "The Luxembourg Common Agricultural Policy and the European Food industries: what's at stake?" *Canadian Journal of Agricultural Economics*, 24(1):175-194.

Gohin, A., H. Guyomard and C. Le Mouél (2001). "Measures of Internal Support: The Decoupling Issue", in *Coordinated Studies in View of the Future Round of Multilateral Trade Negotiations in Agriculture and the Food Sector*.
<http://w3.rennes.inra.fr/economie/pdf/gogule.pdf>

Hennessy, D. (1998). "The Production Effects of Agricultural Income Support Policies under Uncertainty" *American Journal of Agricultural Economics* 80:46-57.

Kelch, D. (1999). "EU's Agenda 2000 and Beyond" Agricultural Outlook, USDA-ERS, AGO-265, October: 12-15.

Kelch, D. and M.A. Normile (2004). "CAP Reform of 2003-04." WRS-04-07. Economic Research Service, U.S. Department of Agriculture.
<http://www.ers.usda.gov/publications/WRS0407/>

Phimister, E. (1995). "Farm Household Production in the Presence of Restrictions on Debt: Theory and Policy Implications", *Journal of Agricultural Economics* 46:371-380.

Moschini, G. and P. Sckokai (1994). "Efficiently Decoupled Farm Programs under Distortionary Taxation", *American Journal of Agricultural Economics* 76:362-370.

OECD (2001). "Decoupling: A Conceptual Overview", OECD Papers No. 10, Organization for Economic Cooperation and Development, Paris.

OECD (2004). "Analysis of the 2003 CAP Reform", Organization for Economic Cooperation and Development, <http://www.oecd.org/dataoecd/62/42/32039793.pdf>

Rude, J. (2000). *An Examination of Nearly Green Programs: Case Studies for Canada, the United States, and the European Union*, Trade Research Series, Agriculture and Agrifood Canada, Publication 2010/E, Ottawa.

Rude, J. (2001). "Under the Green Box: The WTO and Farm Subsidies", *Journal of World Trade* 35(5):1015-1033.

Swinbank, A. and C. Daugbjerg (2006). "The 2003 CAP Reform: Accommodating WTO Pressures", *Comparative European Politics* 4:47-64.

Swinbank, A. and R. Tranter (2005). "Decoupling EU Farm Support: Does the New Single Payment Scheme Fit within the Green Box? Estey Journal of International Law and Trade Policy, http://www.esteyjournal.com/j_pdfs/swinbanktranter6-1.pdf

WTO (2004). "United States – Subsidies on Upland Cotton", World Trade Organization, WT/DS267/R, Geneva.