Supplementary Materials for the Article

The Effect of Different Fertilization Regimes on Yield, Selected Nutrients and Bioactive Compounds Profiles of Onion

Renata Kazimierczak [1] Dominika Średnicka-Tober [1,*], Marcin Barański [2], Ewelina Hallmann [1], Rita Góralska-Walczak [1], Klaudia Kopczyńska [1], Ewa Rembiałkowska [1], Jan Górski [1], Carlo Leifert [3,4], Leonidas Rempelos [5] and Stanisław Kaniszewski [6]

[1] Department of Functional and Organic Food, Institute of Human Nutrition Sciences, Warsaw University of Life Sciences, Nowoursynowska 159c, 02-776 Warsaw, Poland; renata_kazimierczak@sggw.edu.pl (R.K.), dominika_srednicka_tober@sggw.edu.pl (D.Ś.-T.), ewelina_hallmann@sggw.edu.pl (E.H.), rita_goralska_walczak@sggw.edu.pl (R.G.-W.), klaudia_kopczynska@sggw.edu.pl (K.K.), ewa_rembialkowska@sggw.edu.pl (E.R.), jangorski17@wp.pl (J.G.)
[2] Laboratory of Neurobiology, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Pasteura 3, 02-093 Warsaw, Poland; m.baranski@nencki.edu.pl (M.B.)
[3] Department of Nutrition, Institute of Basic Medical Sciences, University of Oslo, 0372 Oslo, Norway; carlo.leifert@scu.edu.au (C.L.)
[4] Southern Criss Plant Science, Southern Cross University, Military Rd., Lismore, NSW 2480, Australia; carlo.leifert@scu.edu.au (C.L.)
[5] School of Agriculture, Food and Rural Development, NEFG, Newcastle University, Newcastle upon Tyne, NE1 7RU, UK; leonidas.rempelos@ncl.ac.uk (L.R.)
[6] The National Institute of Horticultural Research, Konstytucji 3 Maja 1/3, 96-100 Skierniewice, Poland; stanislaw.kaniszewski@inhort.pl (S.K.)
[*] Correspondence: dominika_srednicka_tober@sggw.edu.pl; Tel.: +48-225937035 (D.Ś.-T.)

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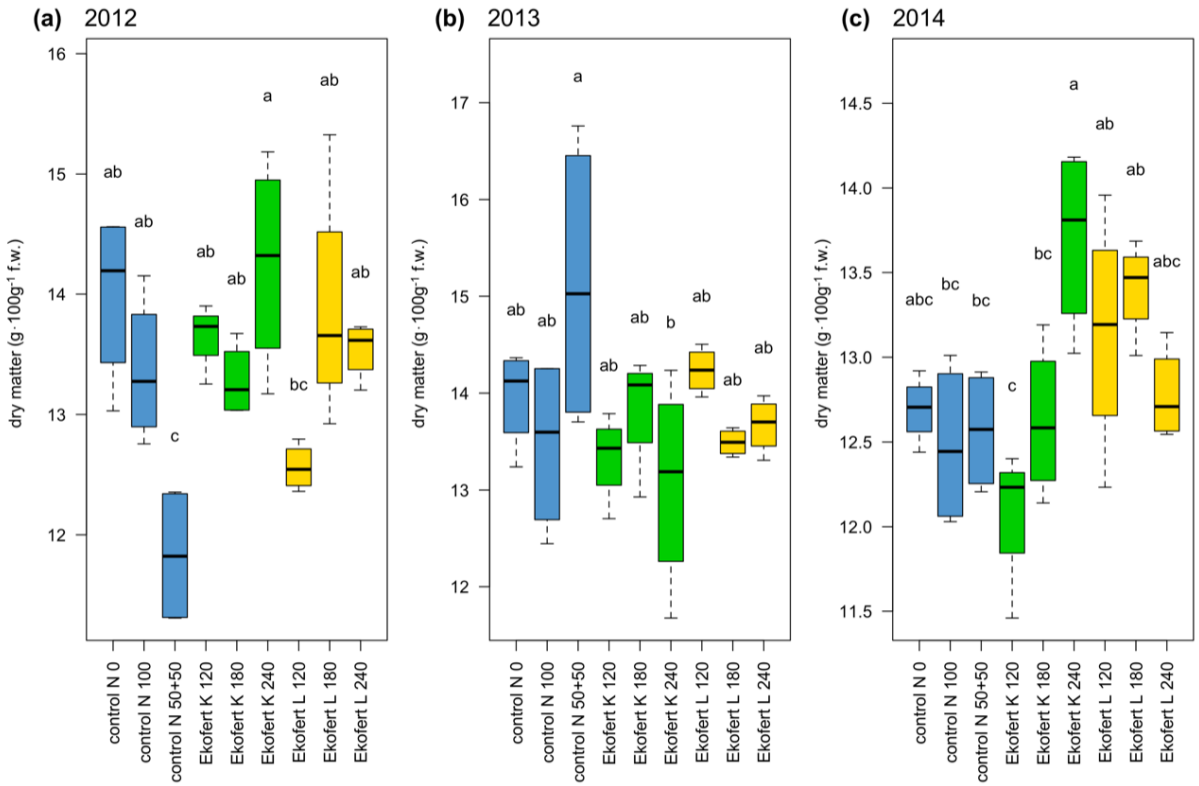

Figure S1. Dry matter in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

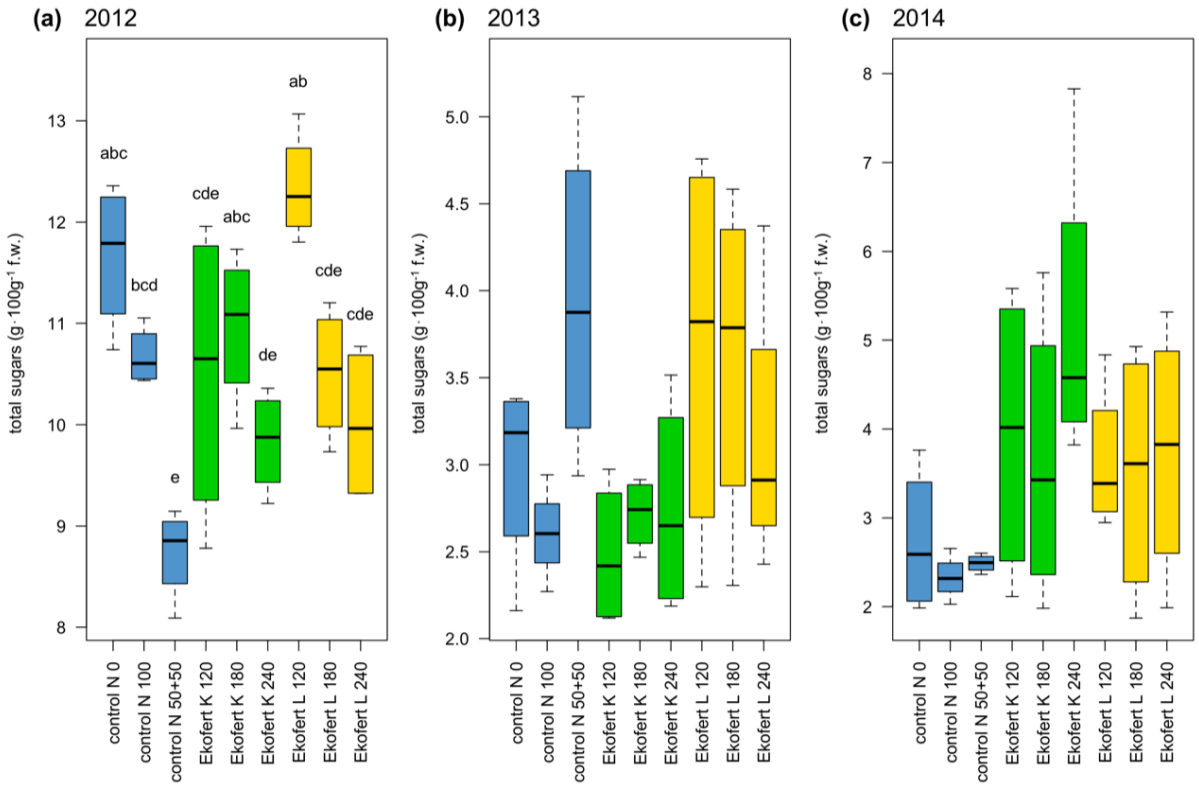

Figure S2. Total sugars content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

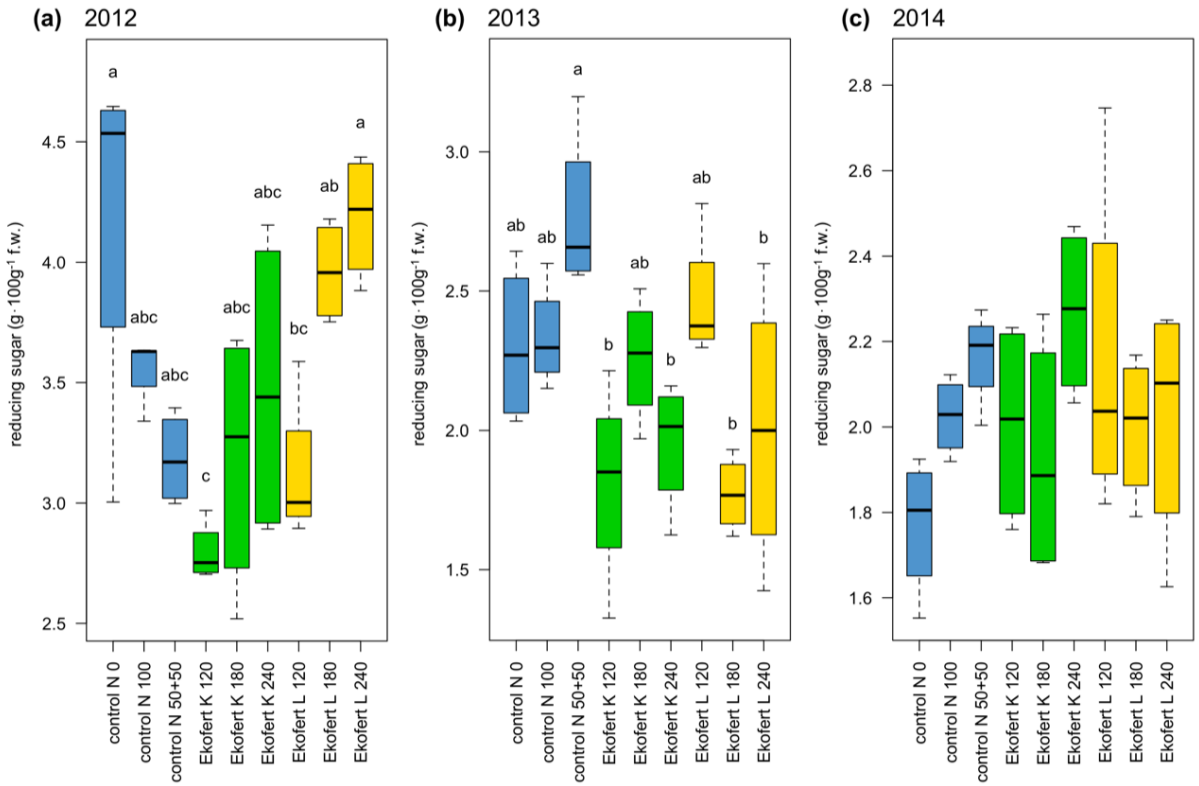

Figure S3. Reducing sugars content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

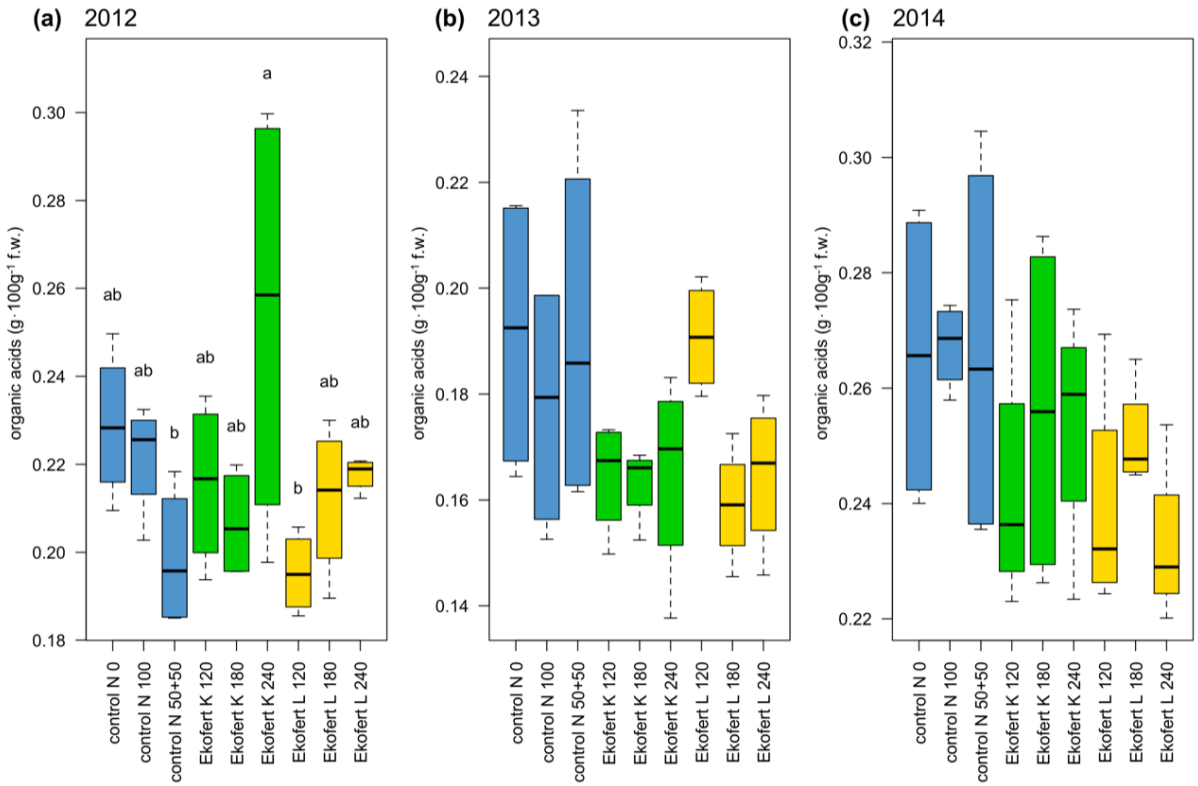

Figure S4. Organic acids content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

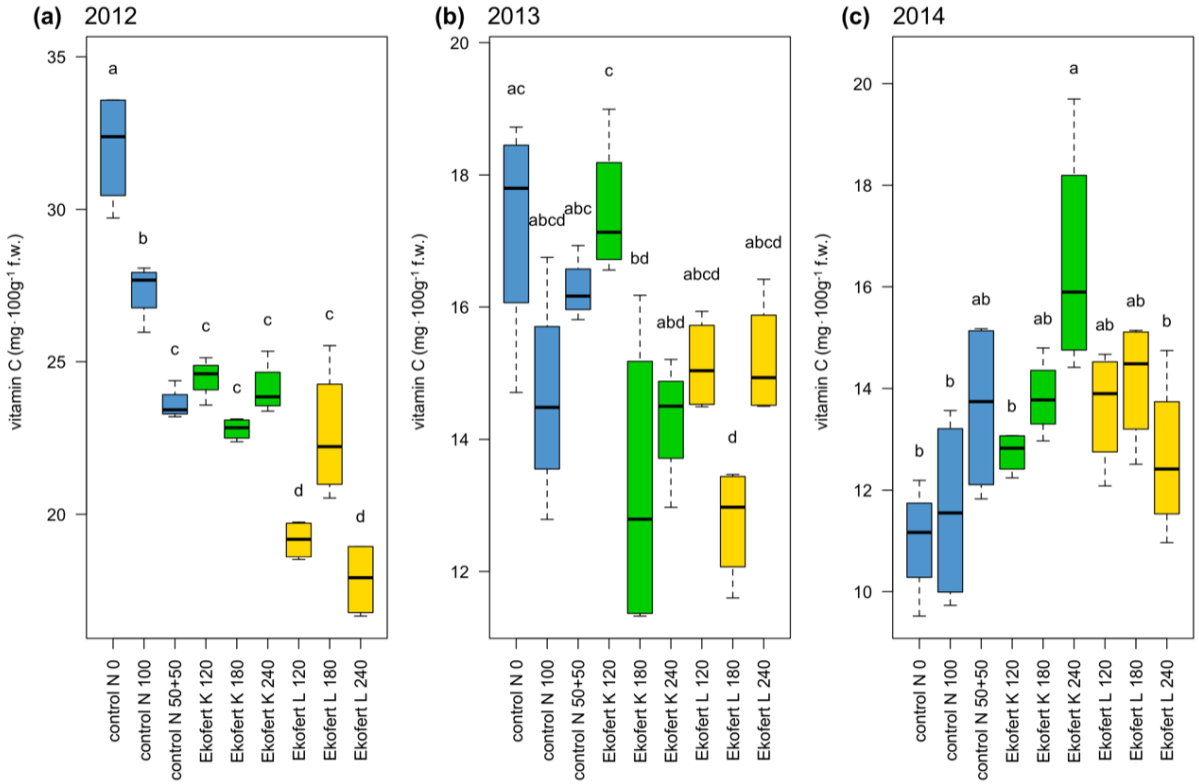

Figure S5. Vitamin C content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

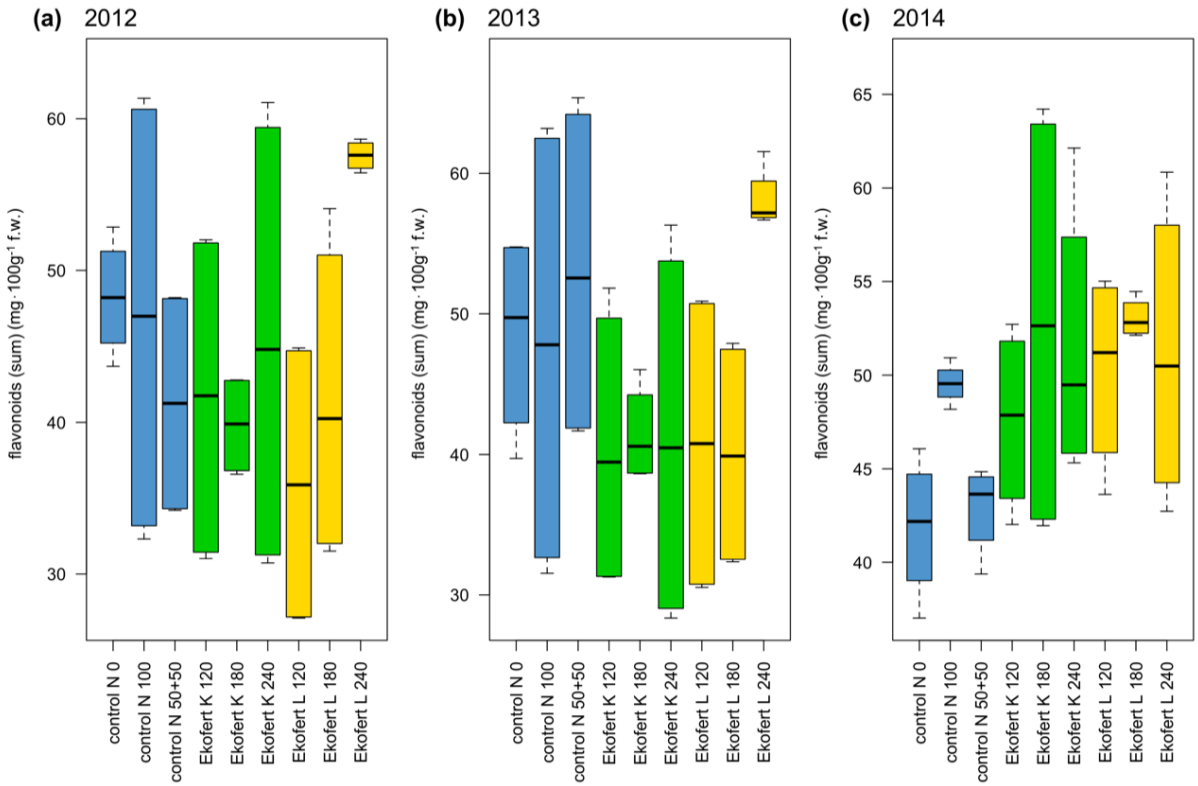

Figure S6. Flavonoids (sum) content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

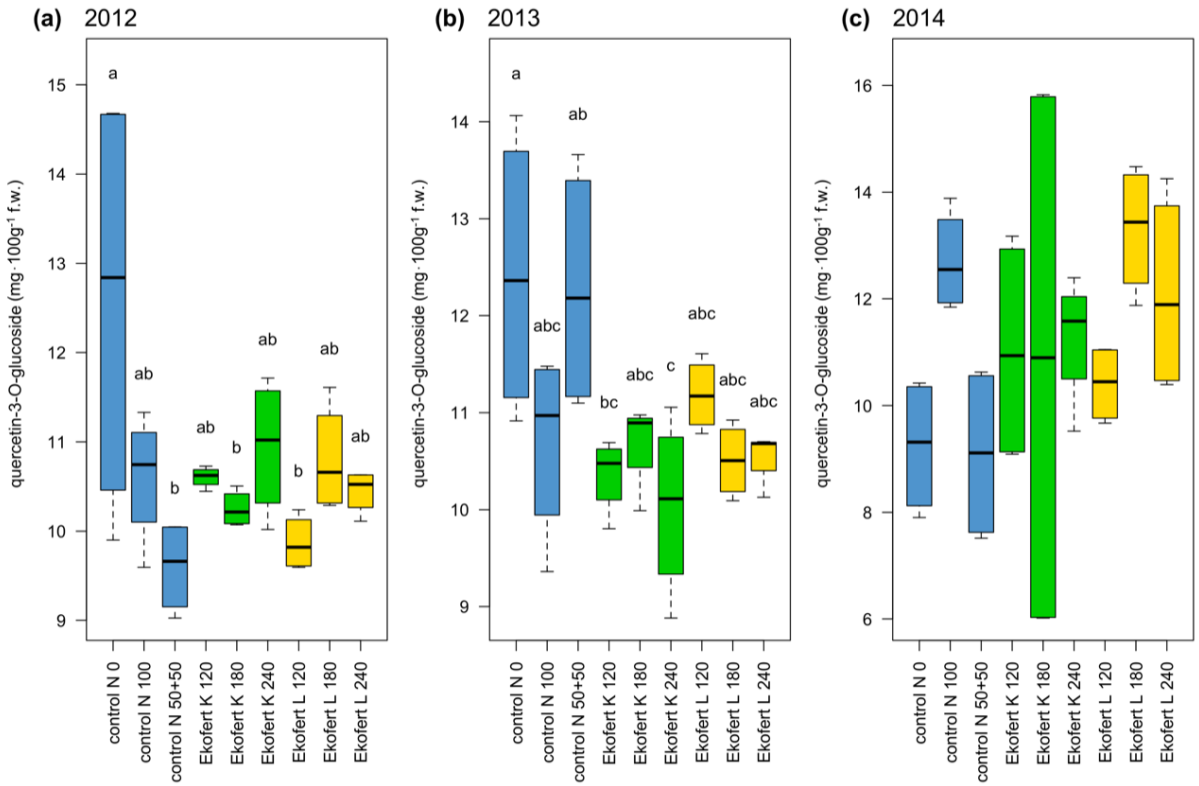

Figure S7. Quercetin-3-*O*-glucoside content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

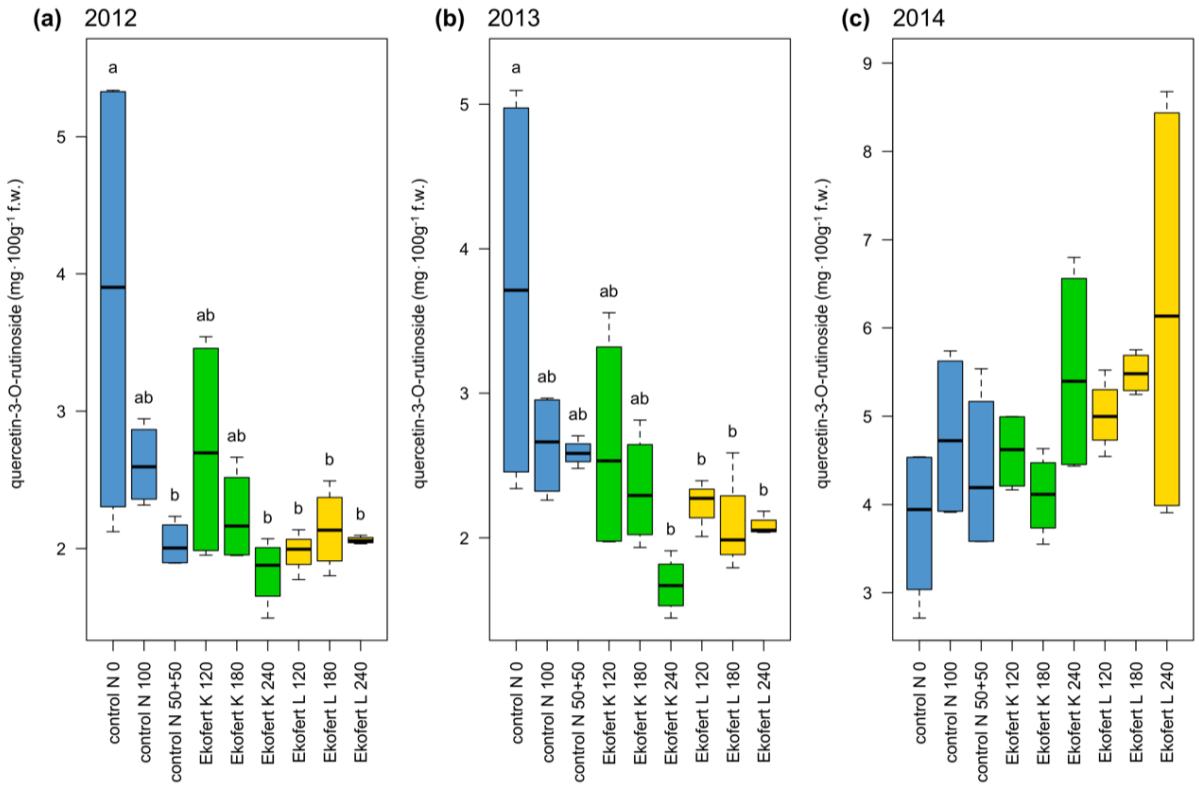

Figure S8. Quercetin-3-*O*-rutinoside content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

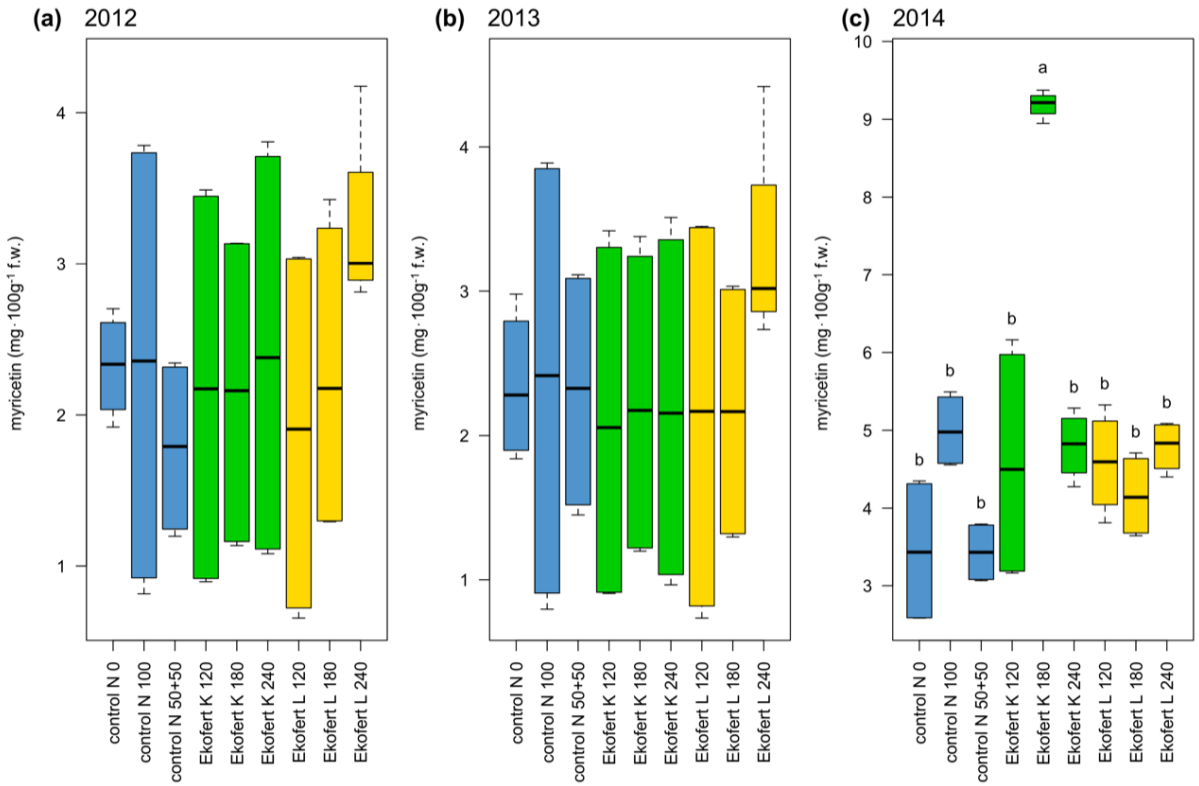

Figure S9. Myricetin content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

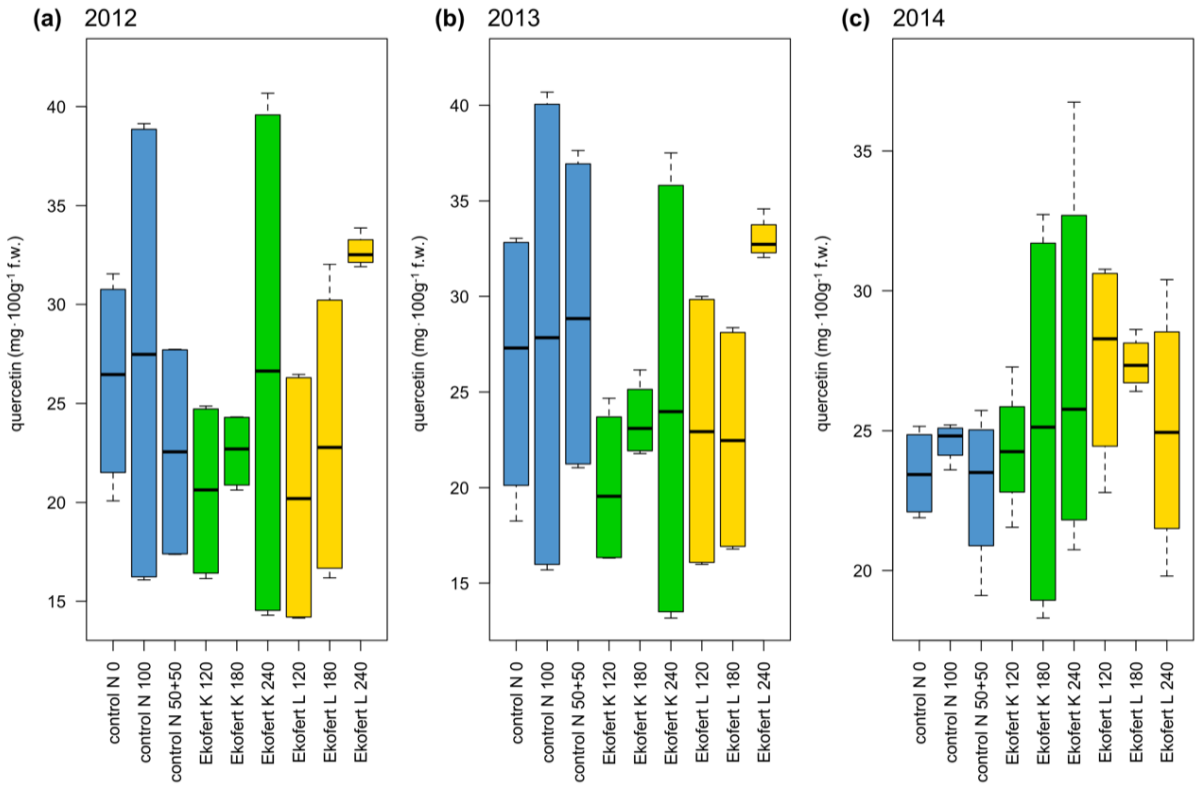

Figure S10. Quercetin content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).

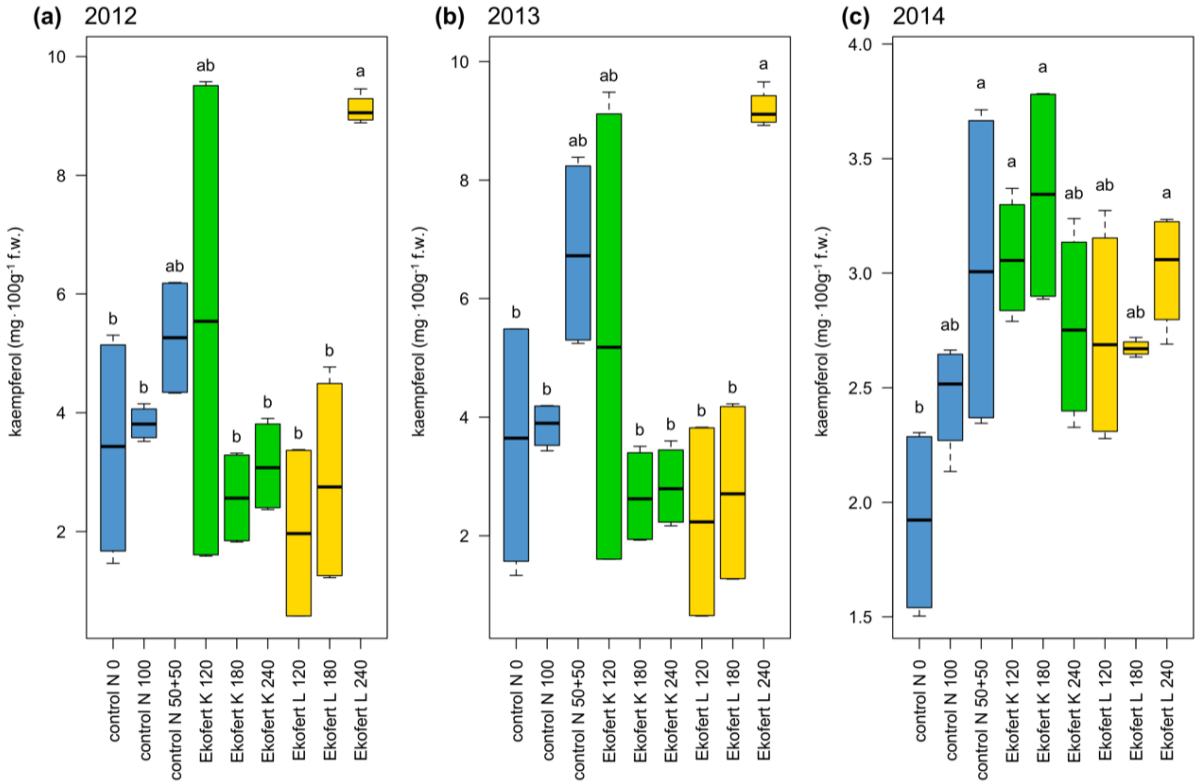

Figure S11. Kaempferol content in onion bulbs of Alonso F1 cultivar grown in organic and conventional fertilization regimes in three years of cultivation. Data are presented as a box plot showing the minimum and maximum (whiskers), first and third quartile (box), and median (horizontal line). Within each cultivation season, bars marked with the same letters are not significantly different at the 5% level of probability. Fertilization regimes: control N 0 (no input), control N 100 (mineral fertilizer at 100 kg N ha^{-1}), control N 50+50 (mineral fertilizer at 2×50 kg N ha^{-1}), Ekofert K 120/180/240 (red clover pellets at 120, 180 or 240 kg N ha^{-1}), Ekofert L 120/180/240 (alfalfa pellets at 120, 180 or 240 kg N ha^{-1}).