



## **SOL's alternative methodology to the IATP assessment of US dumping**

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### Introduction

I – Preliminary comparison of the IATP and SOL assessments of dumping rates

II – SOL methodology to assess the dumping rate in five steps

2.1 – The GATT provisions on dumping assessment

2.2 – The five steps to assess the dumping rate of the US exported crops

2.3 – The detailed calculations of the dumping rate of each crop

III – Additional comparisons of IATP and SOL methodologies

Conclusion: a plea to incorporate NPS subsidies in assessing dumping

Sophia Murphy and Karen Hansen-Kuhn of IATP have published in June 2017 an excellent analysis of the US dumping of five major exported crops – wheat, corn, rice, soybeans and cotton – from 2005 to 2015<sup>1</sup>. This was an appropriate contribution in view of the WTO 11<sup>th</sup> Ministerial Conference (MC11) of Buenos Aires from 10 to 13 December given that agricultural domestic subsidies were supposed to be high on its agenda. Unfortunately, the debate did not even occur given the inflexible stance of the US and EU on the issue. Few days before MC11 a premonitory paper by Tim Wise and Sophia Murphy summarized the developing countries (DCs) expectations on the complementary agricultural issues of public stockholding for food security purposes (PSH), Special Safeguard Mechanism (SSM), reductions of trade-distorting supports, with the special case of cotton<sup>2</sup>. This IATP paper was an update and a broader analysis of a previous report made in 2005 and covering the years 1990 to 2003 for the same five crops<sup>3</sup>.

The IATP analysis is very comprehensive in assessing the main causes, forms and impacts of this US dumping, on the DCs as on the US, so that we could not add much to these causes and impacts. However the objective of the present paper is to propose an alternative methodology to assess dumping, which would be more in line with the GATT provisions and would facilitate such assessment by other countries which do not avail of the same US comprehensive data of annual costs of production per crop. It would also facilitate the assessment of the dumped exports of processed grains, of which into animal products.

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<sup>1</sup> Sophia Murphy and Karen Hansen-Kuhn, *Counting the costs of agricultural dumping*, IATP, June 2017: [https://www.iatp.org/sites/default/files/2017-06/2017\\_06\\_26\\_DumpingPaper.pdf](https://www.iatp.org/sites/default/files/2017-06/2017_06_26_DumpingPaper.pdf)

<sup>2</sup> Timothy A. Wise & Sophia Murphy, *Keep Your Eyes on the Price: WTO Remains Blind to Agricultural Dumping*, Food Tank, December 15, 2017: <https://foodtank.com/news/2017/12/wto-remains-blind-to-agricultural-dumping/>

<sup>3</sup> Sophia Murphy, Ben Lilliston and Mary Beth Lake, *WTO Agreement on Agriculture: A Decade of Dumping*; IATP, February 2005: [https://www.iatp.org/sites/default/files/451\\_2\\_48532.pdf](https://www.iatp.org/sites/default/files/451_2_48532.pdf)

## I – Preliminary comparison of the IATP and SOL assessments of dumping rates

IATP assessment of dumping is based on adding to the farmers' production cost the government input subsidies, plus the transportation and handling costs, arriving thus to the full cost which, compared to the FOB price, gives the dumping rate. Let us already compare its results on the dumping rates with those of SOL.

The dumping rate is not defined in the same way by IATP and SOL: for IATP *"The percent of export dumping is the difference between the full cost of production and the export price, divided by the full cost of production"*, while for SOL it is simply the percentage by which the "administered price" (i.e. the farm price plus all subsidies per tonne) at FOB level exceeds the FOB price. For the sake of comparison, table 1 below uses also for SOL the IATP definition, and without decimals.

Table 1 – Comparing IATP and SOL estimates of dumping rates of five US crops: 2005-16

In %	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IATP dumping rates												
Wheat	28	29	2	-11	24	9	6	-1	14	23	32	
Corn	31	15	-12	-22	4	-11	-44	-18	-30	4	12	
Rice	16	1	-14	-10	-8	3	0	-6	-10	2	2	
Soybeans	-1	9	-16	-33	-21	-22	-33	-27	-22	-17	10	
Cotton	16	27	0	44	30	-75	34	27	35	42	23	
SOL dumping rates												
Wheat	24	25,68	16,50	13,36	20,70	18,85	19,79	20,85	19,11	18,09	10,15	11,91
Corn	27,47	37,13	14,91	10,39	11,69	11,90	10,53	13,40	9	7,08	8,27	12,70
Rice	33,05	35,69	23,94	17,62	14,87	16,91	19,92	18,68	20,20	19,46	11	20,87
Soybeans	13,06	13,61	11,90	10,22	8,02	9,33	10,88	12,33	10,22	8,50	81,02	8,01
Cotton	83,17	57,84	42,50	32,54	58,95	30,82	21,50	24,02	27,36	31,16	39,26	22,34
SOL dumping rates according to IATP definition and without decimals												
Wheat	19	20	14	12	17	16	17	17	16	15	9	11
Corn	22	27	13	9	10	11	10	12	8	7	8	11
Rice	25	26	19	15	13	14	17	16	17	16	10	17
Soybeans	12	12	11	9	7	9	10	11	9	8	7	7
Cotton	45	37	30	25	37	24	18	19	21	24	28	18

On average from 2005 to 2015 SOL's average dumping rate has been 10 times larger than for IATP: 16.5% against 1.64%. It is difficult to understand why on these 11 years the average IATP dumping rate has been negative for corn, rice and soybeans, i.e. why is it that exports have not been made at the full cost that IATP has calculated at FOB level but at a higher export price? And what does a negative dumping rate mean as it looks like a tax on exports?

IATP says that *"In our new calculations of dumping rates, we relied on the same methodology as in the 2003 and 2005 analyses, adding the costs of production to government support allocated for those crops and estimating transportation costs to arrive at an approximation of the full cost of production, which we then compared to export prices"*. Sure, but at that time IATP advanced that, *"To measure dumping, it is only the government subsidies to input costs that are relevant – the normal costs of doing business that are met from the public purse rather than farm operation. These subsidies pay for production costs, and so are included to generate a fuller cost of production number. The calculation does not include the much larger sums that the U.S. government spends on income support. These payments are not related to production costs, but rather to an income standard determined in a political bargaining process. The calculations show that dumping levels are very high, regardless of the other subsidies paid by government. For dumping purposes, it is only the costs of production that can be included in the assessment of a constructed price"*. At that time (in 2003) I made some criticism about this

IATP methodology<sup>4</sup>. IATP confirms in the present analysis that it considers only "the cost of government support which includes the subsidy portions of crop insurance, revenue insurance and credit allocated to each crop". Is this not in contradiction with IATP statement that "U.S. commodity farmers are reliant on off-farm income as well as government payments (in the form of both production and income support) to stay in business"? When IATP states that "These payments are not related to production costs, but rather to an income standard determined in a political bargaining process", it seems to ignore that "Annual median household income for farm families is now \$20,000 more than the median household income of all Americans"<sup>5</sup>. What does "credit allocated to each crop" mean as it can cover reimbursable loans? It would be very difficult to sell this methodology to agricultural economists worldwide and the EU Commission will rejoice given its huge domestic agricultural subsidies, of which more than €35 billion in direct decoupled payments to be notified in the WTO green box for 2016!

Clearly if the largest bias in IATP methodology is the huge underestimate of government subsidies, a minor bias is related to the calculation of processing and transportation costs. IATP states that "Estimates of processing and transportation costs as the commodity goes from field to port are more difficult to arrive at, both because the crops are grown at and distributed to diverse places, and because most of the information on freight and related costs is proprietary data that is not publicly available". Yet, as the analysis concerns grains exported raw, without processing (other than milling the rough rice and ginning the cotton seed), it is simpler to use the gap between the available average farm prices and FOB prices<sup>6</sup>. So that it was not necessary to consider the specific gaps for each type of specific area of production and each export port for each specific grain, for example between the 5 types of wheat – hard red winter, hard red spring (or dark red spring), soft red winter, white and durum – according to their regional origin and port of export.

Another bias is that IATP does not provide the dumping per tonne but only the dumping rate. Yet we need the dumping per tonne to assess the dumping of processed products from raw grains, for example on exports of wheat flour or whisky, of corn ethanol or DDGS (distillers dried grains with solubles), and of animal products fed with the subsidized grains.

## **II – SOL methodology to assess the dumping rate in five steps**

### **2.1 – The GATT provisions on dumping assessment**

Let us first remind that, for the GATT article 6, "A product is to be considered as being introduced into the commerce of an importing country at less than its normal value, if the price of the product exported from one country to another

(a) is less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country, or,

(b) in the absence of such domestic price, is less than either

(i) the highest comparable price for the like product for export to any third country in the ordinary course of trade, or

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<sup>4</sup> Comments on the methodology used by IATP to estimate the dumping of US exported crops", Solidarité, 9 August 2003 (Solidarité's papers are no longer downloadable but may be provided on request).

<sup>5</sup> [https://www.ewg.org/agmag/2017/11/double-dipping-how-taxpayers-subsidize-farmers-twice-crop-losses#.Wkikp9\\_iaUk](https://www.ewg.org/agmag/2017/11/double-dipping-how-taxpayers-subsidize-farmers-twice-crop-losses#.Wkikp9_iaUk)

<sup>6</sup> For wheat, corn, rice and soybeans, use: <https://apps.fas.usda.gov/gats/ExpressQuery1.aspx>; however for cotton lint (HS code 5201) use the USITC data base: [https://dataweb.usitc.gov/scripts/user\\_set.asp](https://dataweb.usitc.gov/scripts/user_set.asp)

(ii) *the cost of production of the product in the country of origin plus a reasonable addition for selling cost and profit*".

Thus, for the GATT, assessing dumping on the cost of production is the third possible way when it is not possible to compare the export price with the domestic price – i.e. when it has been lowered from its *normal value* "by virtue of governmental action", this political reduction being offset by domestic and export subsidies –, which is yet a way quite available for the US and other major developed countries. IATP says that it "uses the definition of dumping established in the GATT for markets in which the market price may not reflect "normal value" (for example, because of the presence of significant public subsidies). In such cases, normal value must be constructed". Here, for these grains exported raw, without processing (other than milling the rough rice and ginning the cotton seed), the farm price was lowered "by virtue of governmental action" under the pressures of agribusiness corporations on Congress, a fact well underscored by IATP: " *The 1996 Farm Bill shifted public policy from commodity price floors (designed to ensure farmers a fair price in the marketplace) to farm income support, satisfying a long-standing demand from commodity traders that the government should not interfere to raise prices. With floor prices, grain traders had to match the government floor. With the end of such policies, traders could use their market power to pay less for commodities, leaving the government to make up the shortfall in income that farmers then faced... IATP argues that the system is structured in a way that allows, even encourages, farmers to operate at a loss, which maximizes profits further downstream for agribusiness and leaves the public covering the farmers' losses... Grain traders are in the business of adding value to primary commodities, whether they are fattening animals with soy or turning corn into ethanol. Cheap grain then becomes an input and the companies are happy to keep those prices low*". Clearly these low farm prices are also a result of overproduction, a fact well underscored by IATP: "*Dumping is the logical result of U.S. agriculture and trade policies that encourage overproduction, using export markets as an escape valve for falling prices and revenues*".

Nevertheless the IATP statement that "*The WTO diagnosis has focused on just one of several complex causes: government subsidies, both export and domestic subsidies. This focus has left other potentially more important factors, such as the oligopolistic market power of international grain traders and global overproduction, unaddressed*" is a little ambiguous as it leads to understand that subsidies are less important than the oligopolistic market power of international grain traders. If this might be true for some grains during some periods, this should not be interpreted as a general statement, and IATP takes care of speaking of "*potentially more important factor*".

The GATT provision is that there is no dumping as long as exports are made at the domestic *market price*, even if it is lower than its *normal value*, i.e. than its average national production cost, a definition which has prompted the US and the EU to change radically their agricultural policies at the end of the 1980s and early 1990s at the same time when they devised in a face to face the Agreement on Agriculture (AoA) rules. They decided to reduce their minimum guaranteed prices – US *loan rates* and EU *intervention prices* – while compensating their farmers for the income loss with subsidies that they defined in the AoA as non-trade-distorting, to improve the competitiveness of their agricultural products by importing less and exporting more. At the same time, the AoA required all countries, including DCs other than the LDCs (least developed countries), to reduce their import protection – the LDCs having been constrained already by the structural adjustment policies of the World Bank and IMF –, knowing that the DCs did not have the means to significantly subsidize their large number of farmers.

## **2.2 – The five steps to assess the dumping rate of the US exports**

1) Assessing the product-specific (PS) subsidies, coming from three sources:

a) The Commodity Credit Corporation (CCC), which manages all types of direct payments, except to crop insurance, available in its annual Commodity Estimates Book<sup>7</sup>, data controlled with those of the OECD PSE data base<sup>8</sup> and of the Environment Working Group<sup>9</sup>.

b) The crop insurance subsidies, managed by the Risk Management Agency (RMA), in its Summary of Business Reports and Data<sup>10</sup>. To the premium subsidy we have added the share of total government costs accruing to each crop – as this omission was criticized by a CRS (Congressional Research Service)'s report of April 2007<sup>11</sup> and a GAO (Government Accounting Office)'s report of 2009<sup>12</sup> –, except for 2015 and 2016 when total government costs were lower than premium subsidies.

c) The irrigation subsidies, which are not available in any USDA report but are hugely under-notified at the WTO as at OECD and for which there are many critical official reports, including of the GAO and CBO as well as academic reports. Among the last ones that of Bernasconi-Osterwalder, based on many previous studies, for whom "*The annual irrigation subsidies for the United States from such underpricing have been estimated at between \$2 billion and \$2.5 billion*"<sup>13</sup>, a figure repeated several times by many other studies. A detailed calculation of the irrigation subsidies to the main US crops is given in SOL's paper on "*Time is up for Developing countries to sue the US agricultural domestic subsidies*" of 14 January 2016<sup>14</sup>, assuming \$2 billion for all crops.

2) From the farm price to the product-specific (PS) administered price at the farm gate

The average annual farm price is obtained by dividing the production value in \$ million (\$M) by the production quantity in million tonnes (Mt)<sup>15</sup> but it is also available on the OECD PSE (producer's support estimate), which gives it only for rough rice and not for milled rice, but USDA published also the annual milling rates. Adding the PS subsidies per tonne to the farm price gives what we have called the PS *administered price* at farm gate. SOL has defined this concept of administered price in several recent papers, of which in "*Reconciling the views on a permanent solution to the issue of public stockholding for food security purposes*" of 10 September 2017<sup>16</sup>.

3) Calculation of the non-product-specific (NPS) subsidies

We impute to each crop the non-product-specific NPS subsidies corresponding to the share of its production value in the total agricultural production value (VOP). In a 2004 report, Tim

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<sup>7</sup> <https://www.fsa.usda.gov/about-fsa/budget-and-performance-management/budget/commodity-estimates-book-and-reports/index>

<sup>8</sup> <http://www.oecd.org/agriculture/agricultural-policies/producerandconsumersupportestimatesdatabase.htm>

<sup>9</sup> [https://farm.ewg.org/crop\\_insurance\\_analysis.php](https://farm.ewg.org/crop_insurance_analysis.php)

<sup>10</sup> <https://www.rma.usda.gov/data/sob.html>

<sup>11</sup> Randy Schnepf and Jasper Womach, *Potential Challenges to U.S. Farm Subsidies in the WTO*, CRS Report for Congress, Updated April 26, 2007.

<sup>12</sup> [www.gao.gov/products/GAO-09-445](http://www.gao.gov/products/GAO-09-445)

<sup>13</sup> <http://www.gbv.de/dms/spk/sbb/toc/487559800.pdf>

<sup>14</sup> <https://www.sol-asso.fr/analyses-politiques-agricoles-jacques-b/>

<sup>15</sup> [https://www.nass.usda.gov/Publications/Ag\\_Statistics/2016/Chapter01.pdf](https://www.nass.usda.gov/Publications/Ag_Statistics/2016/Chapter01.pdf);

[http://usda.mannlib.cornell.edu/usda/current/CropValuSu/CropValuSu-02-24-2017\\_revision.pdf](http://usda.mannlib.cornell.edu/usda/current/CropValuSu/CropValuSu-02-24-2017_revision.pdf)

<sup>16</sup> <https://www.sol-asso.fr/analyses-politiques-agricoles-jacques-b-2/>

Wise recommended also that "All input subsidies and general subsidies should be taken into account, as should indirect subsidies such as the subsidized cost of feed grains in meat and dairy products"<sup>17</sup>. Even if almost all US specific subsidies are going to crops and very few to animal products – except some to dairy (most of which being fake market price support not implying subsidies and the actual subsidies being restricted to small dairy market loss payments) and to animal disaster payments and livestock forage, the main indirect subsidies benefiting to animal products being the subsidies to feed consumed by animals but received by the producers of feed crops, including hay –, for conservative reasons the share of NPS subsidies is based on the share of each crop in the total VOP and not in the production value of all crops.

Table 2 – Share of the 5 crops in the US total crop production value, 2005-16

\$ Million and %	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Crops prod* value	115967	122125	150067	173919	171607	180366	201044	231614	220848	211417	187480	193667
All ag prod* value	240898	240624	288546	314351	291675	321237	365902	401433	403553	424216	376940	356534
% wheat value	2,98	3,20	4,61	5,29	3,65	3,99	3,91	4,33	3,62	2,81	2,66	2,55
% corn value	9,21	13,33	18,95	15,69	16,02	20,12	21,03	18,47	15,35	12,48	13,09	14,50
% rice value	0,72	0,83	0,90	1,15	1,10	0,99	0,75	0,76	0,79	0,73	0,64	0,67
% soybean value	7,17	8,51	9,35	9,37	11,02	11,69	10,52	10,64	10,80	9,31	9,34	11,48
% cotton value	2,36	2,08	1,96	0,96	1,30	2,29	1,91	1,57	1,16	1,21	1,06	1,59

To identify the NPS subsidies we rely mainly on OECD PSE data base for 2016 and previous years, in which many are grouped in the GSSE (general services support estimate), covering expenditures on Agricultural knowledge and innovation system, Inspection and control, Storage, marketing and other physical infrastructure, Rural tech & cooperative development grants, Marketing and promotion, Cost of public stockholding (other than food aid), Sub-national expenditures. However many other NPS subsidies are outside GSSE: Farm operating loans (Agricultural credit program), Emergency Assistance Loans, Energy subsidies, Conservation programs (of which Environmental Quality Incentives Program, EQIP), Disaster payments, Farm ownership loans (Agricultural credit program), Value Added Agricultural Producer Grants, Value Added Agricultural Product Marketing, Farm Storage Facility Loan Program, Renewable Energy Program, Extension service Federal funds, Animal & plant health inspection service, State technical assistance, Appropriate Technology Transfer for Rural Areas, Outreach and assistance for socially disadvantaged farmers and rangers program, Income tax concessions.

The share of each of the five crops in the production value of all crops allow then to distribute the NPS subsidies among them (table 3).

Table 3 – Distribution of the NPS subsidies between the five crops

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
All NPS subsidies	17490	18841	18294	19148	17348	16936	18933	22464	18986	20439	20569	18003
Wheat	521,2	602,9	843,4	1012,9	633,2	675,7	740,3	972,7	687,3	574,3	547,1	459,1
Corn	1610,8	2511,5	3466,7	3004,3	2779,1	3407,5	3981,6	4149,1	2914,4	2550,8	2692,5	2610,4
Rice	125,9	156,4	164,6	220,2	190,8	167,7	142	170,7	150	149,2	131,6	120,6
Soybeans	1254	1603,4	1710,5	1794,2	1911,7	1979,8	1991,8	2390,2	2050,5	1902,9	1921,1	2066,7
Cotton	412,8	391,9	358,6	183,8	225,5	387,8	361,63	352,7	220,2	247,3	218	286,2

#### 4) Calculation of all PS and NPS subsidies and administered price at farm gate

The addition of PS and NPS subsidies to each crop, divided by the crop production quantity, gives the total subsidy per tonne which, added to the farm price, gives the equivalent of the "administered price" at farm gate.

<sup>17</sup> Tim Wise, *The Paradox of Agricultural Subsidies: Measurement Issues, Agricultural Dumping, and Policy Reform*, Tufts University, February 2004, <http://ase.tufts.edu/gdae>

## 5) The administered price at FOB level compared to the FOB price gives the dumping rate

The FOB price of each crop result from the division of the export value by the export volume. Then the gap between the FOB price and the farm price is added to the administered price at farm level to give the administered price at FOB level, which, divided by the FOB price, gives the dumping rate.

### 2.3 – The detailed calculations of the dumping rate of each crop

Table 4 – The dumping rate of US wheat exports from 2005 to 2016

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Wheat specific subsidies												
Direct payment	1135,8	1076,4	850,4	1031,8	1138,4	1060,7	1025,3	864,6	1050,2	1036,1	5,9	
CCP		-27,5										
ARC												303,8
ACRE							304,4	8,6	28,7	1,7	48,9	
LDP	43,8	14,3			4	178,2	27,3					117,7
MLAP							20	-43		0,2		
MLG					9	1,8						
Storage	16,1	13,2										
Miscellaneous	3	16,3	-3,5	-8,3	2,9							
CCC total	1198,7	1092,7	846,9	1023,5	1154,3	1240,7	1377	830,2	1078,9	1363	54,8	421,5
Insurance subsidies	373,1	468,9	519,9	1269,3	1143,5	688	1419,5	2145,3	1661,1	1136,1	810,5	700,1
Irrigation subsidies	118	120,6	123,3	126,1	120,6	115,4	110,5	105,7	101,2	96,6	96,6	96,6
All specific subsidies	1689,8	1682,2	1490,1	2418,9	2418,4	2044,1	2907	3081,2	2841,2	2595,7	961,9	1218,2
From the farm price to the product-specific (PS) administered price at the farm gate												
Production: Mt	57,242	49,217	55,822	68,363	60,116	58,867	54,243	61,298	58,105	55,147	56,116	62,868
Production: \$M	7171	7695	13289	16626	10654	12827	14323	17383	14604	11915	10018	9104
Farm price: \$/t	125,66	156,53	238,10	249,12	178,94	209,44	266,02	285,50	252,43	220,09	179,68	141,46
PS subsidy: \$/t	29,52	34,18	26,69	35,38	40,23	34,72	53,59	50,27	48,90	47,07	17,14	19,38
PS admin price farm gate	155,18	190,71	264,79	284,5	219,17	244,16	319,61	335,77	301,33	267,16	196,82	160,84
Calculation of the non-product-specific (NPS) subsidies												
All agr prod* value: \$M	240898	240624	288546	314351	291675	321237	365902	401433	403553	424216	376940	356534
% wheat value	2,98	3,20	4,61	5,29	3,65	3,99	3,91	4,33	3,62	2,81	2,66	2,55
All NPS subsidies	17490	18841	18294	19148	17348	16936	18933	22464	18986	20439	20569	18003
* to wheat	521,2	602,9	843,4	1012,9	633,2	675,7	740,3	972,7	687,3	574,3	547,1	459,1
Calculation of all PS and NPS subsidies and administered price at farm gate												
All subsidies to wheat	2211	2285,1	2333,5	3431,8	3051,6	2719,8	3647,3	4053,9	3528,5	3170	1509	1677,3
All subsidies/t	38,63	46,43	41,80	50,20	50,76	46,20	67,24	66,13	60,73	57,48	26,89	26,68
Admin price at farm gate	164,29	202,96	279,9	299,32	229,7	255,64	333,26	351,63	313,16	277,57	206,57	168,14
Comparing the administered price at FOB level with the FOB price to assess the dumping rate												
Exports: Mt	26,86	23,32	32,89	30,07	21,93	27,61	32,80	25,76	32,88	25,42	21,26	23,91
Exports: \$M	4378,4	4226,4	8340,4	11299,4	5379,4	6770,9	11144,6	8168,7	10444,6	7715	5631,8	5371,4
FOB price: \$/t	161,2	180,8	253,3	375,7	245,2	245,1	339,7	317,1	317,8	317,8	264,8	224,1
Gap FOB-farm price	35,54	24,27	15,2	126,58	66,26	35,66	73,68	31,6	65,37	97,71	85,12	82,64
Admin. price at FOB	199,83	227,23	295,1	425,9	295,96	291,3	406,94	383,23	378,53	375,28	291,69	250,78
Dumping rate: %	24	25,68	16,50	13,36	20,70	18,85	19,79	20,85	19,11	18,09	10,15	11,91

CCP: counter-cyclical payment; ARC: agricultural risk coverage; ACRE: average crop revenue election; LDP: loan deficiency payments; MLAP: marketing loan assistance payment; MLG: marketing loan gain

Incidentally let us underscore that, contrary to the EU where the decoupled direct payments have never been allocated to the crops from which they were created but are hidden in the green box which has become an actual black box, in the US they have always been allocated to the crops from which they were created even if the beneficiaries were not obliged to plant this crop.

Table 5 – The dumping rate of US corn exports from 2005 to 2016

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Corn specific subsidies												
Direct payments	2100,5	1993,9	1591	1950,3	2110	1938,1	1894,8	1558,2	1933,4	1914,4	8,1	
PFCP										211		
CCP	905,8	2514,5	1627,6	-0,4								
ARC												3725,4
ACRE							97,2	1	6,6	145,5	154,5	
LDP	2867,8	4042,5	2,7									
MLG			0,7									
Miscellaneous	3,7	1,9		0,5			0,1					
CCC total	5877,8	8552,8	3222	1950,4	2110	1938,1	1992,1	1559,2	1940	2270,9	162,6	3725,4
Insurance subsidies	789,4	1121,9	1722,2	2866,4	2134,1	1754,2	3692,4	5173,8	3759,8	2704,8	2246,3	2199,3
Irrigation subsidies	336,5	337	337,5	338,1	350,4	363,2	376,5	390,3	404,6	436,2	436,2	436,2
All specific subsidies	7003,7	10011,7	5281,7	5154,9	4594,5	4055,5	6061	7123,3	6104,4	5411,9	2845,1	6360,9
From the farm price to the product-specific (PS) administered price at the farm gate												
Production in Mt	282,3	267,5	331,2	305,9	331,9	315,6	312,8	273,2	351,3	361,1	345,5	384,8
Production value: \$M	22198	32083	54667	49313	46734	64643	76940	74155	61928	52952	49339	51704
Farm price	78,7	119,7	165,4	159,8	139,8	203,9	244,9	271,4	175,6	145,7	141,7	133,9
Specific subsidy/t	24,81	37,43	15,95	16,85	13,84	12,85	19,38	26,07	17,38	14,99	8,23	16,53
PS admin price farm gate	103,51	157,13	181,35	176,65	153,64	216,75	264,28	297,47	192,98	160,69	149,93	150,43
Calculation of the non-product-specific (NFS) subsidies												
All agr prod* value: \$M	240898	240624	288546	314351	291675	321237	365902	401433	403553	424216	376940	356534
% corn value	9,21	13,33	18,95	15,69	16,02	20,12	21,03	18,47	15,35	12,48	13,09	14,50
All NPS specific subsid	17490	18841	18294	19148	17348	16936	18933	22464	18986	20439	20569	18003
Corn NPS subsidies	1610,8	2511,5	3466,7	3004,3	2779,1	3407,5	3981,6	4149,1	2914,4	2550,8	2692,5	2610,4
Calculation of all PS and NPS subsidies and administered price at farm gate												
All subsidies to corn	8614,5	12523,2	8748,4	8159,2	7373,6	7463	10042,6	11272,4	9018,8	7962,7	5537,6	8971,3
All corn subsidies/t	30,52	46,82	26,41	26,67	22,22	23,65	32,11	41,26	25,67	22,05	16,03	23,31
Adm price at farm gate	109,22	166,52	191,81	186,47	162,02	227,55	277,01	312,66	201,27	167,75	157,73	157,21
Comparing the administered price at FOB level with the FOB price to assess the dumping rate												
Exports: Mt	45,369	57,886	57,014	54,094	47,813	50,662	45,791	31,480	24,080	35,770	44,658	55,993
Exports: \$M	5038,5	7299,9	10099,9	13884,5	9086,4	10068,1	13958,4	9697,2	6870,5	11140,7	8660,7	10282,4
FOB price/t	111,1	126,1	177,1	256,7	190	198,7	304,8	308	285,3	311,5	193,9	183,6
Gap FOB-farm prices	32,4	6,4	11,7	96,9	50,2	-5,2	59,9	36,6	109,7	165,8	52,2	49,7
Administ price at FOB	141,62	172,92	203,51	283,37	212,22	222,35	336,91	349,26	310,97	333,55	209,93	206,91
Dumping rate: %	27,47	37,13	14,91	10,39	11,69	11,90	10,53	13,40	9	7,08	8,27	12,70

PFCP: production flexibility contract payment; CCP: counter-cyclical payment; ARC: agricultural risk coverage; ACRE: average crop revenue election; LDP: loan deficiency payments; MLAP: marketing loan assistance payment; MLG: marketing loan gain

Table 6 – The dumping rate of US rice exports from 2005 to 2016

\$ million	2005-06	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rice specific subsidies												
Direct payments	424	401,8	317,9	402	416,7	418,1	394,1	323,7	406,1	377,1	2,5	
PFCP	1,6									104		
CCP	10,6	85,6	54,1									
PLC												393,6
ACRE								2,2	0,5			
LDP	45,3	49,3										
MLAP	2											
Miscellaneous	0,8	0,5	1,3	0,9	1,4							
CCC total	484,3	537,2	373,3	402,9	418,1	418,1	394,1	325,9	406,6	481,1	2,5	393,6
Insurance subsid	16,7	21,4	15,4	18,9	17	30,9	43,6	50,2	56,6	73,7	41,4	55,9
Irrigation subsid	148,8	144,1	139,7	135,3	147	159,9	173,7	188,9	205,3	223,1	223,1	223,1
Total spe subs	649,8	702,7	528,4	557,1	582,1	608,9	611,4	565	668,5	777,9	267	672,6
From the farm price to the product-specific (PS) administered price at the farm gate												
Production: Mt	7,101	6,267	6,288	6,546	7,133	7,593	5,866	6,348	6,116	7,106	6,133	7,117
Product* value: \$M	1742	1991	2601	3603	3209	3183	2737	3067	3182	3076	2422	2371
Farm price	240,07	309,27	403,82	522,90	443,81	406,59	457,13	475,56	506,13	419,04	384,23	330,69
PS subsidy/t	91,51	112,13	84,03	85,11	81,61	80,19	104,23	89	109,30	109,47	43,53	94,51
PS adm price farm gate	331,58	421,4	487,85	608,01	525,42	486,78	561,36	564,56	615,43	528,51	427,76	425,2
Calculation of the non-product-specific (NFS) subsidies												
All agr prod* value: \$M	240898	240624	288546	314351	291675	321237	365902	401433	403553	424216	376940	356534
% rice value	0,72	0,83	0,90	1,15	1,10	0,99	0,75	0,76	0,79	0,73	0,64	0,67
All NPS subsidies	17490	18841	18294	19148	17348	16936	18933	22464	18986	20439	20569	18003
Rice NPS subsidies	125,9	156,4	164,6	220,2	190,8	167,7	142	170,7	150	149,2	131,6	120,6
Rice NPS subsidy,t	17,73	24,96	26,18	33,64	26,75	22,09	24,21	26,89	24,53	21	21,46	16,95
Calculation of all PS and NPS subsidies and administered price at farm gate												
All subsidies	775,7	859,1	693	777,3	772,9	776,6	753,4	735,7	818,5	927,1	398,6	793,2
All subsidies/t	109,24	137,08	110,21	118,74	108,36	102,28	128,44	115,89	133,83	130,47	64,99	111,45
Admi price at farm gate	349,31	446,35	514,03	641,64	552,17	508,87	585,57	591,45	639,96	549,51	449,22	442,14
Comparing the administered price at FOB level with the FOB price to assess the dumping rate												
Exports: Mt	3,850	3,295	3,014	3,262	2,976	3,840	3,254	3,291	3,277	2,924	3,367	3,365
Exports: \$M	1272,3	1265,3	1387,4	2198,1	2166,9	2323,4	2099,2	2040,5	2172,4	1960,2	1989,9	1796,8
FOB price/t	330,47	384	460,32	673,85	728,13	605,05	645,11	620,02	662,92	670,38	591	533,97
Gap FOB-farm price	90,37	74,71	56,49	150,92	284,23	198,47	188,07	144,37	156,84	251,32	206,79	203,26
Admin price at FOB	439,68	521,06	570,52	792,56	836,4	707,34	773,64	735,82	796,8	800,83	656,01	645,4
Dumping rate: %	33,05	35,69	23,94	17,62	14,87	16,91	19,92	18,68	20,20	19,46	11	20,87

PFCP: production flexibility contract payment; CCP: counter-cyclical payment; PLC: price loss coverage; ACRE: average crop revenue election; LDP: loan deficiency payments; MLAP: marketing loan assistance payment; MLG: marketing loan gain



Table 7 – The dumping rate of US soybeans exports from 2005 to 2016

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Soybeans specific subsidies												
Direct payments	595.7	563.8	445	546.1	590.3	543.1	530.5	433.2	538.4	532.8	2.1	
CCP	146.3	-146.2										320.4
ARC												
ACRE									4	58.3		
LDP	286.3	22	45.8									
Storage payments			0.3									
Miscellaneous	0.7	13.5	1.4	-0.8	0.3	0.5			331	-1.8		
CCC payments	1029	453.1	492.5	545.3	590.6	543.6	530.5	433.2	873.4	589.3	2.1	320.4
Insurance subsidies	297.8	753.5	600.1	1318.1	366.5	1072.2	2036.1	2834.1	2041.5	1720.8	1308.8	1164.2
Irrigation subsidies	102.2	104.1	106.1	108.1	115.5	123.5	132	141	150.8	161.1	161.1	161.1
All specific subsidies	1429	1310.7	1198.7	1971.5	1072.6	1739.3	2698.6	3408.3	3065.7	2471.2	1472	1645.7
From the farm price to the product-specific (PS) administered price at the farm gate												
Product* Mt	83,497	87,008	72,856	80,749	91,417	90,601	84,205	82,790	91,390	106,878	106,848	117,217
Product* value	17289	20468	26974	29458	32145	37547	38498	42723	43583	39475	35192	40944
Farm price	207.97	236.26	371.11	366.33	352.37	415.20	459.30	529.11	477.67	371.11	328.86	349.07
PS subsidy/t	17.11	15.06	16.45	24.42	11.73	19.20	32.05	41.17	33.55	23.12	13.78	14.04
PS adm price farm gate	225.08	251.32	387.56	390.75	364.1	434.4	491.35	570.28	511.22	394.23	342.64	363.11
Calculation of the non-product-specific (NFS) subsidies												
All agr prod* value: \$M	240898	240624	288546	314351	291675	321237	365902	401433	403553	424216	376940	356534
% soy value	7.17	8.51	9.35	9.37	11.02	11.69	10.52	10.64	10.80	9.31	9.34	11.48
All NPS subsidies	17490	18841	18294	19148	17348	16936	18933	22464	18986	20439	20569	18003
Soybean NPS subsidi	1254	1603.4	1710.5	1794.2	1911.7	1979.8	1991.8	2390.2	2050.5	1902.9	1921.1	2066.7
Calculation of all PS and NPS subsidies and administered price at farm gate												
All subsidies	2683	2914.1	2909.2	3765.7	2984.3	3719.1	4690.4	5798.5	5116.2	4374.1	3393.1	3712.4
All subsidies/t	32.13	33.49	39.93	46.63	32.64	41.05	55.70	70.04	55.98	40.93	31.76	31.67
Adm price at farm gate	240.1	269.75	411.04	412.96	385.01	456.25	515	599.15	533.65	412.04	360.62	380.74
Comparing the administered price at FOB level with the FOB price to assess the dumping rate												
Exports: Mt	25,508	28,180	29,777	33,816	40,372	42,319	34,376	43,623	39,364	49,567	48,148	57,715
Exports: \$M	6273.6	6935.6	9992.1	15340.9	16423.2	18610.8	17590.9	24770.9	21570.2	23866.1	18875	22820
FOB price/t	245.95	246.12	335.57	456.31	406.80	439.78	511.72	567.84	547.96	481.49	392.02	395.39
Gap FOB-farm prices	37.98	9.86	-35.54	89.98	54.43	24.58	52.42	38.73	70.29	110.38	63.16	46.32
Admin price at FOB	278.08	279.61	375.5	502.94	439.44	480.83	567.42	637.88	603.94	522.42	423.78	427.06
Dumping rate: %	13.06	13.61	11.90	10.22	8.02	9.33	10.88	12.33	10.22	8.50	81.02	8.01

CCP: counter-cyclical payment; ARC: agricultural risk coverage; ACRE: average crop revenue election; LDP: loan deficiency payments

Table 8 – The dumping rate of US cotton exports from 2005 to 2016

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cotton specific subsidies												
Direct payments	608.1	575.4	454.5	573.5	596.9	588.9	555.8	464.8	569.5	526.2	3.3	
PFCP		-0.4								728		
ACRE									4.3	3.5	64.4	
LDP	381.9	250.2	105.7		131.2	4.4			10.3	0.4	173.3	120.3
MLG											187.1	226.5
CCP	1421	1410.4	1281.3	267.2	727.8	889.9	82.6	1.1	0.9	0.2		
Transition										0.5	484.3	24
Adjustment					74.7	75.6	77.1	60.2	49.5	48.4	49	49.4
Miscellaneous	383.3	348.3	3.9					2.5			61.6	29.9
CCC total	2794.3	2583.9	1845.4	840.7	1530.6	1558.8	715.5	528.6	634.5	1307.2	1023	431.1
Insurance subsid	234.7	365.8	197.1	342.7	230.4	321	1037.1	1079.4	599.8	605.7	460.4	456.8
Irrigation subsid	112.5	104	96.3	89	88.5	88.1	87.7	87.2	86.88	86.3	86.3	86.3
Total spe subs	3141.5	3053.7	2138.8	1272.4	1849.5	1967.9	1840.3	1695.2	1321.18	1999.2	1569.7	974.2
From the farm price to the product-specific (PS) administered price at the farm gate												
Product* Mt	5,20144	4,70023	4,1817	2,79004	2,65355	3,94112	3,3906	3,76956	2,81059	3,55306	2,80598	3,51879
Product* value	5695	5013	5653	3021	3788	7348	6986	6292	4668	5147	3989	5672
Farm price	1095.70	1067.04	1347.02	1091.29	1428.59	1865.11	2061.32	1668.90	1818.81	1424.18	1387.60	1525.39
PS subsidy/tonne	603.97	649.69	511.47	456.05	696.99	499.33	542.77	449.71	470.07	562.67	559.41	276.86
PS adm price farm gate	1699.67	1716.73	1858.49	1547.34	2125.58	2364.44	2604.09	2118.61	2288.88	1986.85	1947.01	1802.25
Calculation of the non-product-specific (NFS) subsidies												
All agr prod* value: \$M	240898	240624	288546	314351	291675	321237	365902	401433	403553	424216	376940	356534
% cotton value	2.36	2.08	1.96	0.96	1.30	2.29	1.91	1.57	1.16	1.21	1.06	1.59
All NPS subsidies	17490	18841	18294	19148	17348	16936	18933	22464	18986	20439	20569	18003
NPS subsid/cotton	412.8	391.9	358.6	183.8	225.5	387.8	361.63	352.7	220.2	247.3	218	286.2
* per tonne	79.36	83.38	85.75	65.88	84.98	98.40	106.66	93.57	78.35	69.60	77.69	81.33
Calculation of all PS and NPS subsidies and administered price at farm gate												
All subsidies to cotton	3554.3	3445.6	2497.4	1456.2	2075	2355.7	2201.93	2047.9	1541.38	2246.5	1787.7	1260.4
* per tonne	683.33	733.07	597.22	521.93	781.97	597.72	649.42	543.27	548.42	632.27	637.10	358.19
Admi price at farm gate	1779.03	1800.11	1944.24	1613.22	2210.56	2462.83	2710.74	2212.17	2367.23	2056.45	2024.7	1883.58
Comparing the administered price at FOB level with the FOB price to assess the dumping rate												
Exports: Mt	3,397	3,506	3,258	3,011	2,551	2,956	2,760	2,752	2,790	2,167	2,396	2,469
Exports: \$M	3920.2	4500.6	4578.2	4829.5	3383.7	5733.7	8335.7	6225.4	5592	4396.4	3888.7	3958.7
FOB price/t	1154.02	1283.69	1405.22	1603.95	1326.42	1939.68	3020.18	2262.14	2004.30	2028.80	1622.97	1603.36
Gap FOB-farm prices	58.32	216.65	58.2	512.66	-102.17	74.57	958.86	593.24	185.49	604.62	235.37	77.97
Export subsidies: \$M	276.5	9.4										
Admin price at FOB	2113.85	2026.16	2002.44	2125.88	2108.39	2537.4	3669.6	2805.41	2552.72	2661.07	2260.07	1961.55
Dumping rate: %	83.17	57.84	42.50	32.54	58.95	30.82	21.50	24.02	27.36	31.16	39.26	22.34

PFCP: production flexibility contract payment; ACRE: average crop revenue election; LDP: loan deficiency payments; MLG: marketing loan gain; CCP: counter-cyclical payment

Let us underscore that the US cotton has benefitted of explicit export subsidies in 2005 and 2006, before being deleted given the WTO Appellate Body's ruling of 3 March 2005.

### III – Additional comparisons of IATP and SOL methodologies

One of the limitation of the IATP methodology based on annual costs of production per crop is that it relies on data too sophisticated to be replicable in other countries. Even in the EU the Farm Accountancy Data Network (FADN) does not produce such detailed production costs per crop. Thus it gives production costs for all cereals together and for dairy and beef, and not for all years<sup>18</sup>.

Tables 9 to 12 show the much lower ratio of subsidies on farm prices for IATP than for SOL, differentiating between product-specific (PS) subsidies per tonne and all subsidies per tonne for SOL. The prices (per bushel or cwt or lb) are available in the USDA production costs tables used by IATP.

Table 9 shows that SOL ratio of PS/t of wheat was on average 3.2 times higher than that of IATP from 2005 to 2015 and that SOL ratio of all subsidies/t was 4.3 times higher.

**Table 9 – Ratio of subsidies on wheat price for IATP and SOL**

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IATP ratio of subsidies on wheat price												
Wheat price/bu	3.44	3.17	4.12	5.25	7.86	4.75	7.35	7.58	7.09	6.44	5.12	3.93
Wheat subsidies/bu	0.06	0.30	0.24	0.37	0.73	0.37	0.57	0.50	0.61	0.45	0.39	
% subsidy/price	1.74	9.46	5.83	7.05	13.18	7.79	7.76	6.60	8.60	6.998	7.62	
SOL ratio of subsidies on wheat price												
Wheat price/t	125.66	156.53	238.10	249.12	178.94	209.44	266.02	285.50	252.43	220.09	179.68	141.46
PS subsidy/t	29.52	34.18	26.69	35.38	40.23	34.72	53.59	50.27	48.90	47.07	17.14	19.38
% PS subsidies/price	23.49	21.84	11.21	14.20	22.48	16.58	20.15	17.61	19.37	21.39	9.54	13.70
All subsidies/t	38.63	46.43	41.80	50.20	50.76	46.20	67.24	66.13	60.73	57.48	26.89	26.68
% all subsidies/price	30.74	29.66	17.56	20.15	28.37	22.06	25.28	23.16	24.06	26.12	14.97	18.86
Ratio SOL PS/IATP	13.5	2.31	1.92	2.01	1.71	2.13	2.60	2.67	2.25	3.06	1.25	
Ratio SOL all sub/IATP	17.67	3.14	3.01	2.86	2.15	2.83	3.26	3.51	2.80	3.73	1.96	

Table 10 shows that SOL ratio of PS/t of corn was on average 9.8 times higher than that of IATP from 2005 to 2015 (deleting 2007 given the negative figures for IATP) and that SOL ratio of all subsidies/t was 12.9 times higher.

**Table 10 – Ratio of subsidies on corn price for IATP and SOL**

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IATP ratio of subsidies on corn price												
Corn price/bu	1.74	2.54	3.27	4.36	3.59	4.33	5.73	6.79	4.61	3.54	3.66	3.29
Corn subsidies/bu	0.40	0.01	-0.02	0.18	0.17	0.14	0.24	0.26	0.22	0.16	0.17	
% subsidy/price	22.99	0.39	-0.06	4.13	4.74	3.23	4.19	3.83	4.77	4.52	4.64	
SOL ratio of subsidies on corn price												
Corn price/t	78.7	119.7	165.4	159.8	139.8	203.9	244.9	271.4	175.6	145.7	141.7	133.9
PS subsidy/t	24.81	37.43	15.95	16.85	13.84	12.85	19.38	26.07	17.38	14.99	8.23	16.53
% PS subsidies/price	31.52	31.27	9.64	10.54	9.90	6.30	7.91	9.61	9.90	10.29	5.81	12.35
All subsidies/t	30.52	46.82	26.41	26.67	22.22	23.65	32.11	41.26	25.67	22.05	16.03	23.31
% all subsidies/price	38.78	39.11	15.97	16.69	15.89	11.60	13.11	15.20	14.62	15.13	11.31	17.41
Ratio SOL PS/IATP	1.37	80.18	-160.67	2.55	2.09	1.95	1.89	2.51	2.08	2.28	1.25	
Ratio SOL all sub/IATP	1.69	100.28	-266.17	4.04	3.35	3.59	3.13	3.97	3.06	3.35	2.44	

Table 11 shows that SOL ratio of PS/t of rice was on average 14.6 times higher than that of IATP from 2005 to 2015 and SOL ratio of all subsidies/t was 19 times higher.

**Table 11 – Ratio of subsidies on rice price for IATP and SOL**

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IATP ratio of subsidies on rice price												
Rice price/cwt	6.59	8.62	10.26	17.88	14.49	11.30	14.77	14.95	16.81	14.05	13.09	11.03
Rice subsidies/cwt	0.50	0.09	0.04	0.14	0.22	0.25	0.30	0.24	0.24	0.28	0.24	
% subsidy/price	7.59	10.44	0.39	0.78	1.525	2.21	2.03	1.61	1.43	1.99	1.83	
SOL ratio of subsidies on rice price												
Corn price/t	240.07	309.27	403.82	522.90	443.81	406.59	457.13	475.56	506.13	419.04	384.23	330.69
PS subsidy/t	91.51	112.13	84.03	85.11	81.61	80.19	104.23	89	109.30	109.47	43.53	94.51
% PS subsidies/price	38.12	36.26	20.81	16.28	18.39	19.72	22.80	18.71	21.59	26.12	11.33	28.58
All subsidies/t	109.24	137.08	110.21	118.74	108.36	102.28	128.44	115.89	133.83	130.47	64.99	111.45
% all subsidies/price	45.50	44.32	27.29	22.71	24.42	25.16	28.10	24.37	26.44	31.14	16.91	33.70
Ratio SOL PS sub/IATP	5.02	3.47	53.36	20.87	12.06	8.92	11.23	11.62	15.10	13.13	6.19	
Ratio SOL all sub/IATP	5.99	4.25	69.97	29.12	16.01	11.38	13.84	15.14	18.49	15.65	9.24	

<sup>18</sup> [http://ec.europa.eu/agriculture/rica/publications\\_en.cfm](http://ec.europa.eu/agriculture/rica/publications_en.cfm)

Table 12 shows that SOL ratio of PS/t of soybeans was on average twice higher than that of IATP from 2007 to 2015 (deleting 2005 and 2006 given the negative ratios for IATP) and that SOL ratio of all subsidies/t was 4.2 times higher.

Table 12 – Ratio of subsidies on soybeans price for IATP and SOL

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IATP ratio of subsidies on soybeans price												
Soybeans price/bu	5.68	5.54	7.95	10.48	9.30	9.56	11.94	14.21	12.56	10.37	8.50	9.03
Soybeans subsidies/bu	-0.03	-0.02	0.06	0.50	0.36	0.32	0.52	0.51	0.46	0.36	0.33	
% subsidy/price	-0.53	-0.36	0.75	4.77	3.87	3.35	4.36	3.59	3.66	3.47	3.88	
SOL ratio of subsidies on soybeans price												
Soybeans price/t	207.97	236.26	371.11	366.33	352.37	415.20	459.30	529.11	477.67	371.11	328.86	349.07
PS subsidy/t	17.11	15.06	16.45	24.42	11.73	19.20	32.05	41.17	33.55	23.12	13.78	14.04
% PS subsidies/price	8.23	6.37	4.43	6.67	3.33	4.62	6.98	7.78	7.02	6.23	4.19	4.02
All subsidies/t	32.13	33.49	39.93	46.63	32.64	41.05	55.70	70.04	55.98	40.93	31.76	31.67
% all subsidies/price	15.45	14.18	10.76	12.73	9.26	9.89	12.13	13.24	11.72	11.03	9.66	9.07
Ratio SOL PS sub/IATP	-15.53	-17.69	5.91	1.40	0.86	1.38	1.60	2.17	1.92	1.80	1.08	
Ratio SOL all sub/IATP	-29.15	-39.39	14.35	2.67	2.39	2.95	2.78	3.69	3.20	3.18	2.492	

As IATP does not provide the government subsidies per pound of cotton, table 13 cannot compare the SOL ratios of PS/t and all subsidies/t with those of IATP. It shows only the huge level, for SOL, of the ratios of PS/t and all subsidies/t to the cotton farm price.

Table 13 – Ratio of subsidies on cotton prices for IATP and SOL

\$ million	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IATP ratio of subsidies on cotton price												
Cotton price/lb	0.48	0.47	0.57	0.60	0.59	0.82	0.96	0.71	0.82	0.68	0.61	0.67
Cotton subsidies/lb												
% subsidy/price												
SOL ratio of subsidies on cotton price												
Cotton price/t	1095.70	1067.04	1347.02	1091.29	1428.59	1865.11	2061.32	1668.90	1818.81	1424.18	1387.60	1525.39
PS subsidy/t	603.97	649.69	511.47	456.05	696.99	499.33	542.77	449.71	470.07	562.67	559.41	276.86
% PS subsidies/price	55.12	60.89	37.97	41.79	48.79	26.77	26.33	26.95	25.85	39.51	40.31	18.15
All subsidies/t	683.33	733.07	597.22	521.93	781.97	597.72	649.42	543.27	548.42	632.27	637.10	358.19
% all subsidies/price	62.36	68.70	44.34	47.83	54.74	32.05	31.51	32.56	30.15	44.40	45.91	23.48
Ratio SOL PS sub/IATP												
Ratio SOL all sub/IATP												

### **Conclusion: a plea to incorporate the NPS subsidies in assessing dumping**

Clearly the comparisons between SOL and IATP methodologies in assessing dumping should lead IATP to extend the list of the subsidies included in its dumping rates to make them at least positive in all years, otherwise it would contradict its undeniable commitment not to harm DCs and other competitors of developed countries. Furthermore we cannot take at face value the USDA production costs of grains as several of their operating costs incorporate subsidies, particularly on energy (fuels and electricity) to make fertilizers, chemicals, fuel, and to interests on loans. Without forgetting the subsidized farm investments.

We can argue that SOL plea to take into account the NPS subsidies is all the more justified that the WTO rules – as defined in article 2 of the Agreement on subsidies and countervailing measures (ASCM) – are highly biased against DCs as they take only into account the current sectoral (here agricultural) and product-specific subsidies. That is why SOL (previously Solidarité) had proposed already during the WTO Ministerial of Hong-Kong in December 2005 to put in a "gold box" all types of past and present non-agricultural supports and the past agricultural supports<sup>19</sup>.

<sup>19</sup> *The green box: a black box which hides the gold box*, Solidarité, December 2005, [https://www.wto.org/english/forums\\_e/ngo\\_e/posp55\\_e.htm](https://www.wto.org/english/forums_e/ngo_e/posp55_e.htm); <https://www.sol-asso.fr/articles-de-2005/>. It is also available in a broader "Analysis of the main controversies on domestic agricultural supports" of July 25, 2017 (<https://www.sol-asso.fr/analyses-politiques-agricoles-jacques-b-2/>).

These present and past non-agricultural supports have reduced largely the unit production cost of agri-food products in rich countries vis-à-vis those in DCs, particularly on the following items (not an exhaustive list):

- efficient transport and information infrastructures (including immaterial ones);
- general education and research;
- health and pensions of farmers financed by society at large, at least in the EU;
- wealthy consumers with an ever-increasing purchasing power, able to pay fair prices to farmers, even if these prices are too low; contrary to the situation of poor DCs where the consumers' purchasing power is very low and is often reducing;
- low interest rates, particularly on agriculture, low inflation rates and political management of their exchange rates;
- high import protection on agricultural products and infant industries for decades;
- democratic States able to enforce commercial contracts, to fight corruption, particularly in collecting tariffs and preventing the illicit extortion of money by the police and army, etc.
- plundering of DCs resources during the slave and colonial periods;
- neo-colonial exploitation ever since through the DCs indebtedness vis-à-vis the developed countries and the international institutions under their control, and through unfair free-trade agreements.

All in all, the present higher competitiveness of Western agri-food products relatively to that of DCs results much less from the gap in the current agricultural subsidies (even more when assessed per capita or agricultural working unit) – the only ones considered by the WTO – than from the current and past non-agricultural supports and past agricultural supports, for decades and even centuries, particularly through a huge import protection and explicit export subsidies.

It is why, even if the WTO would decide stricter criteria for the green box, the developed countries would still be able to increase their gold box subsidies to maintain their farmers' competitiveness. For instance, instead of maintaining specific agricultural institutions to sustain farmers, they would have just to integrate these institutions in broader institutions so that the specific nature of the subsidies would disappear.

Another example is that of the public financing of transport infrastructures which are not specific to agricultural products but are highly beneficial to them: *"The Mississippi River is a vital artery for grain shippers moving product from the Midwest to the Gulf of Mexico. For many years, the grain industry has been vocal about the need to update some of the river's nearly 100-year-old locks and dams... "We need to make more investment to maintain what we have and to upgrade it," said Mike Toohey, president of the Waterways Council, Inc. "The world is coming to the breadbasket of America for its food stocks and we need to be ready"... Another reason to invest in Mississippi River infrastructure is the expected increase in traffic from the expansion of the Panama Canal... and will lead to a 12% decrease in the cost of transporting grain from the U.S. Corn belt to Asia... The upgrades planned for U.S. waterways and railways will help preserve one of the United States' most competitive advantages to foreign buyers — affordable transportation costs... Congress' passage of the Waterways Resources Reform and Development Act [in 2014] recognized the importance of maintaining vital waterways like the Mississippi River"*<sup>20</sup>.

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<sup>20</sup> <http://www.feedandgrain.com/magazine/u.s.-invests-in-key-rail-and-river-infrastructure>