

The Economics of LLP Thresholds

Nicholas Kalaitzandonakes
University of Missouri

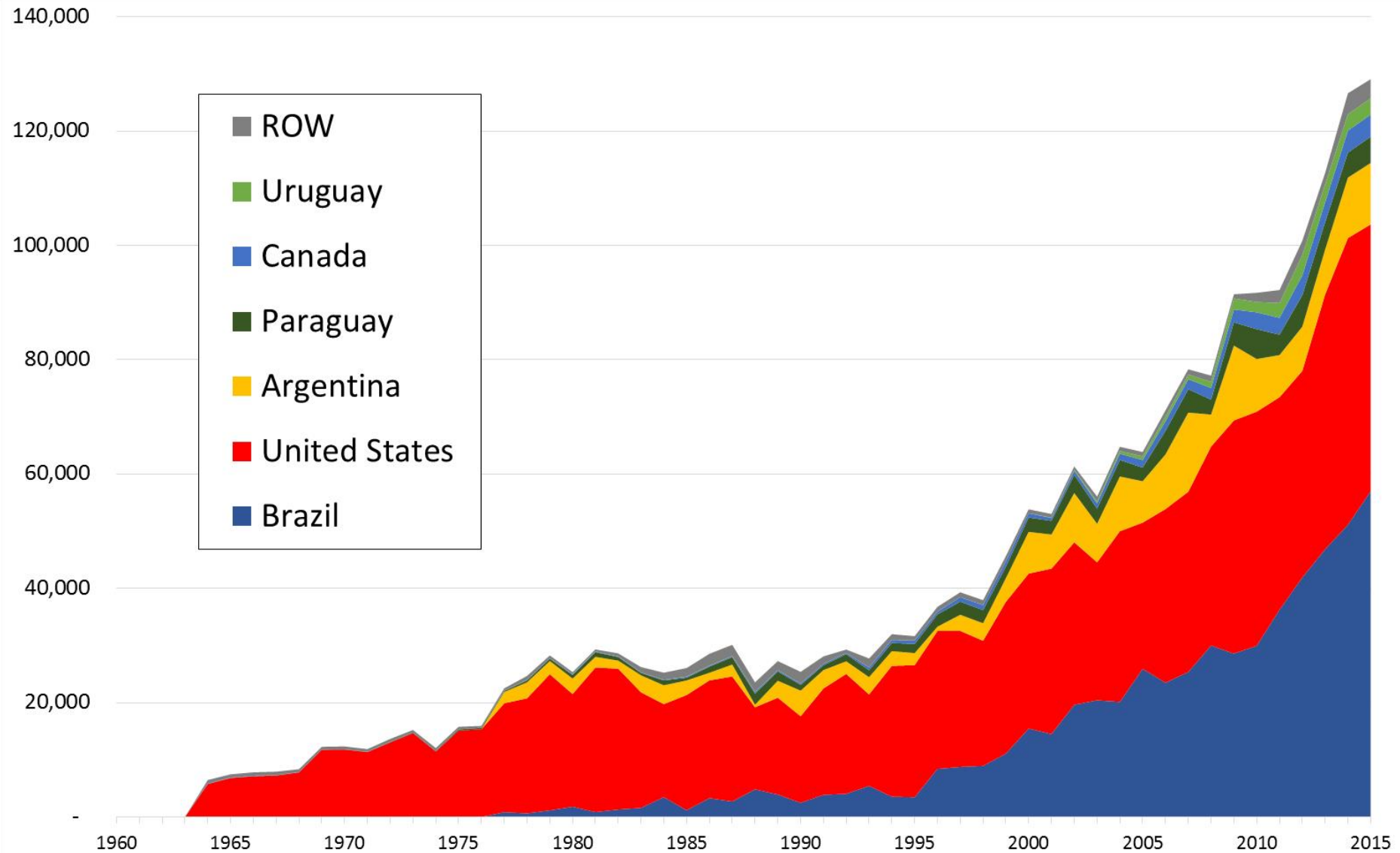
EMAC

Economics and Management of Agrobiotechnology Center

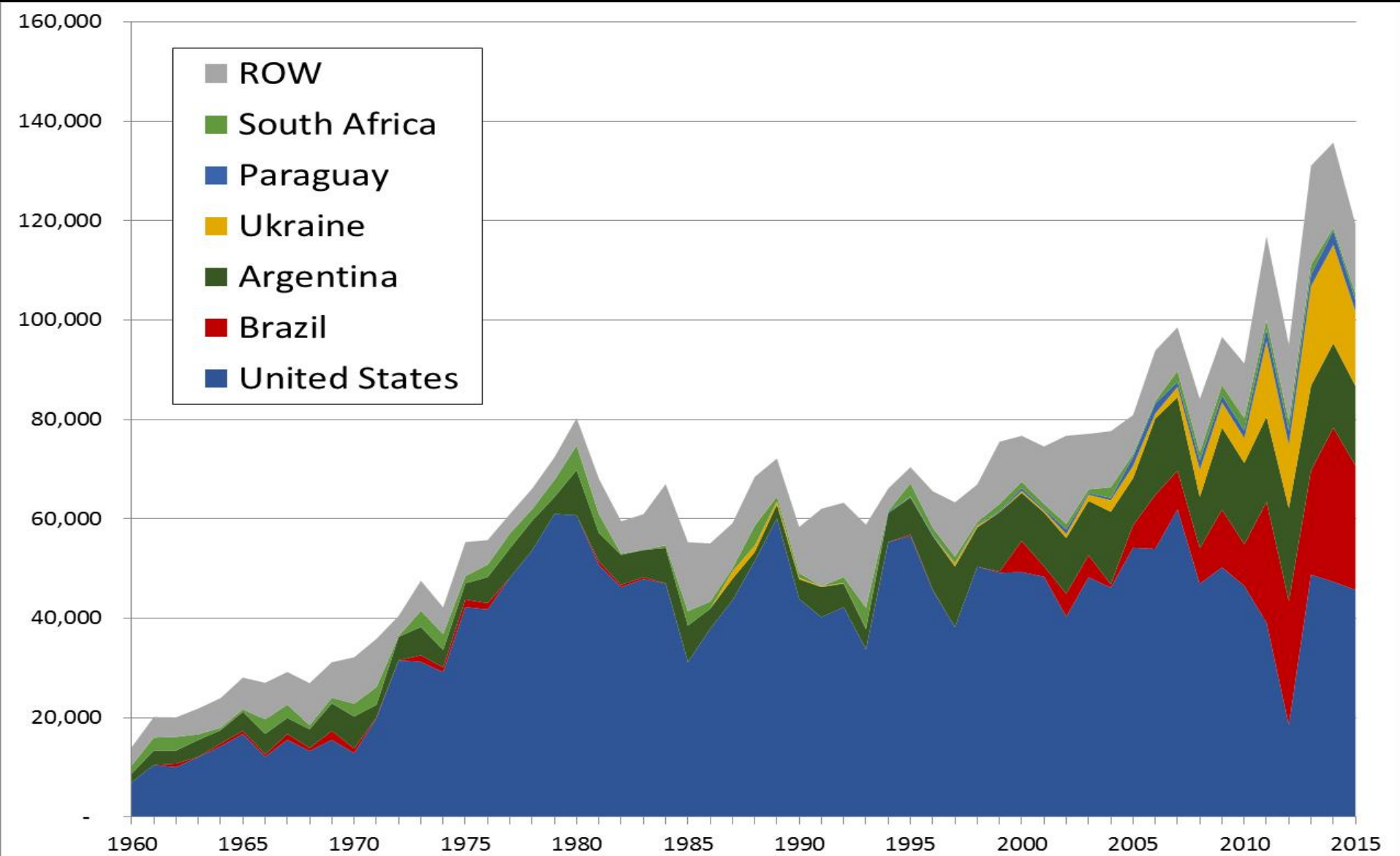
<http://www.emac.missouri.edu>

LLP is a trade problem

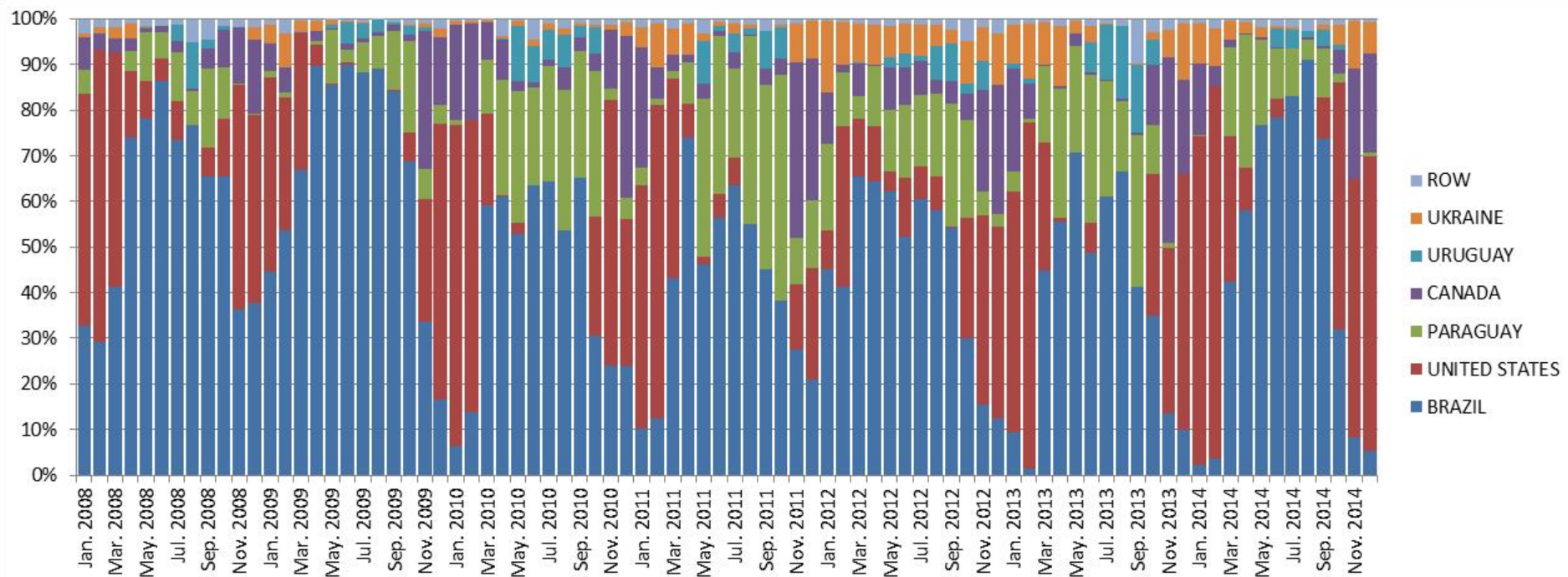
Soybean exports by origin



Corn exports by origin

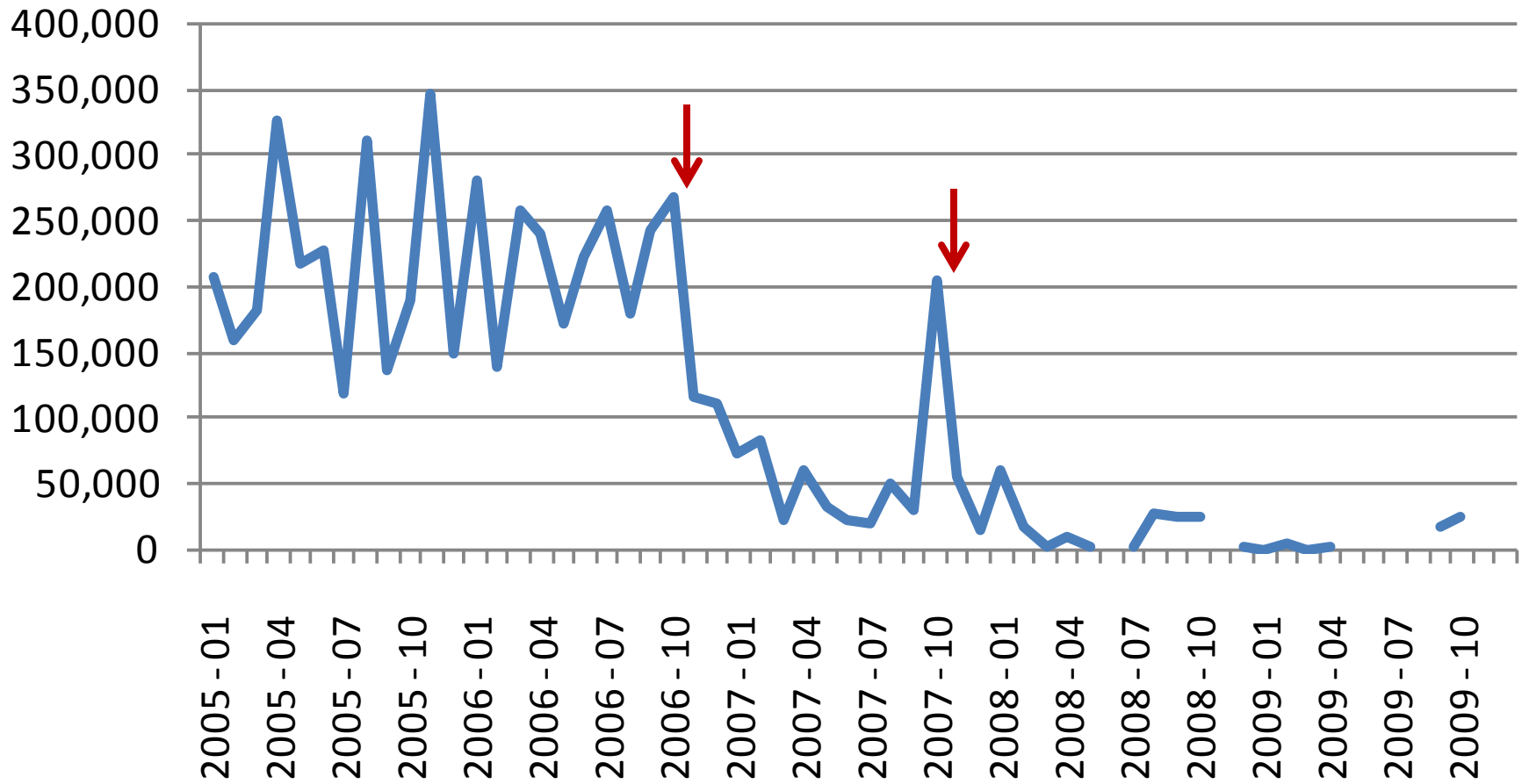


EU soybean imports by origin



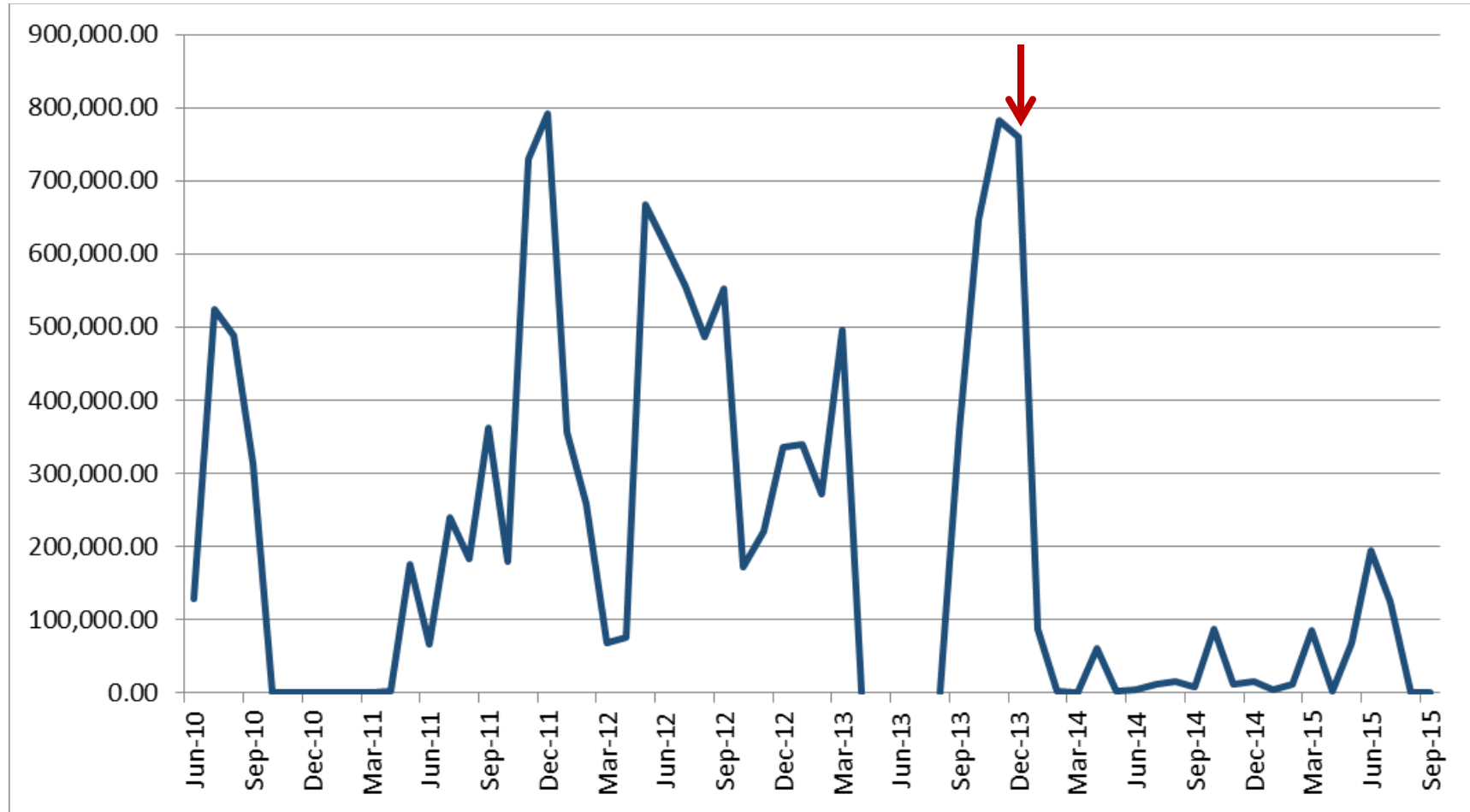
LLP events mean (bilateral) trade disruptions

EU CGF Imports from US (MT)



LLP events mean (bilateral) trade disruptions

China Corn Monthly Imports from the US (MT)



The potential economic impacts of LLP and zero trade

Asynchronous China/US –DDGS market

	Price	Agg S	Agg D	Welfare	Welfare Change
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EU27	-1.9	-0.6	2.5	0.5	9,811
BRZ	-1.9	-0.5	0.6	0.4	1
ARG	-1.8	-1.3	0.7	-0.2	(101)
USA	-1.7	-0.5	0.8	-0.3	(73,584)
CHN	17.1	2.6	-6.8	-9.8	(214,402)
PAR	0.0	0.0	0.0	0.0	-
CAN	-1.3	-0.9	0.7	0.0	(318)
MEX	-1.8	-0.4	0.6	1.3	6,744
BUR	-2.0	-0.7	1.3	0.8	1
WBA	-2.0	-0.9	0.9	1.9	75
REU	-1.9	-0.7	0.9	1.9	306
RUB	-2.0	-0.9	1.0	0.8	1
UKR	-2.0	-0.7	0.7	0.6	1
CAM	-1.9	-0.9	0.6	1.3	1,214
VEN	-1.9	-0.8	0.6	0.5	1
CHL	-1.9	-0.7	0.7	1.5	62
URU	-1.9	-1.1	0.7	1.5	30
COL	-0.6	-0.3	0.2	0.2	0
RSA	-1.9	-0.9	0.6	1.3	659
IND	-2.0	-1.1	0.6	0.7	1
JAP	-2.0	-0.9	0.4	0.8	2,778
TLD	-2.1	-0.6	0.6	1.2	1,507
SKR	-2.0	-0.8	0.7	1.4	5,361
INDO	-2.1	-0.8	0.6	1.3	1,445
MLAY	-2.1	-0.9	0.6	1.3	335
PHIL	-2.1	-0.9	0.8	1.6	391
ANZ	-2.0	-0.9	0.7	0.7	1
MOR	-1.9	-0.4	0.5	1.1	357
TUN	-2.0	-0.9	0.4	0.9	176
ALG	-1.9	-0.9	0.4	0.9	176
EGY	-2.0	-0.7	0.6	1.1	633
TUR	-2.0	-0.9	0.8	1.7	2,890
ISR	-2.0	-1.3	0.9	1.8	699
LDC	-2.1	-0.8	0.8	1.7	213
AFR	-1.9	-0.5	0.6	1.0	4
C&P	-1.9	-0.9	0.7	1.5	393
MIDE	-2.0	-0.9	0.7	1.4	455
ROW	-2.1	-0.9	0.7	1.4	1,828

	Price	Agg S	Agg D	Welfare	Welfare Change
USA	-1.7	-0.5	0.8	-0.3	(73,584)
CHN	17.1	2.6	-6.8	-9.8	(214,402)
PAR	0.0	0.0	0.0	0.0	-

TOTAL CHANGE IN WELFARE
(249,862)

Asynchronous Japan-US; Corn market

	Price	Agg S	Agg D	Welfare	Welfare Change
EU27	(0.22)	(0.02)	0.05	0.01	8,268
BRZ	(0.74)	(0.30)	0.24	(0.10)	(24,074)
ARG	0.75	0.37	(0.11)	0.17	28,983
USA	(0.10)	(0.03)	0.01	(0.00)	(7,302)
CHN	0.96	0.03	(0.02)	0.00	17,560
PAR	(0.25)	(0.11)	0.06	(0.12)	(1,392)
CAN	1.35	0.22	(0.26)	0.02	3,560
MEX	(3.70)	(0.75)	0.44	0.19	94,392
BUR	1.02	0.06	(0.10)	(0.06)	(3)
WBA	0.28	0.05	(0.05)	0.02	1,425
REU	0.37	0.05	(0.07)	(0.03)	(417)
RUB	0.18	0.06	(0.04)	0.02	2,226
UKR	1.45	0.46	(0.40)	0.45	80,492
CAM	(0.78)	(0.07)	0.12	0.05	5,759
VEN	(1.64)	(0.15)	0.22	0.19	9,890
CHL	(1.14)	(0.11)	0.17	0.11	4,328
URU	(0.86)	(0.08)	0.14	0.01	132
COL	(1.27)	(0.13)	0.20	(0.02)	(290)
RSA	(1.88)	(0.17)	0.27	0.20	31,320
IND	1.02	0.20	(0.21)	0.04	12,597
JAP	12.45	1.38	(0.80)	(1.52)	(413,854)
TLD	0.56	0.07	(0.06)	(0.00)	(398)
SKR	0.56	0.10	(0.06)	(0.11)	(13,343)
INDO	0.53	0.13	(0.08)	(0.03)	(4,474)
MLAY	0.64	0.13	(0.15)	(0.29)	(5,501)
PHIL	0.57	0.11	(0.10)	(0.01)	(1,347)
ANZ	1.22	0.26	(0.15)	0.01	75
MOR	(1.38)	(0.32)	0.40	0.67	7,440
TUN	(1.38)	(0.32)	0.42	0.83	3,359
ALG	(1.38)	(0.26)	0.13	0.27	13,552
EGY	0.92	0.21	(0.27)	(0.21)	(18,879)
TUR	1.00	0.23	(0.29)	(0.05)	(2,582)
ISR	0.90	0.16	(0.24)	(0.47)	(3,800)
LDC	1.62	0.12	(0.19)	0.01	5,023
AFR	(0.53)	(0.04)	0.05	(0.00)	(3,529)
C&P	(1.64)	(0.10)	0.15	0.20	9,724
MIDE	0.90	0.07	(0.14)	(0.20)	(23,849)
ROW	1.90	0.20	(0.32)	0.01	2,723

	Price	Agg S	Agg D	Welfare	Welfare Change
JAP	12.45	1.38	(0.80)	(1.52)	(413,854)
TLD	0.56	0.07	(0.06)	(0.00)	(398)
SKR	0.56	0.10	(0.06)	(0.11)	(13,343)

TOTAL CHANGE IN WELFARE
(182,205)

Asynchronous Japan, S Korea/US– Corn market

	Price	Agg S	Agg D	Welfare	Welfare Change
EU27	0.88	0.06	(0.20)	(0.02)	(33,201)
BRZ	0.53	0.22	(0.17)	0.07	17,639
ARG	1.98	0.99	(0.29)	0.47	77,578
USA	(2.54)	(1.01)	0.34	(0.04)	(186,360)
CHN	(5.51)	0.44	(0.28)	0.01	315,106
PAR	0.49	0.21	(0.13)	0.23	2,760
CAN	(1.57)	(0.26)	0.30	(0.02)	(3,858)
MEX	(1.55)	(0.32)	0.18	0.08	39,232
BUR	2.12	0.13	(0.21)	(0.12)	(5)
WBA	1.33	0.25	(0.25)	0.09	6,760
REU	1.49	0.21	(0.28)	(0.10)	(1,678)
RUB	1.24	0.38	(0.29)	0.14	15,270
UKR	2.50	0.79	(0.68)	0.77	138,997
CAM	(0.97)	(0.09)	0.14	0.06	7,130
VEN	(0.80)	(0.07)	0.10	0.09	4,612
CHL	(0.34)	(0.03)	0.05	0.03	1,279
URU	(0.08)	(0.01)	0.01	0.00	12
COL	(0.46)	(0.05)	0.07	(0.01)	(106)
RSA	(1.02)	(0.09)	0.15	0.11	16,995
IND	(1.47)	(0.30)	0.31	(0.06)	(17,809)
JAP	17.95	1.42	(0.74)	(1.97)	(539,213)
TLD	(2.05)	(0.27)	0.21	0.01	1,521
SKR	14.45	1.64	(0.91)	(2.34)	(279,723)
INDO	(2.10)	(0.52)	0.32	0.13	18,073
MLAY	(1.96)	(0.40)	0.47	0.90	16,865
PHIL	(2.57)	(0.49)	0.46	0.06	6,330
ANZ	(1.71)	(0.36)	0.22	(0.01)	(94)
MOR	(0.56)	(0.13)	0.16	0.27	3,008
TUN	(0.56)	(0.13)	0.17	0.34	1,358
ALG	(0.56)	(0.10)	0.05	0.11	5,485
EGY	2.04	0.47	(0.59)	(0.45)	(41,469)
TUR	2.10	0.49	(0.62)	(0.10)	(5,349)
ISR	2.02	0.37	(0.52)	(1.05)	(8,476)
LDC	(0.70)	(0.05)	0.08	(0.00)	(2,062)
AFR	0.23	0.02	(0.02)	0.00	1,554
C&P	(0.80)	(0.05)	0.07	0.10	4,731
MIDE	2.02	0.16	(0.32)	(0.45)	(53,209)
ROW	(0.81)	(0.09)	0.13	(0.00)	(973)

	Price	Agg S	Agg D	Welfare	Welfare Change
JAP	17.95	1.42	(0.74)	(1.97)	(539,213)
TLD	(2.05)	(0.27)	0.21	0.01	1,521
SKR	14.45	1.64	(0.91)	(2.34)	(279,723)

TOTAL CHANGE IN WELFARE
(471,291)

Asynchronous Japan/US& Argentina– Corn market

	Price	Agg S	Agg D	Welfare	Welfare Change
EU27	1.21	0.09	(0.28)	(0.03)	(45,586.87)
BRZ	0.55	0.23	(0.18)	0.07	18,174.90
ARG	(2.33)	(1.16)	0.34	(0.54)	(89,168.61)
USA	(1.94)	(0.65)	0.22	(0.03)	(133,861.76)
CHN	(5.30)	0.15	(0.10)	0.00	100,100.81
PAR	0.98	0.42	(0.25)	0.46	5,528.16
CAN	5.55	0.92	(1.06)	0.08	16,083.85
MEX	(2.32)	(0.47)	0.27	0.12	58,841.84
BUR	2.45	0.16	(0.25)	(0.14)	(6.22)
WBA	1.64	0.30	(0.32)	0.11	8,383.10
REU	(0.73)	(0.10)	0.14	0.05	822.72
RUB	1.56	0.48	(0.37)	0.18	19,245.82
UKR	2.82	0.89	(0.77)	0.87	156,739.89
CAM	(0.62)	(0.06)	0.09	0.04	4,580.42
VEN	(0.88)	(0.08)	0.11	0.10	5,063.66
CHL	(0.40)	(0.04)	0.06	0.04	1,533.30
URU	(0.14)	(0.01)	0.02	0.00	21.48
COL	0.07	0.01	(0.01)	0.00	17.16
RSA	(1.09)	(0.10)	0.16	0.12	18,220.63
IND	3.18	0.64	(0.67)	0.14	40,181.08
JAP	22.31	2.04	(1.06)	(2.59)	(707,256.81)
TLD	(1.43)	(0.19)	0.15	0.01	943.84
SKR	(2.04)	(0.37)	0.21	0.41	48,724.35
INDO	(1.12)	(0.28)	0.17	0.07	9,386.75
MLAY	(1.16)	(0.24)	0.28	0.53	9,908.00
PHIL	(1.51)	(0.29)	0.27	0.03	3,384.26
ANZ	5.44	1.15	(0.69)	0.05	386.14
MOR	(0.63)	(0.15)	0.18	0.31	3,386.99
TUN	(0.63)	(0.15)	0.19	0.38	1,529.61
ALG	(0.63)	(0.12)	0.06	0.12	6,175.40
EGY	(1.92)	(0.44)	0.56	0.43	39,145.48
TUR	(1.99)	(0.46)	0.58	0.09	5,067.18
ISR	(1.90)	(0.35)	0.50	0.99	7,994.12
LDC	1.69	0.13	(0.20)	0.01	5,363.90
AFR	0.11	0.01	(0.01)	0.00	742.52
C&P	(0.58)	(0.04)	0.05	0.07	3,439.12
MIDE	1.27	0.10	(0.20)	(0.28)	(33,454.35)
ROW	1.55	0.16	(0.26)	0.01	2,275.31

	Price	Agg S	Agg D	Welfare	Welfare Change
JAP	22.31	2.04	(1.06)	(2.59)	(707,256.81)
TLD	(1.43)	(0.19)	0.15	0.01	943.84
SKR	(2.04)	(0.37)	0.21	0.41	48,724.35

TOTAL CHANGE IN WELFARE
(407,943)

Asynchronous China/US; Soybean market

	Price	Agg S	Agg D	Welfare	Change in Welfare
EU	(2.4)	(1.0)	0.7	1.2	127,748
BRA	7.9	2.0	(1.6)	1.2	1,776,864
ARG	10.9	4.5	(5.7)	0.7	489,571
USA	(7.2)	(0.9)	0.3	(0.5)	(870,333)
CHN	23.7	2.2	(2.1)	(5.5)	(4,929,903)
PAR	3.0	0.9	(0.8)	0.3	19,317
CAN	4.6	1.7	(1.6)	1.4	60,465
MEX	(0.6)	(0.2)	0.2	0.3	9,579
BUR	(4.8)	(1.8)	1.6	0.1	2
WBA	(0.3)	(0.1)	0.1	(0.0)	(40)
REU	(0.5)	(0.2)	0.2	0.4	1,011
RUB	(1.8)	(0.7)	0.6	0.2	4,803
UKR	5.8	2.2	(2.1)	1.2	29,999
CAM	(1.8)	(0.7)	0.6	1.0	2,453
VEN	(1.1)	(0.4)	0.3	0.5	1,213
CHL	(1.0)	(0.4)	0.3	0.6	259
URU	7.0	2.4	(1.5)	0.7	14,893
BOL	9.3	3.3	(2.2)	0.1	3,813
COL	(1.5)	(0.5)	0.5	0.8	2,703
RSA	(1.5)	(0.5)	0.3	0.5	1,414
IND	0.2	0.1	(0.1)	0.0	952
JAP	0.6	0.3	(0.2)	(0.4)	(8,721)
TLD	0.3	0.1	(0.2)	(0.3)	(3,010)
SKR	1.5	0.6	(0.7)	(1.1)	(7,376)
INDO	0.1	0.0	(0.0)	(0.0)	(623)
MLAY	3.1	1.2	(1.2)	(2.4)	(7,939)
PHIL	(1.3)	(0.6)	0.6	1.2	399
ANZ	(1.4)	(0.6)	0.6	(0.0)	(25)
MOR/TU	(0.6)	(0.2)	0.2	0.5	187
EGY	(0.2)	(0.1)	0.1	0.1	1,901
TUR	(0.5)	(0.2)	0.1	0.2	4,209
LDC	0.0	0.0	(0.0)	(0.0)	-
AFR	(0.8)	(0.3)	0.3	0.0	545
C&P	(1.7)	(0.6)	0.6	1.1	1,362
MIDE/IS	(0.3)	(0.1)	0.1	0.1	1,040
ROW	(0.4)	(0.1)	0.1	0.2	2,526

	Price	Agg S	Agg D	Welfare	Change in Welfare
USA	(7.2)	(0.9)	0.3	(0.5)	(870,333)
CHN	23.7	2.2	(2.1)	(5.5)	(4,929,903)
PAR	3.0	0.9	(0.8)	0.3	19,317

Change in Welfare
(3,268,742)

The potential economic impacts of alternative LLP thresholds

(all empirical results preliminary)

Asynchronous China/US– DDGS market and 5% LLP threshold

	Price	Agg S	Agg D	Welfare	Welfare Change
EU27	(0.34)	(0.11)	0.44	0.09	1,653
BGM	-	-	-	-	-
ARG	-	-	-	-	-
USA	(0.30)	(0.09)	0.14	(0.05)	(13,002)
CHN	1.10	0.27	(0.71)	(0.80)	(17,578)
PAR	-	-	-	-	-
CAN	2.92	1.29	(1.11)	0.04	384
MEX	(0.32)	(0.06)	0.11	0.23	1,174
BUR	(0.35)	(0.13)	0.22	0.14	0
WBA	(0.34)	(0.16)	0.16	0.32	13
REU	(0.34)	(0.13)	0.16	0.33	53
RUB	(0.34)	(0.16)	0.18	0.14	0
UKR	(0.35)	(0.13)	0.13	0.10	0
CAM	(0.32)	(0.15)	0.11	0.22	211
VEN	(0.32)	(0.14)	0.10	0.09	0
CHL	(0.33)	(0.12)	0.13	0.26	11
URU	-	-	-	-	-
COL	-	-	-	-	-
RSA	(0.32)	(0.15)	0.11	0.22	115
IND	(0.36)	(0.19)	0.11	0.12	0
JAP	(0.35)	(0.16)	0.07	0.13	484
TLD	(0.36)	(0.11)	0.10	0.22	262
SKR	(0.36)	(0.14)	0.12	0.25	933
INDO	(0.36)	(0.14)	0.11	0.22	252
MLAY	(0.36)	(0.16)	0.11	0.22	58
PHIL	(0.36)	(0.16)	0.14	0.29	68
ANZ	(0.35)	(0.16)	0.12	0.11	0
MOR	(0.34)	(0.07)	0.09	0.19	62
TUN	(0.34)	(0.16)	0.08	0.16	31
ALG	(0.34)	(0.16)	0.08	0.16	31
EGY	(0.34)	(0.12)	0.10	0.20	110
TUR	(0.34)	(0.16)	0.14	0.29	503
ISR	(0.35)	(0.23)	0.15	0.31	122
LDC	(0.36)	(0.13)	0.14	0.29	37
AFR	(0.34)	(0.09)	0.11	0.17	1
C&P	(0.33)	(0.15)	0.13	0.26	68
MIDE	(0.36)	(0.16)	0.12	0.25	79

Price	Agg S	Agg D	Welfare	Change in Welfare
USA	(0.30)	(0.09)	0.14	(0.05) (13,002)
CHN	1.10	0.27	(0.71)	(0.80) (17,578)
PAR	-	-	-	-

Change in welfare
(23,546)

Asynchronous Japan/US– Corn market and 5% LLP threshold

	Price	Agg S	Agg D	Welfare	Change in Welfare
EU27	(0.20)	(0.01)	0.05	0.00	7,555
BGM	0.07	0.03	(0.02)	0.01	2,322
BNGM	0.07	0.03	(0.02)	0.01	2,322
ARG	0.45	0.23	(0.11)	0.08	13,473
USA	(0.59)	(0.19)	0.00	(0.07)	(31,789)
CHN	0.49	0.04	(0.03)	0.00	2,706
PAR	0.07	0.03	(0.02)	0.03	376
CAN	0.98	0.16	(0.19)	0.01	2,587
MEX	(0.33)	(0.07)	0.04	0.02	8,306
BUR	(0.09)	(0.06)	0.09	0.05	2
WBA	0.48	0.09	(0.09)	0.03	2,433
REU	(0.32)	(0.04)	0.06	0.02	353
RUB	0.48	0.15	(0.11)	0.06	5,949
UKR	0.74	0.23	(0.20)	0.23	41,266
CAM	0.08	0.01	(0.01)	(0.01)	(565)
VEN	0.08	0.01	(0.01)	(0.01)	(474)
CHL	0.07	0.01	(0.01)	(0.01)	(274)
URU	0.07	0.01	(0.01)	(0.00)	(11)
BOL	0.07	0.01	(0.01)	0.00	17
RSA	0.08	0.01	(0.01)	(0.01)	(1,285)
IND	0.80	0.16	(0.17)	0.04	9,989
JAP	1.70	0.21	(0.11)	(0.22)	(59,338)
TLD	(0.51)	(0.07)	0.05	0.00	357
SKR	(0.48)	(0.09)	0.05	0.09	11,367
INDO	(0.52)	(0.13)	0.08	0.03	4,327
MLAY	(0.51)	(0.10)	0.12	0.23	4,335
PHIL	(0.48)	(0.09)	0.08	0.01	1,121
ANZ	(0.52)	(0.11)	0.07	(0.00)	(32)
MOR	0.05	0.01	(0.01)	(0.02)	(258)
TUN	0.05	0.01	(0.01)	(0.03)	(117)
ALG	0.05	0.01	(0.00)	(0.01)	(471)
EGY	(0.57)	(0.13)	0.16	0.13	11,618
TUR	(0.57)	(0.13)	0.17	0.03	1,442
ISR	(0.57)	(0.10)	0.15	0.30	2,399
LDC	(0.45)	(0.03)	0.05	(0.00)	(1,439)
AFR	0.04	0.00	(0.00)	0.00	304
C&P	0.05	0.00	(0.00)	(0.01)	(292)
MIDE	(0.57)	(0.05)	0.09	0.13	15,059

	Price	Agg S	Agg D	Welfare	Change in Welfare
JAP	1.70	0.21	(0.11)	(0.22)	(59,338)
TLD	(0.51)	(0.07)	0.05	0.00	357
SKR	(0.48)	(0.09)	0.05	0.09	11,367

Change in Welfare
(31,868)

Asynchronous China/US– Soybean market and 5% LLP threshold

Price	Agg S	Agg D	Welfare	Change in Welfare
(0.19)	(0.08)	0.06	0.10	12,055
0.21	0.06	0.05	(0.02)	20,674
0.15	0.25	(0.05)	0.00	3,009
(0.28)	(0.06)	(0.07)	(0.04)	(41,978)
1.82	0.25	(0.30)	(0.32)	(240,728)
0.31	0.08	(0.08)	0.09	3,089
(0.19)	(0.08)	0.08	(0.05)	(1,647)
(0.17)	(0.08)	0.06	0.11	3,443
(0.19)	(0.08)	0.08	0.05	1
(0.16)	(0.08)	0.08	(0.01)	(49)
(0.19)	(0.08)	0.09	0.18	429
(0.19)	(0.08)	0.06	0.02	626
0.11	0.08	0.08533	(0.08)	1,603
(0.19)	(0.08)	0.08	0.12	274
(0.20)	(0.08)	0.08	0.08	166
(0.06)	(0.08)	0.07	0.14	48
0.04	(0.08)	0.11	(0.15)	732
(0.20)	(0.08)	0.06	(0.01)	(205)
(0.19)	(0.08)	0.08	0.11	273
(0.20)	(0.08)	0.05	0.05	92
(0.18)	(0.08)	0.06	(0.01)	(1,327)
(0.23)	(0.07)	0.06	0.10	2,765
(0.18)	(0.08)	0.10	0.18	1,957
(0.18)	(0.08)	0.08	0.13	1,064
(0.17)	(0.07)	0.08	0.09	1,861
(0.18)	(0.07)	0.08	0.15	566
(0.06)	(0.08)	0.08	0.16	64
(0.02)	(0.08)	0.08	(0.01)	(10)
(0.19)	(0.08)	0.08	0.16	74
(0.18)	(0.07)	0.06	0.11	1,637
(0.23)	(0.07)	0.05	0.10	1,337
(0.19)	(0.08)	0.08	0.05	195
(0.19)	(0.08)	0.08	(0.01)	(140)
(0.19)	(0.08)	0.08	0.16	152
(0.18)	(0.07)	0.07	0.09	573

Price	Agg S	Agg D	Welfare	Change in Welfare
(0.28)	(0.06)	(0.07)	(0.04)	(41,978)
1.82	0.25	(0.30)	(0.32)	(240,728)
0.31	0.08	(0.08)	0.09	3,089

Change in Welfare
(225,980)

The practicality of thresholds and implied premiums

change in corn trade of Japan with US under different price premiums

