



The impact of Farmer Field Schools and Rainforest Alliance certification in the smallholder tea sector in Kenya, 2006–2016

Yuca Waarts, Just Dengerink, Linda Puister-Jansen, Fédés van Rijn, Davies Onduru* (*ETC-East Africa)



WAGENINGEN
UNIVERSITY & RESEARCH

Do FFS lead to improved tea farmer incomes?

- Does training farmers in **Farmer Field Schools (FFS)** lead to **improved incomes**, through the **adoption of good tea practices, improved yields, diversification and incomes**?
- Does training for **Rainforest Alliance certification** contribute to adoption, yields and incomes as well?

Positive impacts of FFS and RA certification

- In the pilot phase, FFS **led to improved adoption**, and FFS farmers **perceived participation to have resulted in diversification and higher incomes** (2006-2008)
- The FFS have had a **positive impact on adoption, yields, incomes and diversification** between 2009 and 2013. Rainforest Alliance certification **impacted positively on adoption rates and yields**
- Between 2013 and 2015, the FFS had a **positive impact on yields, diversification and food security**, but **no impact on incomes was found** because of **external influencing factors**

Contributors to FFS impact

	2006-2009 Pilot phase	2009-2012 Upscaling phase	2012-2016 Embedding phase
KTDA	✓	✓	✓
Unilever	✓	✓	✓
DFID	✓		
IDH the sustainable trade initiative		✓	✓
Rainforest Alliance		✓	
Netherlands Embassy in Nairobi		✓	

The funding by Unilever and DFID facilitated the implementation of the FFS pilot at KTDA (2006-2008), including the evaluation of the results of the pilot. The evaluation research in the Upscaling phase was funded by the Netherlands Embassy in Nairobi. The impact of the Embedding Sustainability Programme can be attributed in large part to the three funders: KTDA, Unilever and IDH all contributed one third of the program funds, including the impact evaluation by Wageningen University & Research and ETC-East Africa in that period. The co-funding of Unilever and IDH played a key role in upscaling the FFS approach at KTDA.



Methodology



WAGENINGEN
UNIVERSITY & RESEARCH

Quantitative and qualitative research methods used

- Quantitative: A **household survey** with FFS farmers as well as farmers who did not participate in an FFS:
 - In 4 factories in 2006 and 2008
 - In 4 other factories in 2009, 2011 and 2013
 - In 2 new factories in 2013 and 2015
- Qualitative: **Focus Group discussions** with FFS farmers and non-participants
 - In 4 factories in 2011
 - In 2 factories in 2015
- Qualitative: **Interviews with all stakeholders** involved in the sustainable tea program

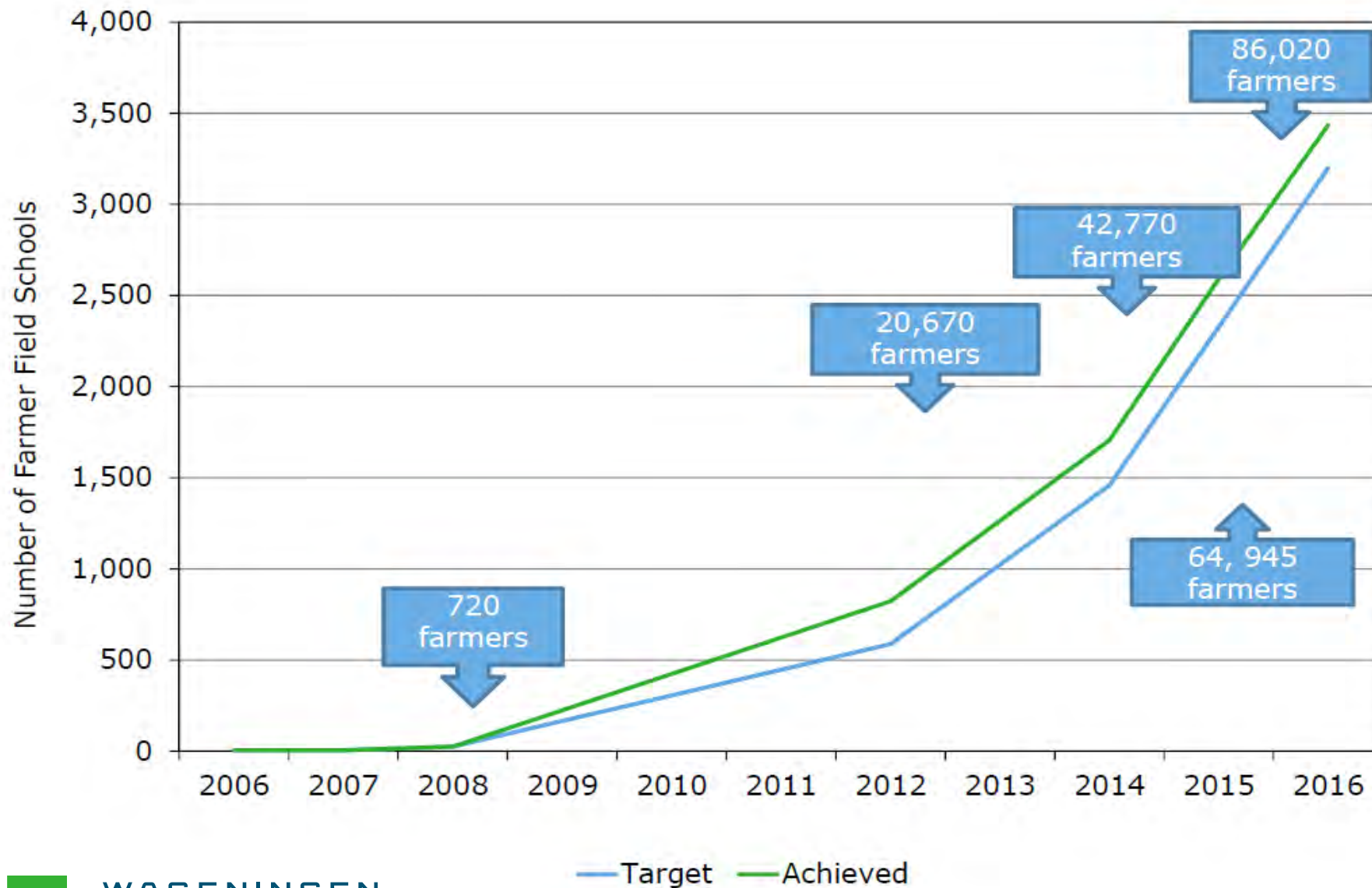


How many
farmers were
trained?

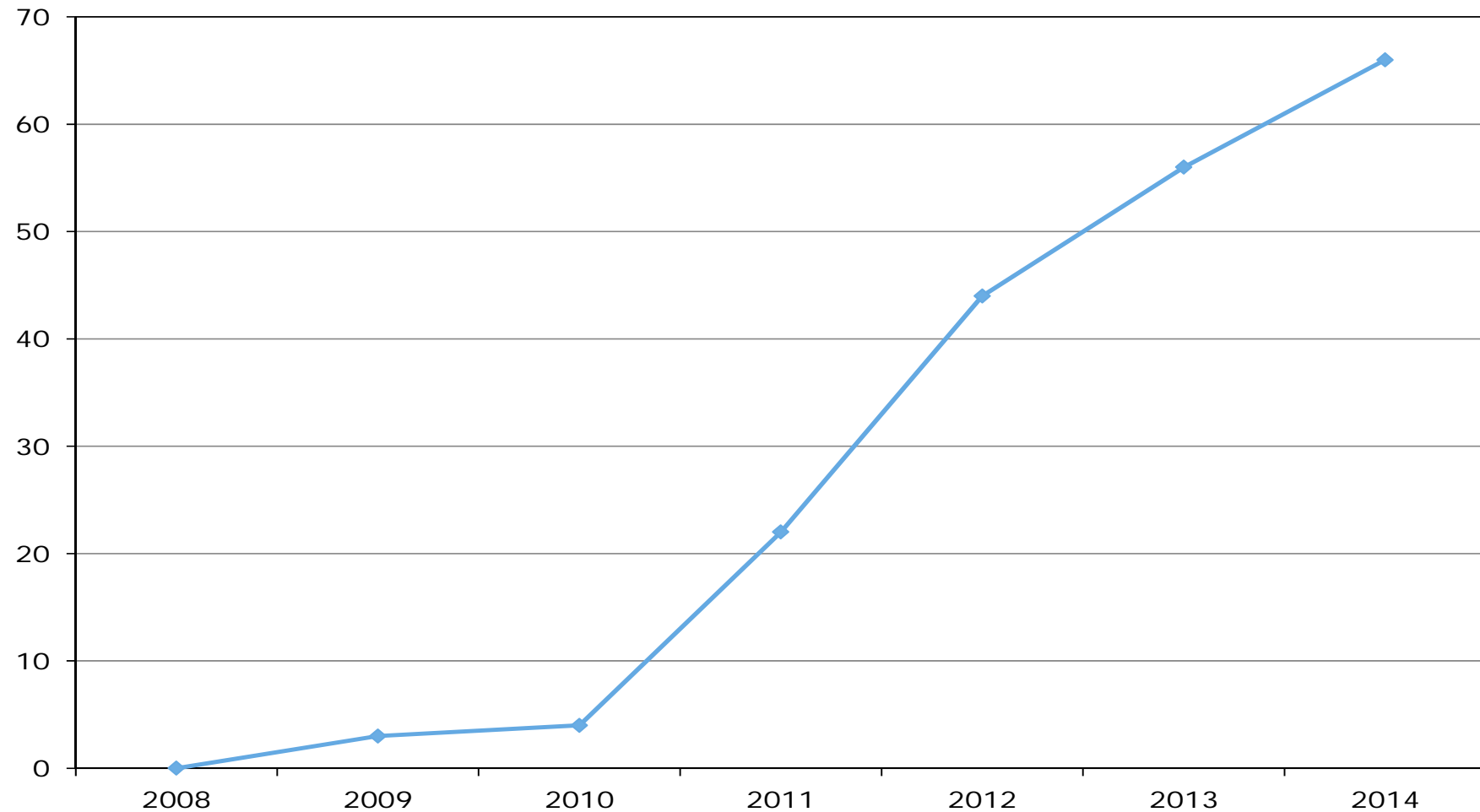


WAGENINGEN
UNIVERSITY & RESEARCH

86,020 FFS farmers trained, of whom 45,849 women



All KTDA factories Rainforest Alliance certified by 2014



Source: Rainforest Alliance



Findings & food for thought



WAGENINGEN
UNIVERSITY & RESEARCH

Positive impact of FFS and Rainforest Alliance

Economic effects: 2006-2015

	2006-2008	2009-2011	2011-2013	2013-2015
Adoption of practices	✓	✓ a)	✓	✗ c)
Green leaf yield per hectare	✗ d)	✓ a)	✓	✓ e)
Green leaf income	✓ f)	✓ b)	✓ g)	✗ h)
Diversification	✓ f)	-	✓	✓ f)
Household income	✓ f)	-	-	✗ h)
Evaluation of FFS or Rainforest Alliance?	FFS	FFS + RA	FFS	FFS

a) FFS & RA c) adoption already high e) lower decrease g) lower decline - not measured
 b) FFS d) climatic influence f) qualitative h) decrease for all farmers

Positive impact of FFS Social effects 2006-2015

	2006-2008	2009-2013	2013-2015
Food and nutrition security	✓ a)	-	✓ a)
Relationship with the factory	✓	-	✓ a)
Health effects	-	-	✓ a)
Women's leadership capacity	-	-	✓ a)
Evaluation of FFS or Rainforest Alliance?	FFS	FFS + RA (2009-2011) FFS (2011-2013)	FFS

a) Qualitative - not measured

Factors influencing the results

- There are **huge differences in yields and prices per factory, per farmer, and over time**. Because of agro-ecological and climatic conditions and market price fluctuations
- The **market price** for tea and the **exchange rate** (USD - KES) **influenced farmer incomes heavily**. **Productivity** increase thus did **not always lead to income increase**
- Rainforest Alliance certification **increased farmers' cost of production** between 2009 and 2011, resulting in no changes of income for farmers who were not trained in an FFS

Poverty alleviation remains a challenge

- **Many farmers cannot earn much with producing green leaf** because of small and decreasing plot sizes
- The **average farm size decreased** from 0.25 to 0.21 ha between 2008 and 2015
- **Green leaf incomes** were on **average** per family per day:
 - 3.3 USD (2009), 5.4 USD (2011),
 - 2.1 USD (2013), 1.2 USD (2015).
- As **farmers heavily depend on green leaf income**, and tea plots are small, it is **difficult to lift them out of poverty**. Even with diversification and higher yields and prices



Recommendations



WAGENINGEN
UNIVERSITY & RESEARCH

Focus trainings (topics / target groups) and continue working with graduated groups

- **Focus the implementation of FFSs on those farmers who still stand to substantially improve their tea practices.** This is likely to have a bigger impact, and would therefore increase the efficiency of FFS implementation
- **Continue the training on diversification and nutrition,** as it contributes to resilience and food security
- **Explore ways of increasing the activities of farmers who have graduated from an FFS** to address production problems and continue to experiment with innovations

Address farm size challenge

- **Explore ways of managing the fact that tea plots are getting smaller, and smaller plots tend to be less productive.**
- We should learn from similar developments occurring in other sectors



Background information



WAGENINGEN
UNIVERSITY & RESEARCH

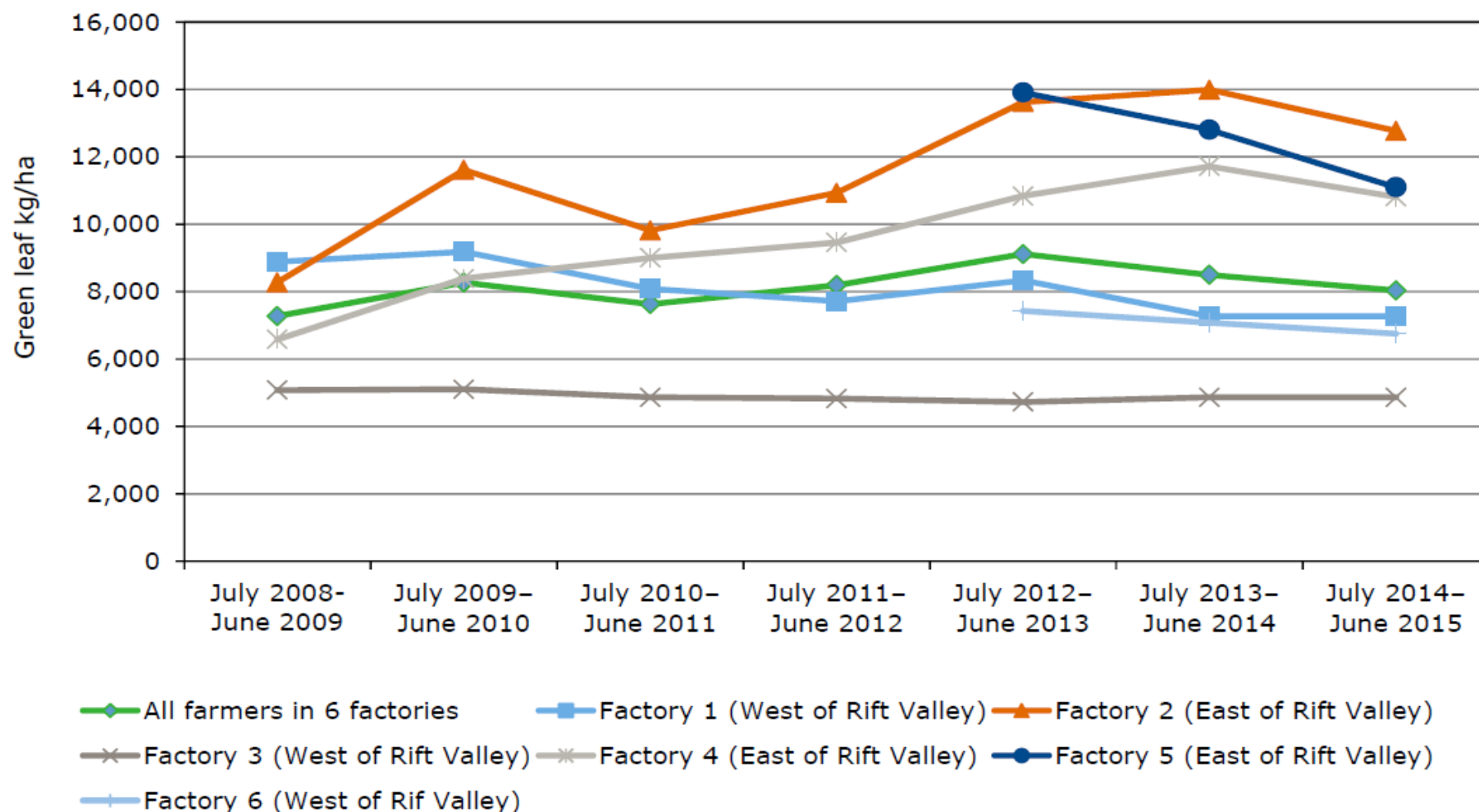
Background information

- The next slides include:
 - more information on the **methodology**
 - **trends** in green leaf yield per hectare and green leaf prices between 2008 and 2015
- The **yield and price information is based on KTDA factory data** for six factories
- **Green leaf prices**, paid to tea farmers, are **based on international tea prices** and **factory performance**
- The figures show a **large variation in yield and price levels over time**, and between the six factories studied

Detailed information on research methods

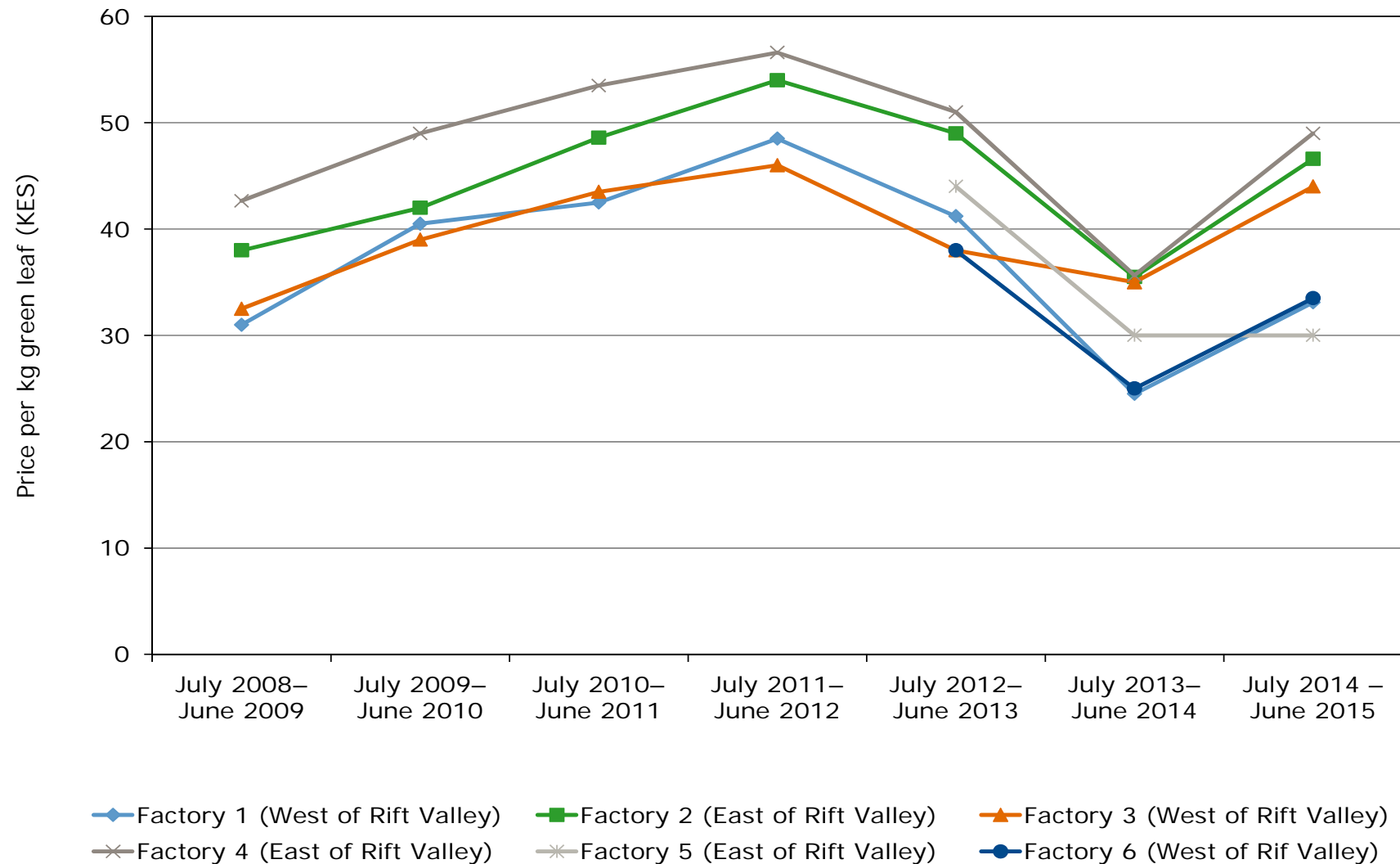
	2006-2008	2009-2011	2011-2013	2013-2015
Number of farmers interviewed with household survey	Total: 120 60 FFS 60 non-FFS	Total: 356 116 FFS 240 non-FFS	Total: 331 164 FFS 167 non-FFS	Total: 240 120 FFS 120 non-FFS
Focus group discussions		4, 2 with FFS graduates		4, 2 with FFS graduates
Stakeholder interviews	All stakeholders	All stakeholders	All stakeholders	All stakeholders
Number of factories in the study	4	4	4	2
Evaluation of FFS / Rainforest Alliance?	FFS	FFS + RA	FFS	FFS

Trend in green leaf yield per hectare



* N = 34,955 in 2008-2009, 36,171 in 2009-2010, 37,788 in 2010-2011, 34,453 in 2011-2012, 51,764 in 2012-2013, 57,188 in 2013-2014 and 57,884 in 2014-2015. We have data from four factories for the period 2008-2009 to 2014-2015, and from two additional factories for the period 2012-2013 to 2014-2015.

Trend in green leaf prices





Further reading



WAGENINGEN
UNIVERSITY & RESEARCH

Please find more information through:

- Final impact evaluation of Farmer Field School implementation in the smallholder tea sector in Kenya, 2009–2016
 - library.wur.nl/WebQuery/wurpubs/fulltext/401403
- For all the tea in Kenya - Impact assessment and baseline situation of Farmer Field Schools (2011-2013)
 - edepot.wur.nl/310209
- Sustainable tea production in Kenya - Impact assessment of Rainforest Alliance and Farmer Field School training (2009-2011)
 - edepot.wur.nl/214044

Please find more information through:

- Brewing business models for smallholder tea certification - A quick scan of models in Sri Lanka, Indonesia and Kenya (2012)
 - edepot.wur.nl/244453
- Sustainable tea production - An assessment of Farmer Field Schools in Kenya (2006-2008)
 - edepot.wur.nl/5554

Thank you!

For more information, please
contact:

Mrs. Yuca Waarts

Wageningen University &
Research

yuca.waarts@wur.nl

Mr. Davies Onduru

ETC-East Africa

d.onduru@etc-eastfrica.org

Special thanks to André de Jager and Sabine Hiller for their involvement in the research program 2006-2010.
Photos: Sabine Hiller (slide 6), André de Jager (slide 8), Yuca Waarts (all other photos)

