

Jäälinjärvi-seminaari 13.11.2012 klo 9.00



Avaus: Eero Laine
Timo Yrjänä

Jäälinjärven yleistilanne:
Analyysit, Birger Ylisaukko-oja
Pohjasedimentti, Kari Kainua
Rauta-humus, Kaisa Heikkinen

Allaskoe: Analyysit, Kaisa Savolainen
Tulkintaa, Tero Väisänen,
Ilkka Sammalkorven aineistosta
Marko Järvinen

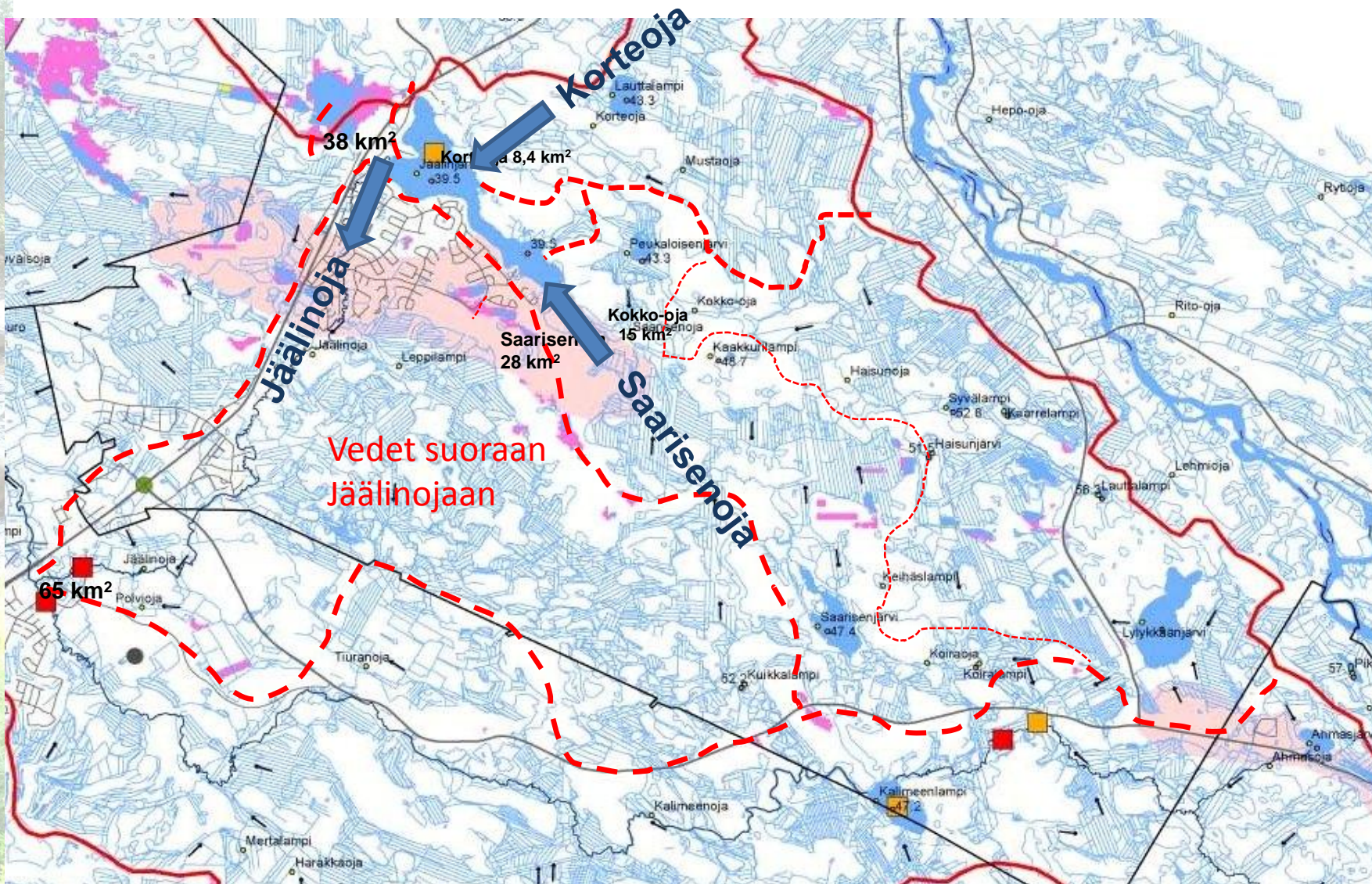
Limalevä: Marko Järvinen

Mitä Jäälinjärvelle olisi tehtävissä?
Keskustelu

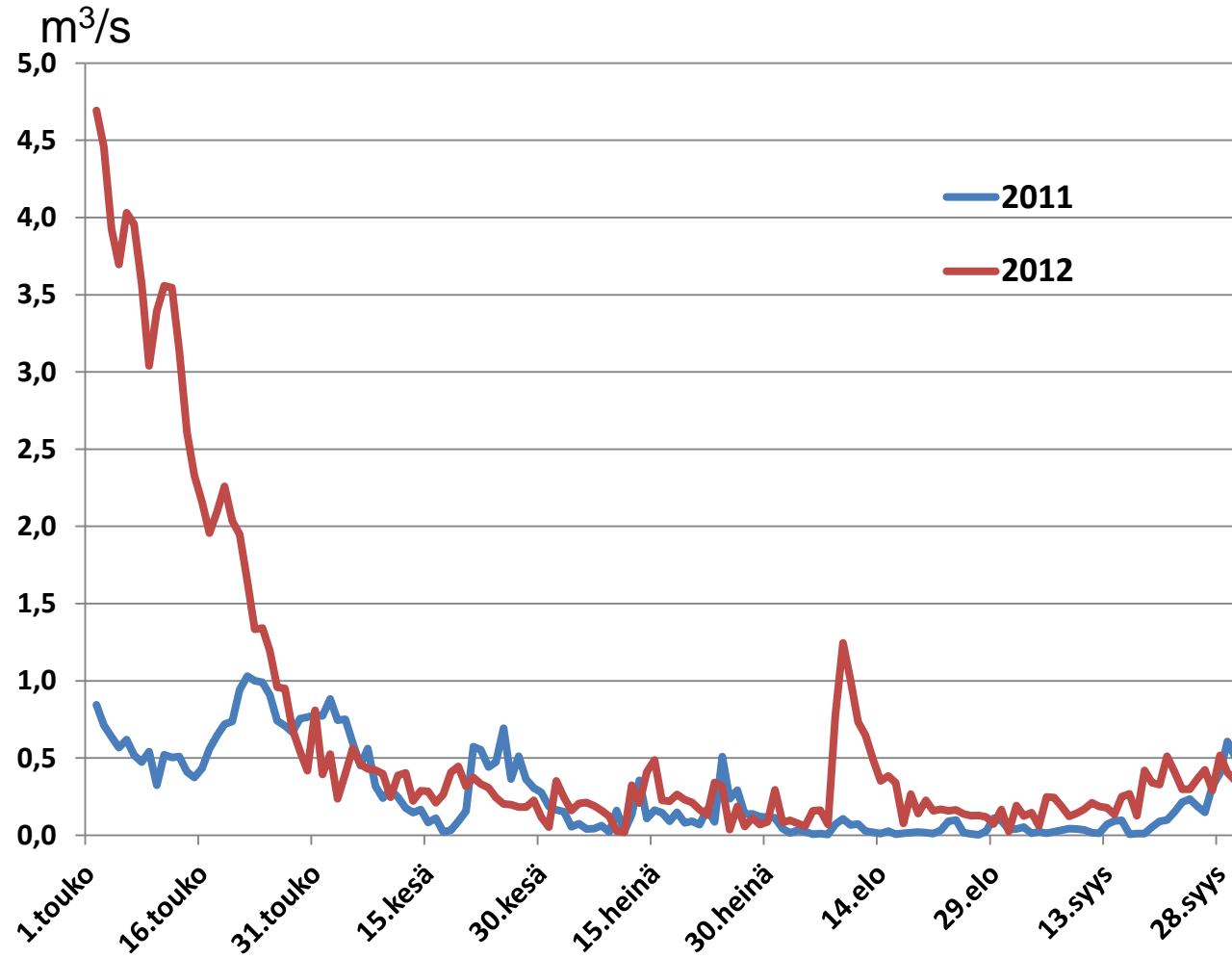
Päätelmät: Arto Lehto

**Tilaisuus päättyy n. klo 12.30 minkä jälkeen
lounas ja maastokäynti**

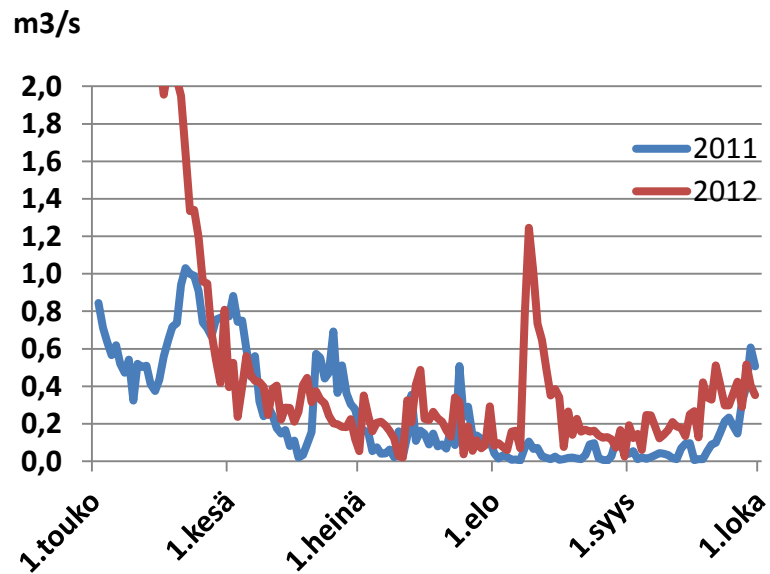
Jäälinojan valuma-alue



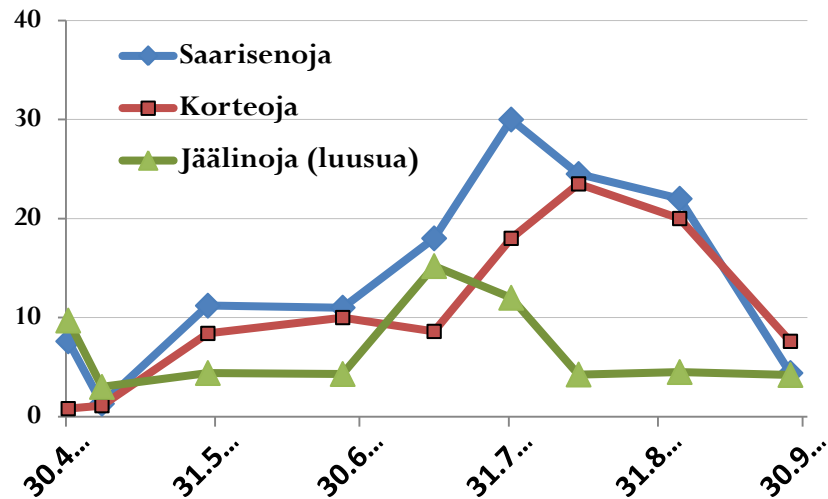
Tulovirtaama Jäälinjärveen



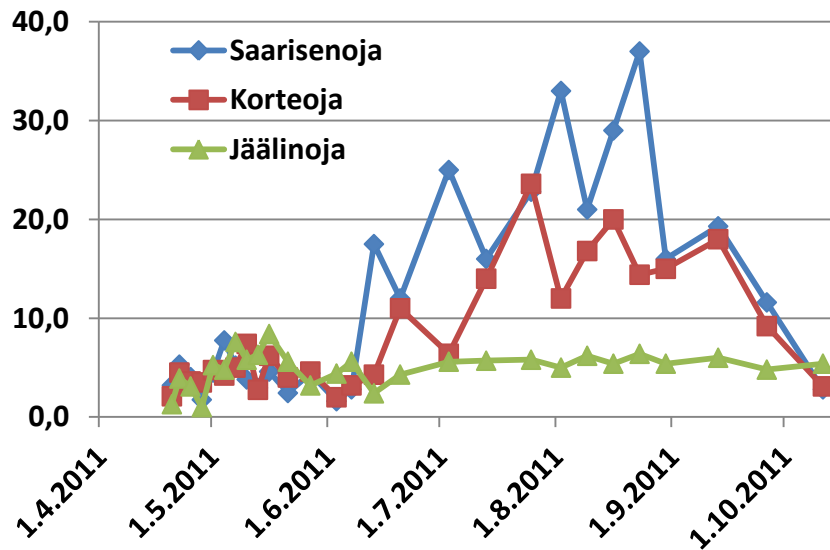
Tulovirtaama Jäälinjärveen 2012



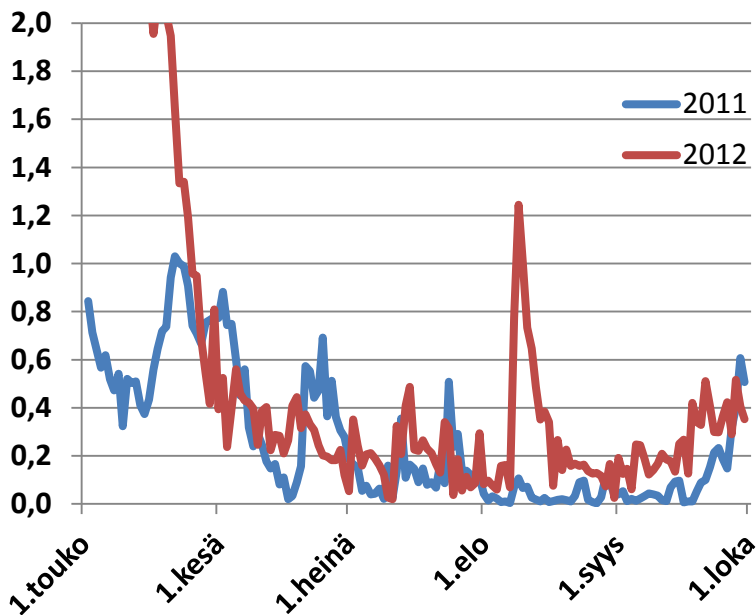
Kiintoaine 2012 mg/l



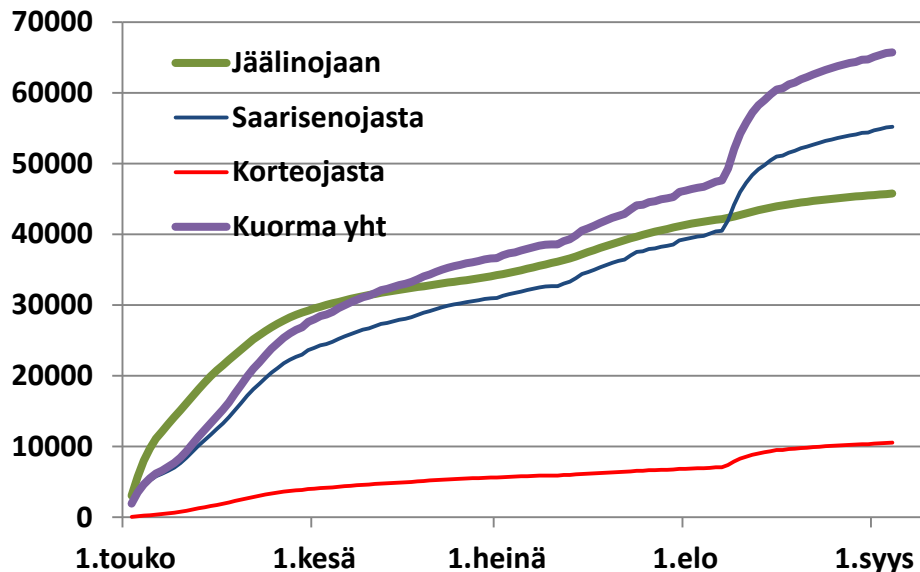
Kiintoaine 2011 mg/l



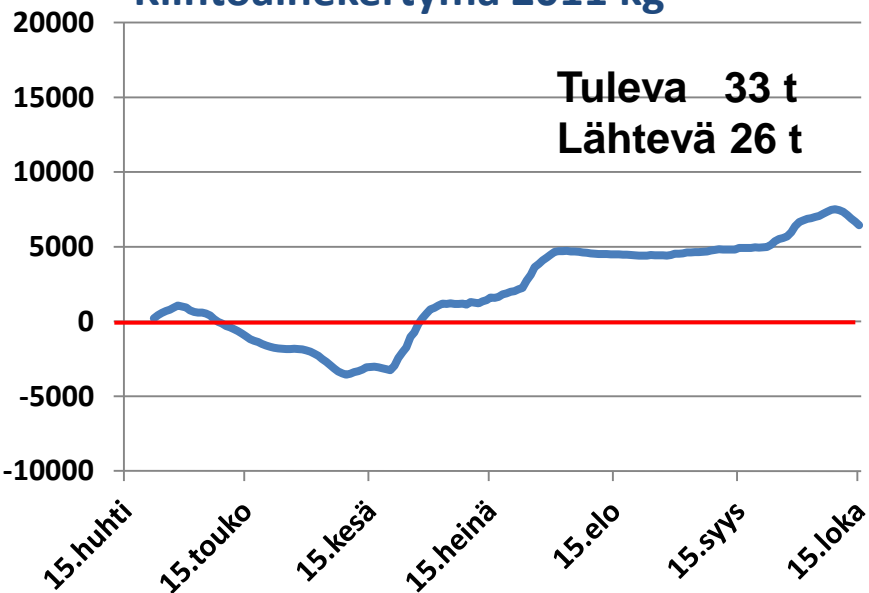
Tulovirtaama Jäälinjärveen



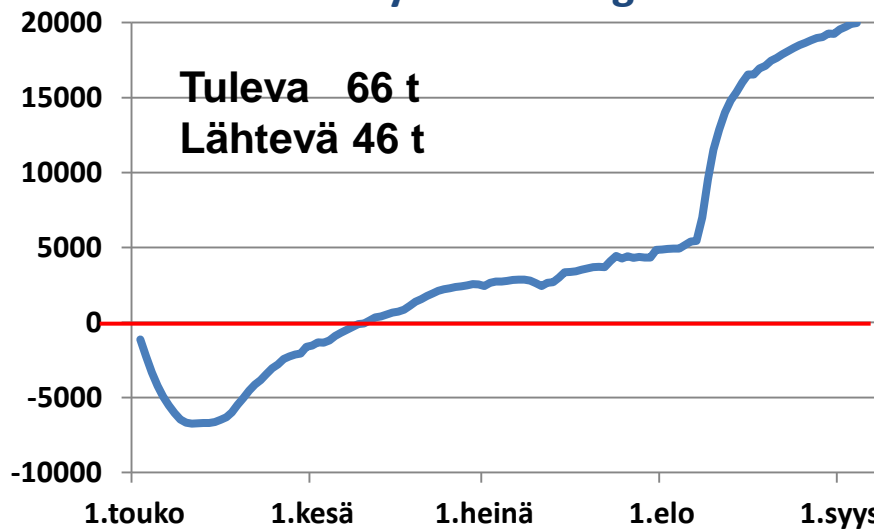
Kiintoaine 2012 kg



Kiintoainekertymä 2011 kg

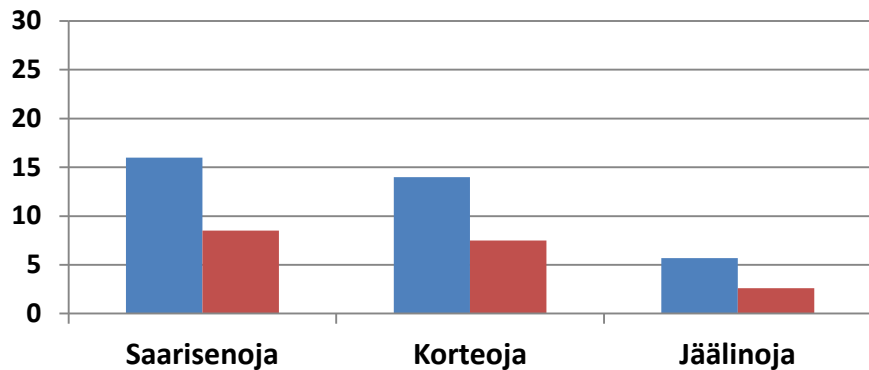


Kiintoainekertymä 2012 kg

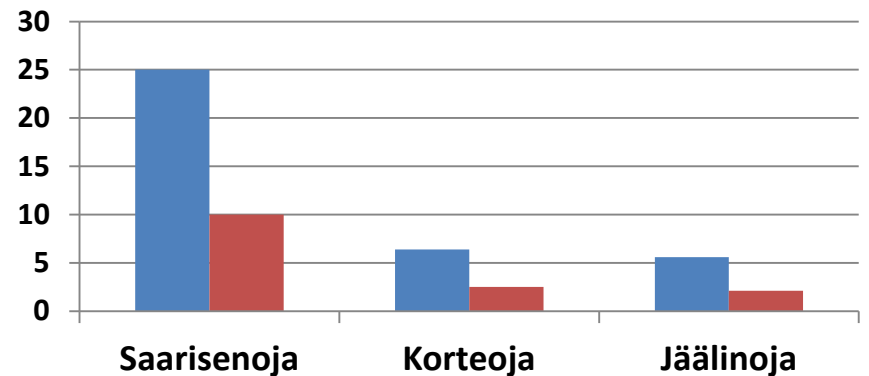


Jäälän vesi, kiintoaineet [mg/l] ...

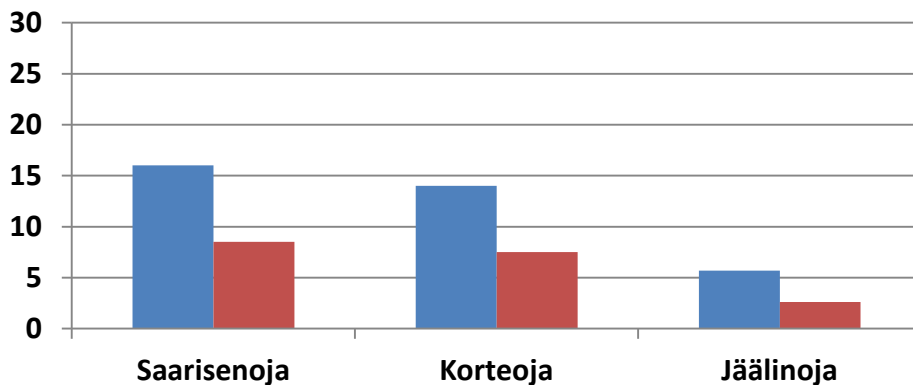
Kiintoaine ja hehkutusjäännös 20.6.2011



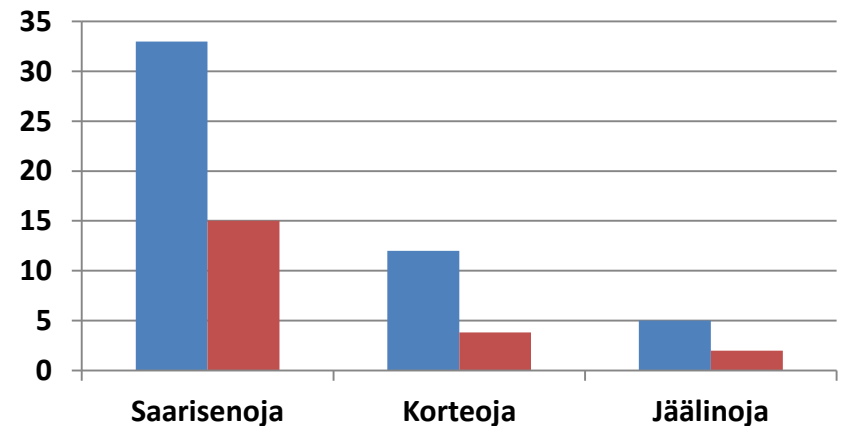
Kiintoaine ja hehkutusjäännös 4.7.2011



Kiintoaine ja hehkutusjäännös 14.7.2011

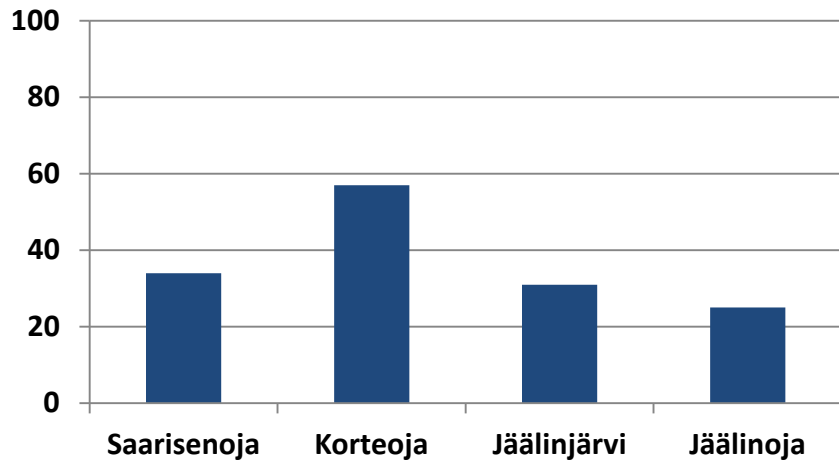


Kiintoaine ja hehkutusjäännös 2.8.2011



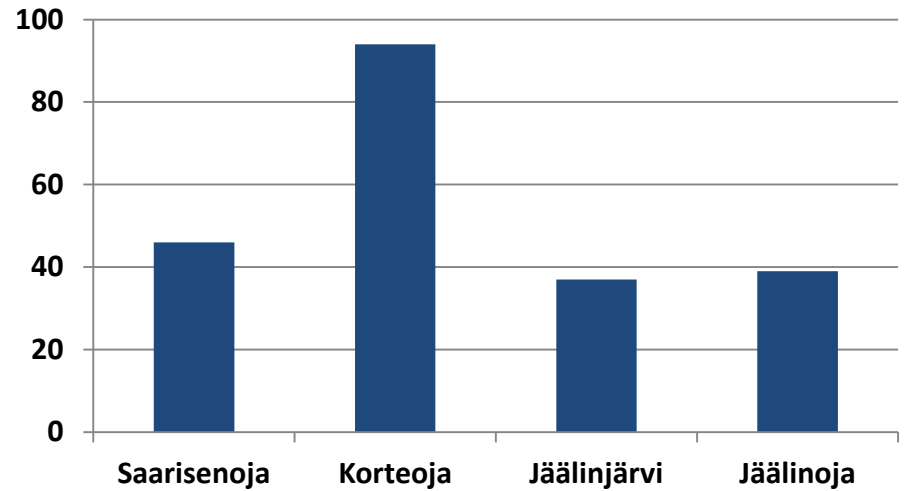
20.6.2011

Kok P $\mu\text{g/l}$



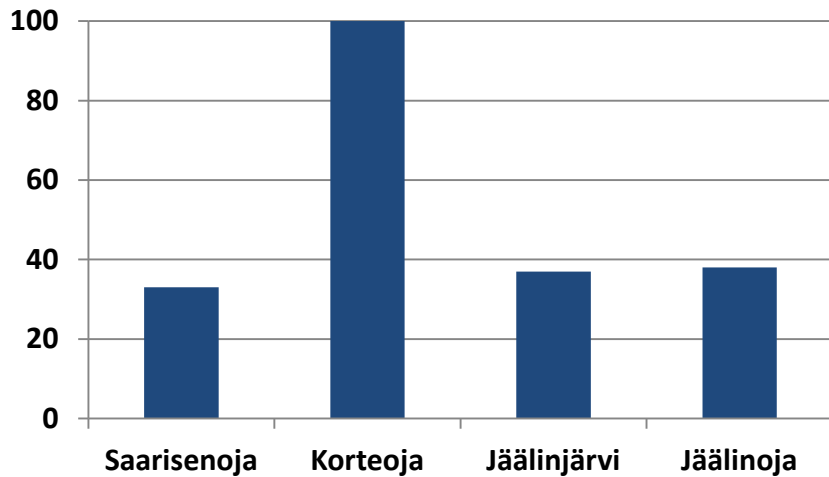
2.8.2011

Kok P $\mu\text{g/l}$



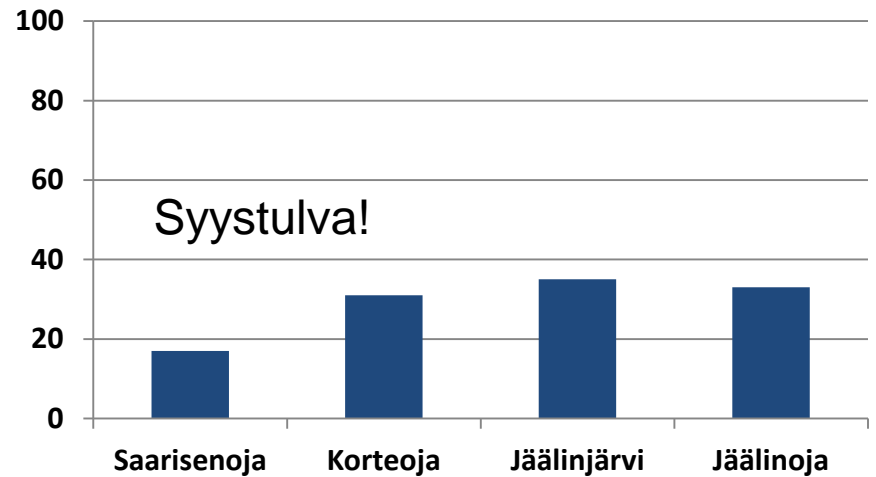
30.8.2011

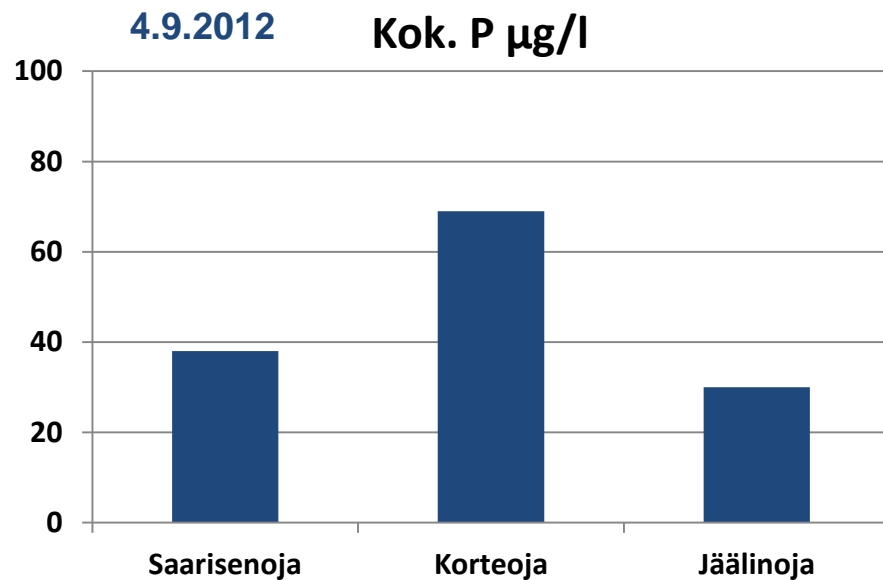
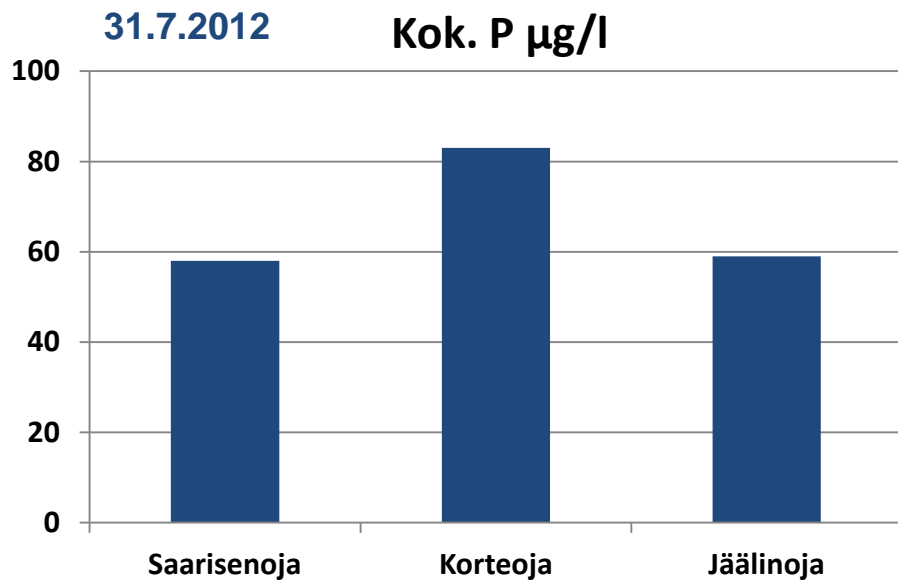
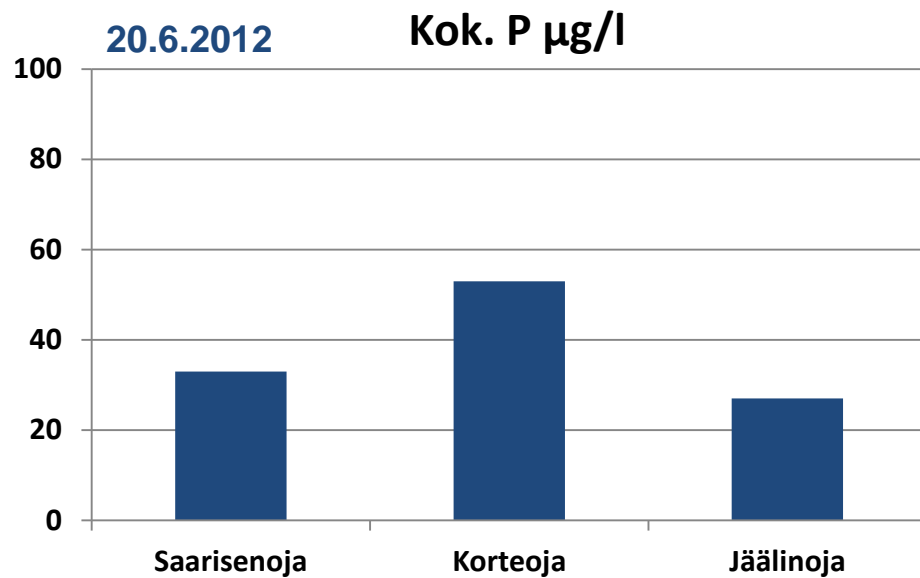
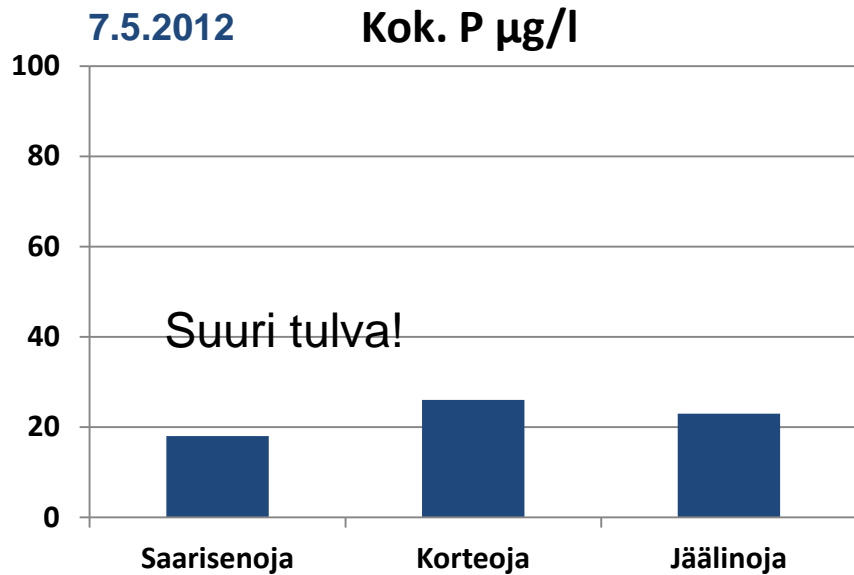
Kok P $\mu\text{g/l}$



11.10.2011

Kok P $\mu\text{g/l}$

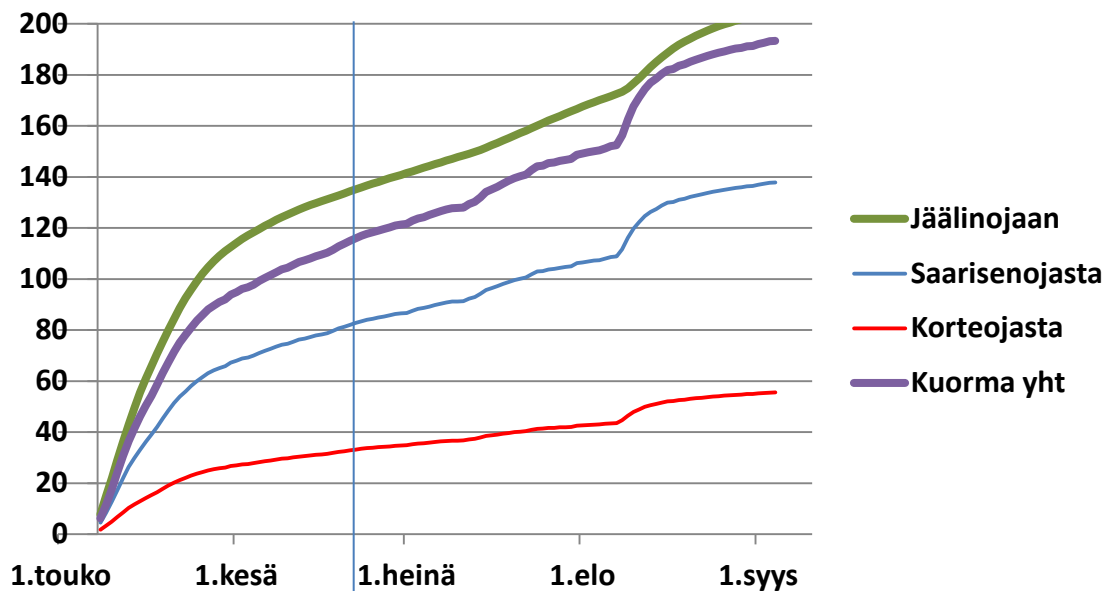




Fosfori 2012

P_{kok} kg

Kertymä -12 kg

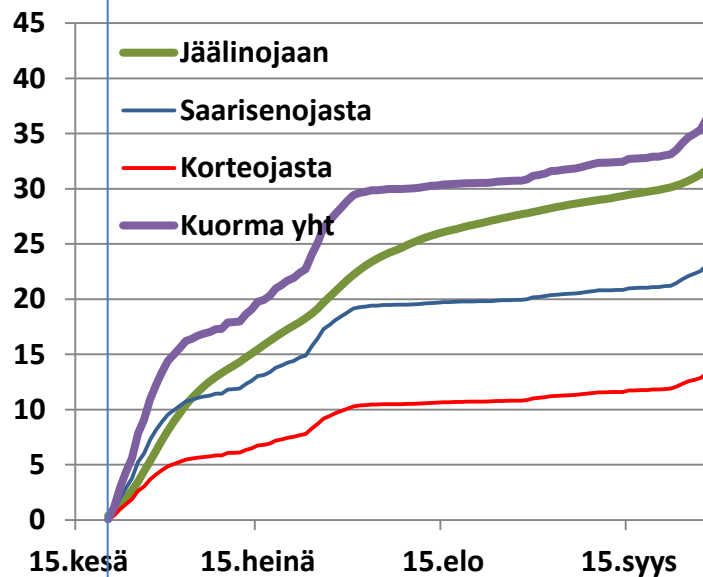


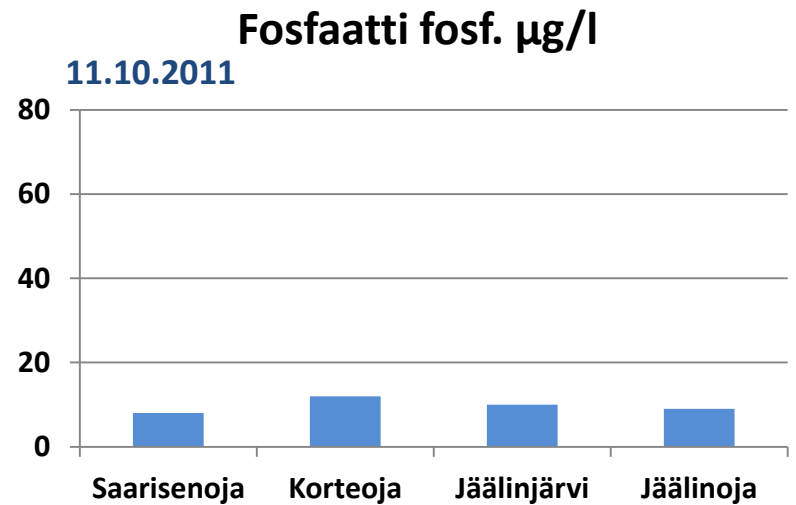
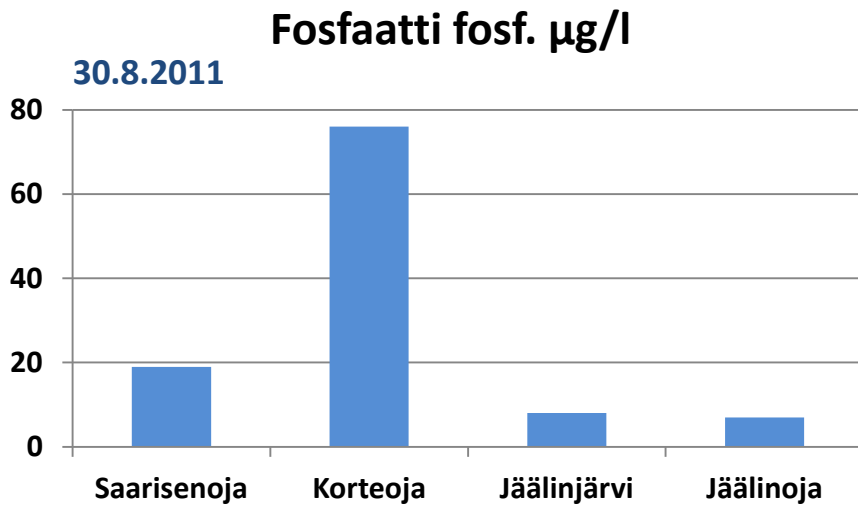
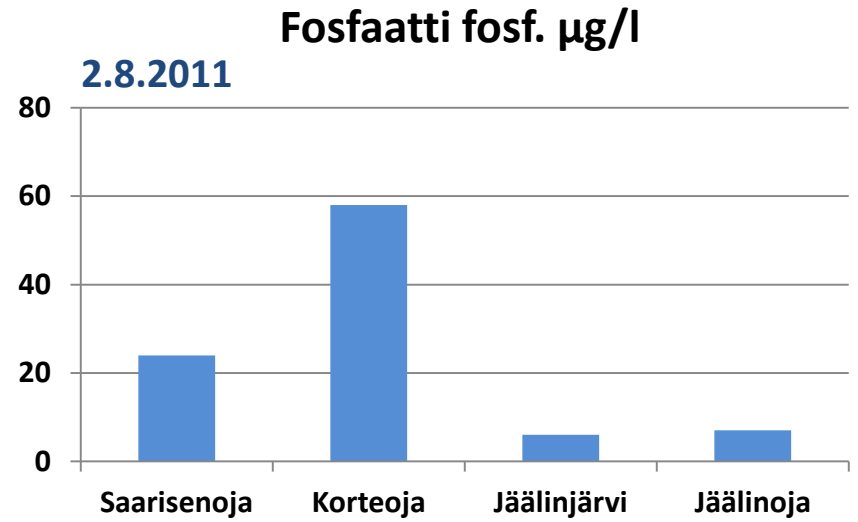
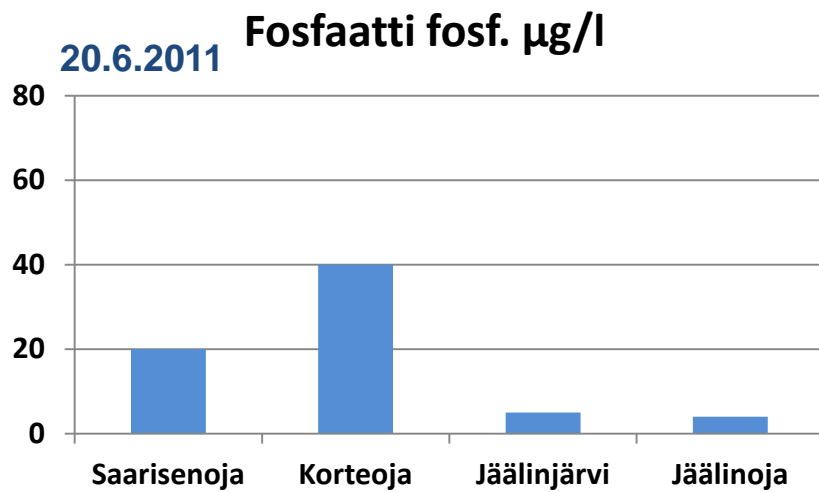
Huom: skaalaus!

Fosfori 2011

P_{kok} kg

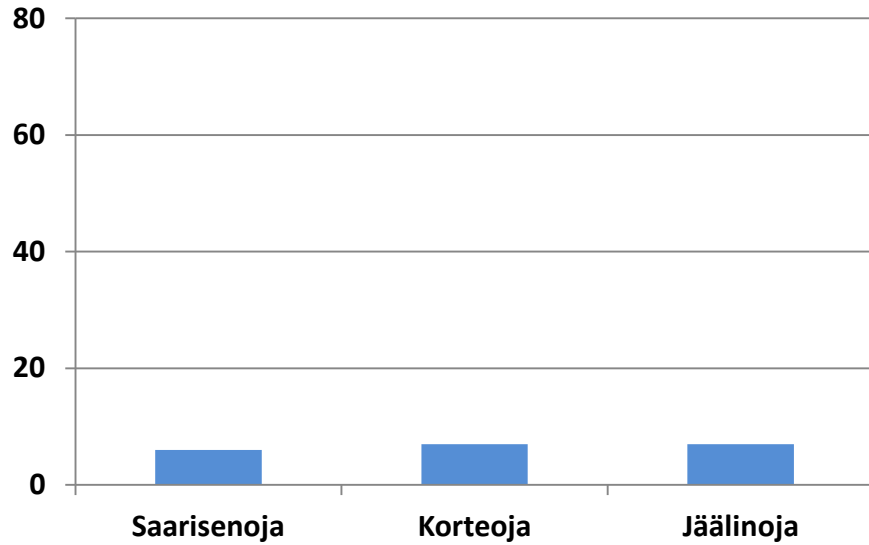
Kertymä 6 kg





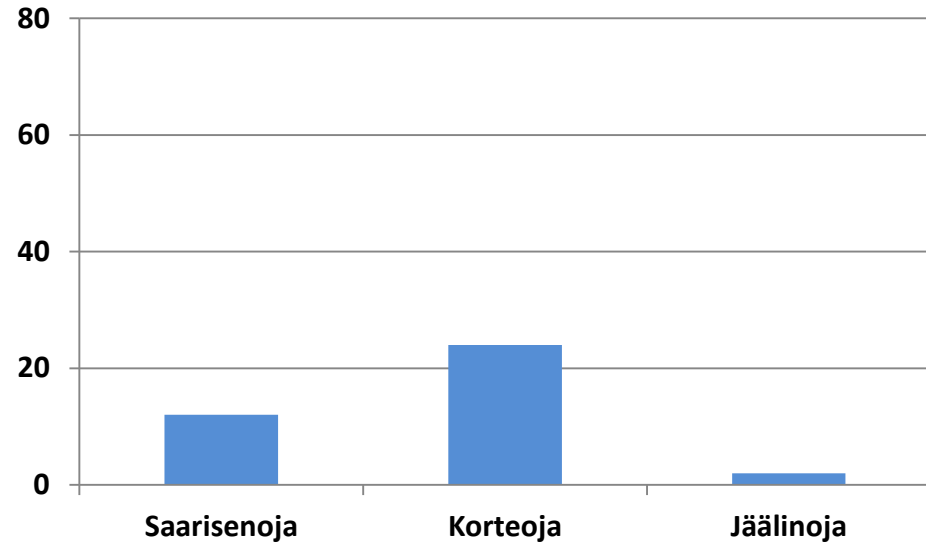
7.5.2012

Fosfaatti fosf. µg/l



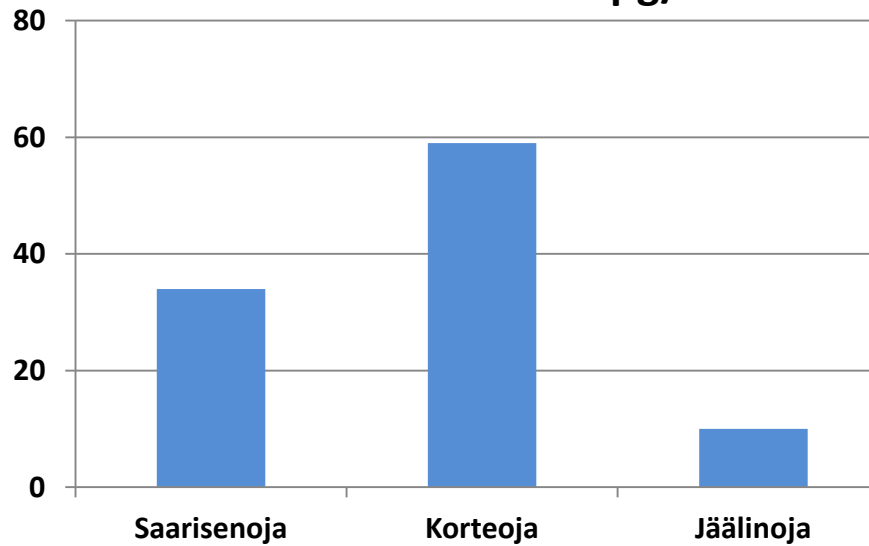
26.6.2012

Fosfaatti fosf. µg/l



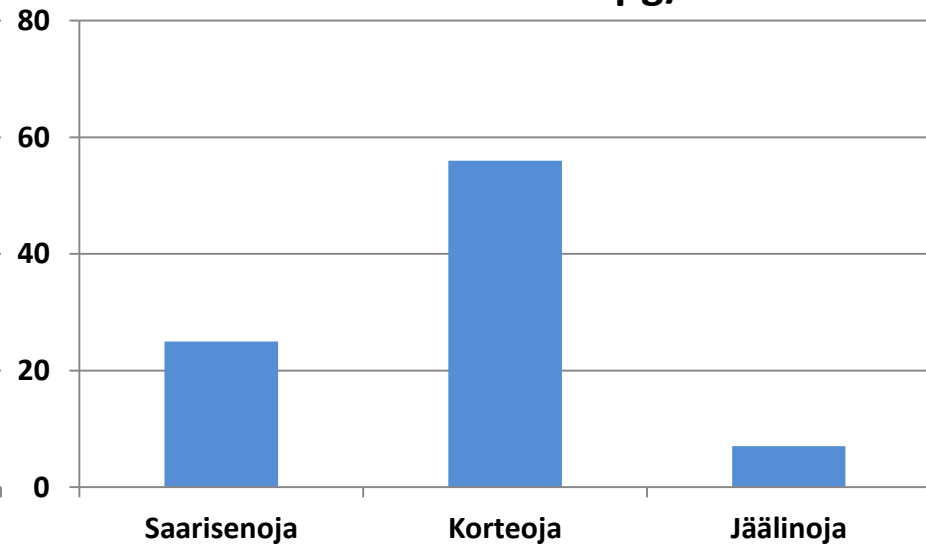
31.7.2012

Fosfaatti fosf. µg/l



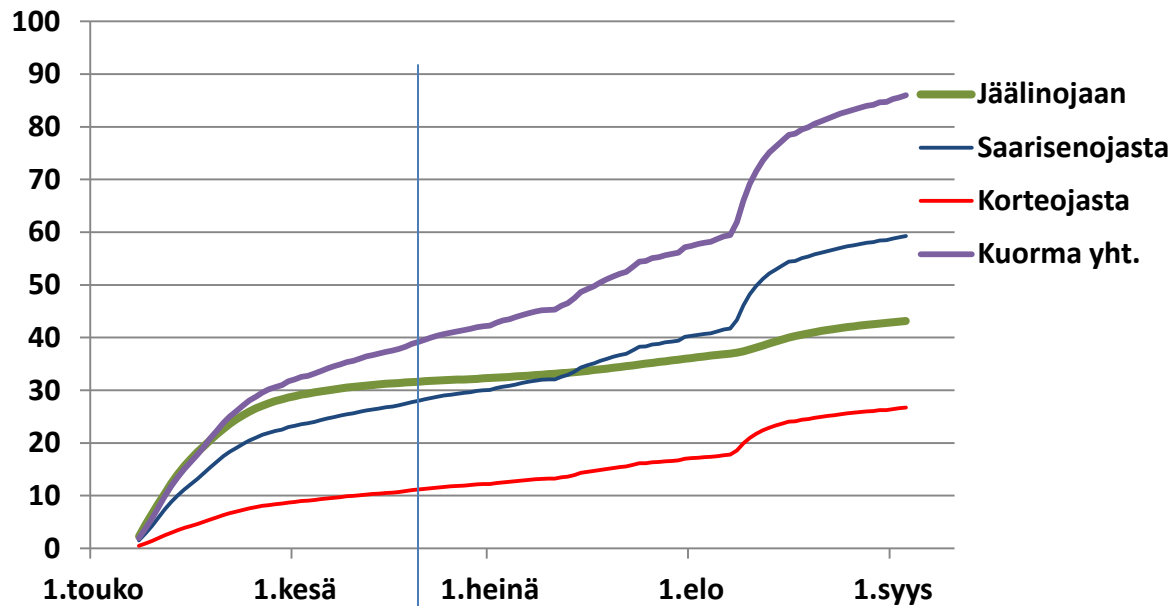
4.9.2012

Fosfaatti fosf. µg/l



Fosfaattifosfori 2012 PO₄-P kg

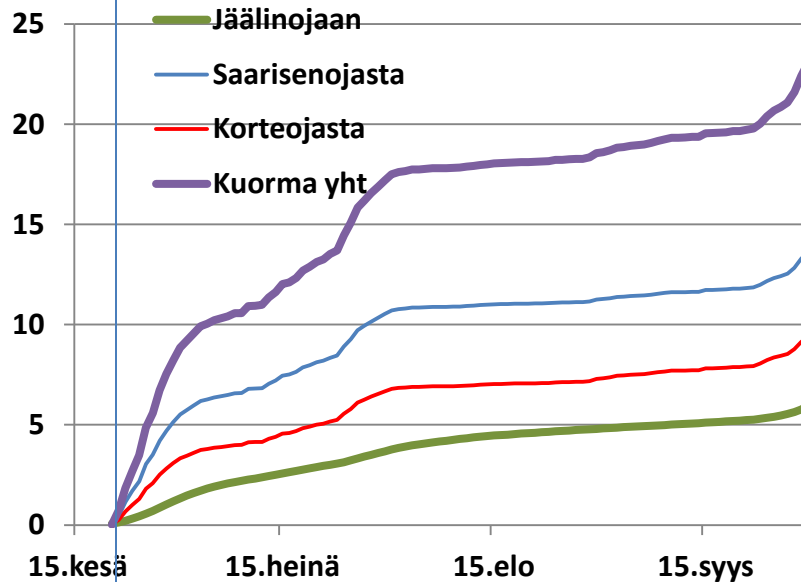
Kertymä 43 kg



Huom: skaalaus!

Fosfaattifosfori 2011 PO₄-P kg

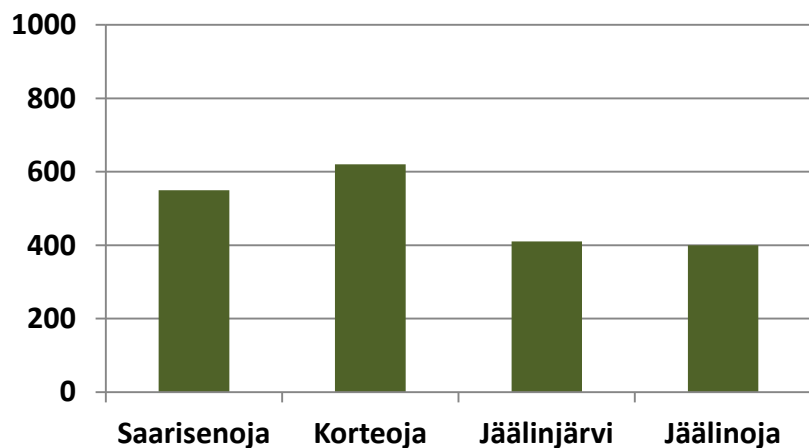
Kertymä 17 kg



Fosfaatti kuluu järvessä!

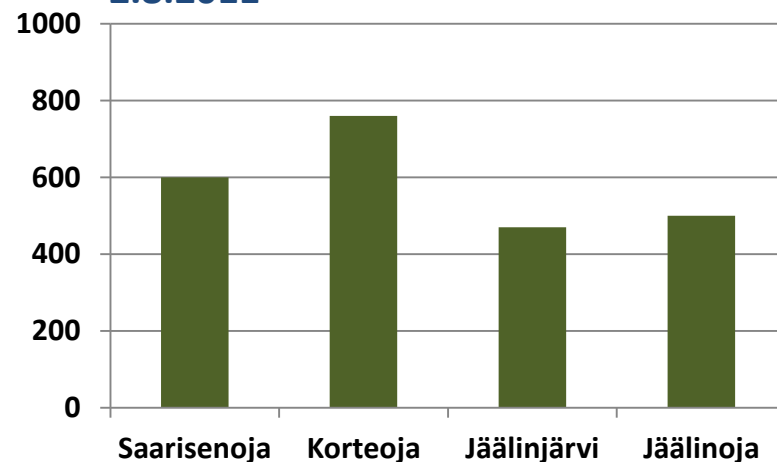
20.6.2011

Kok N $\mu\text{g/l}$



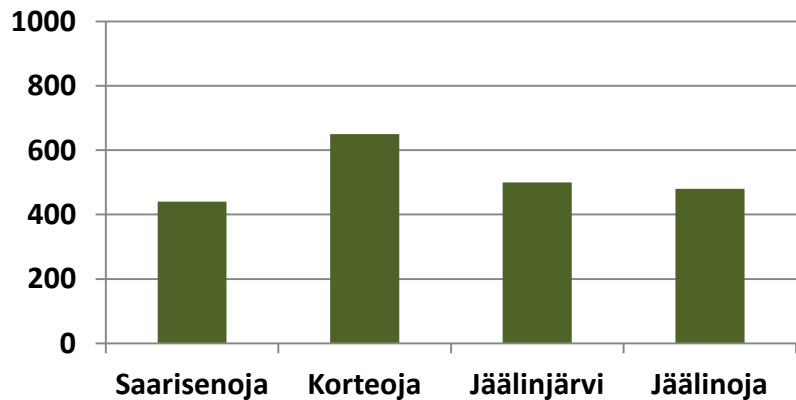
2.8.2011

Kok N $\mu\text{g/l}$



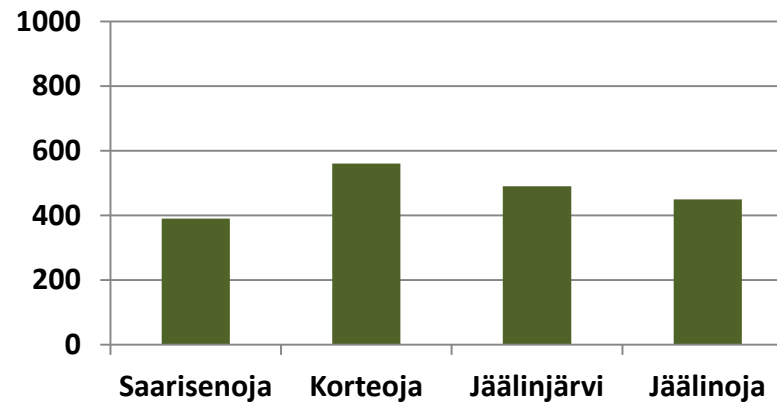
30.8.2011

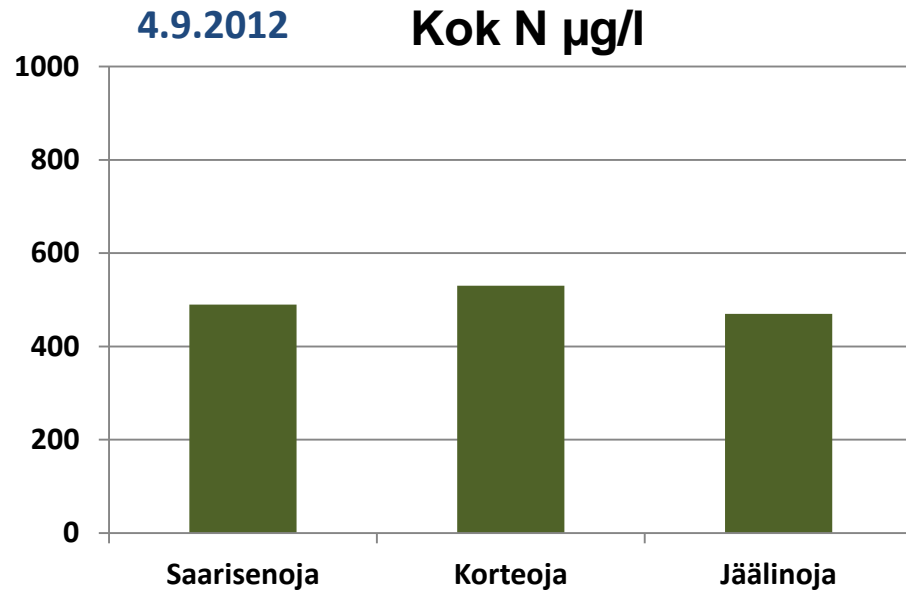
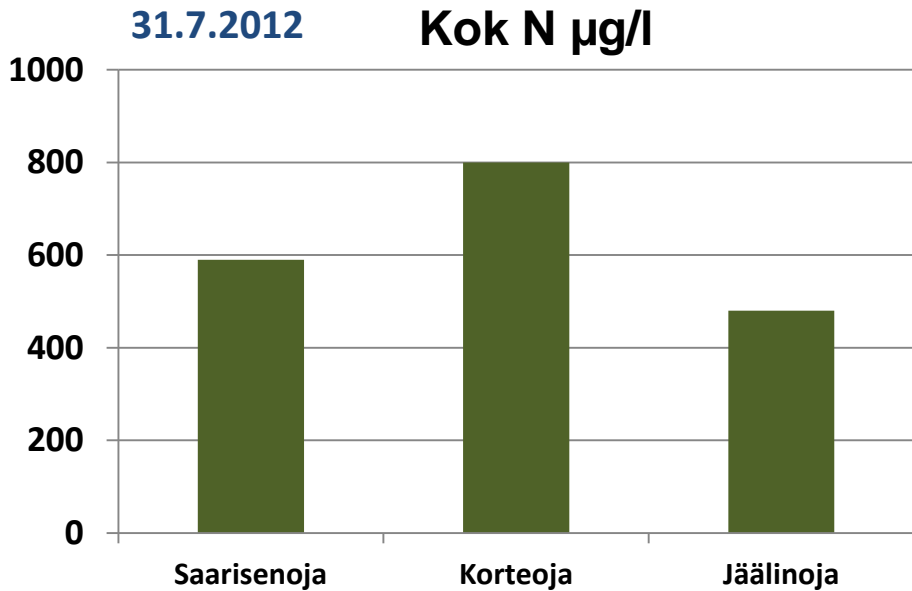
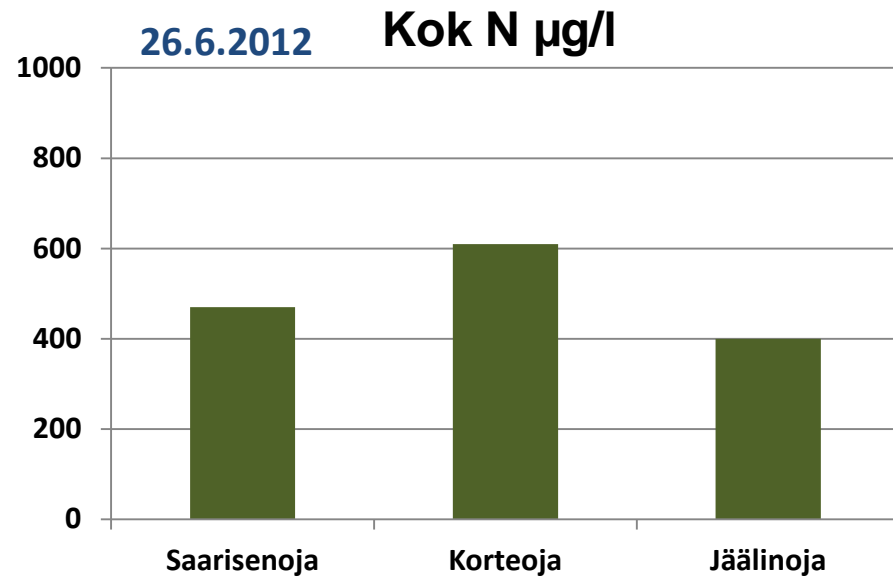
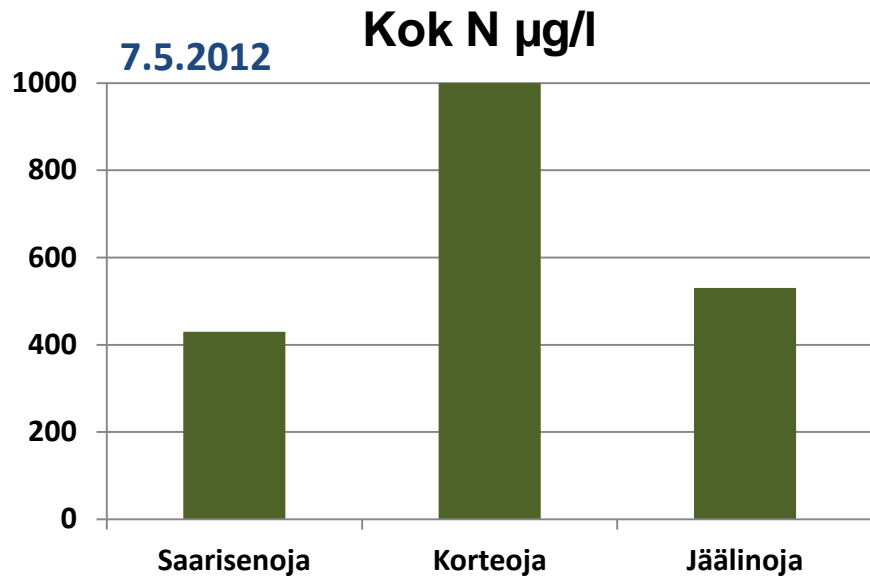
Kok N $\mu\text{g/l}$



11.10.2011

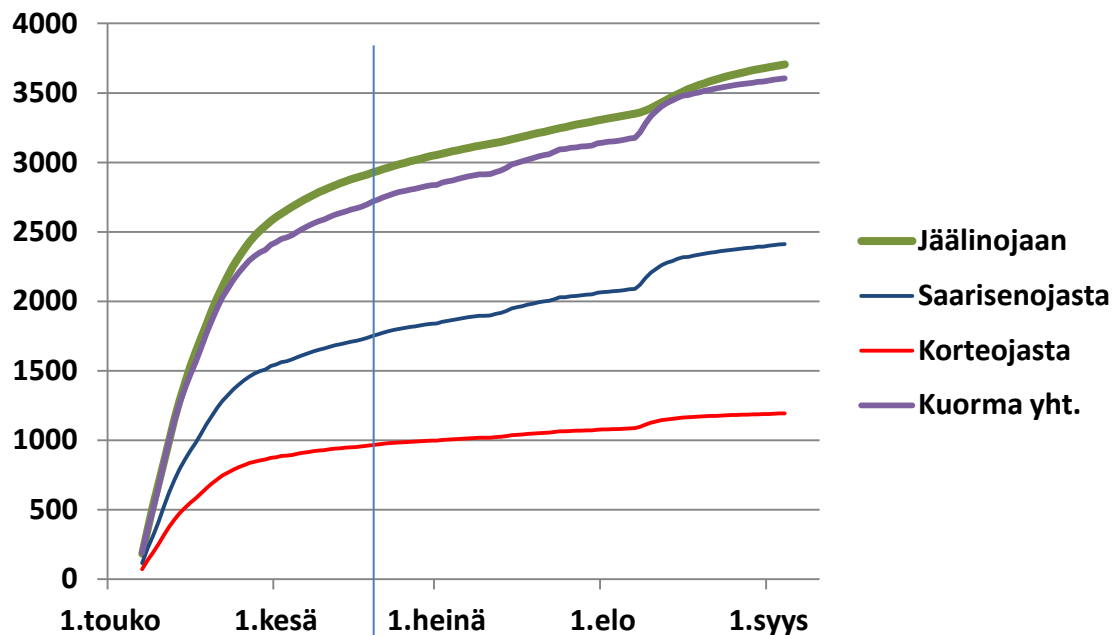
Kok N $\mu\text{g/l}$





Typpi 2012 N_{kok} kg

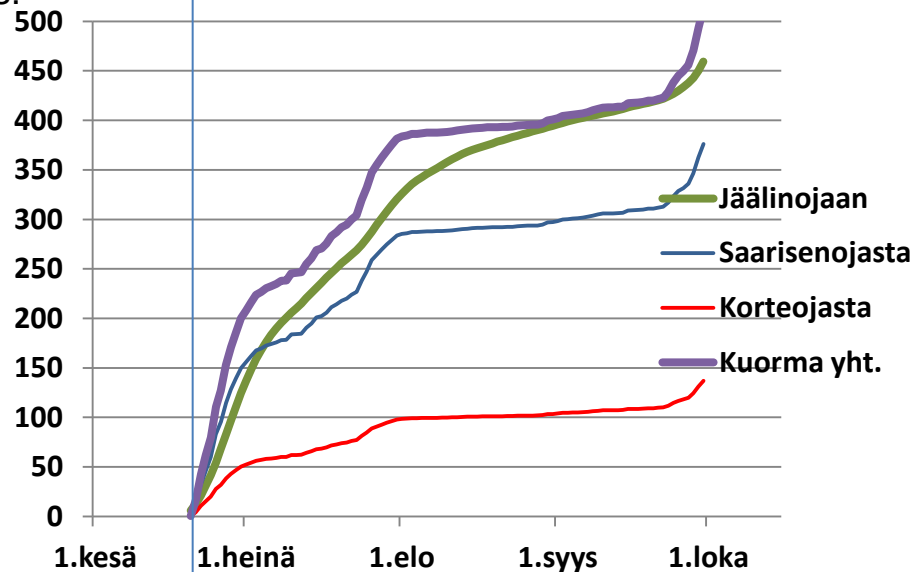
Kertymä -102 kg

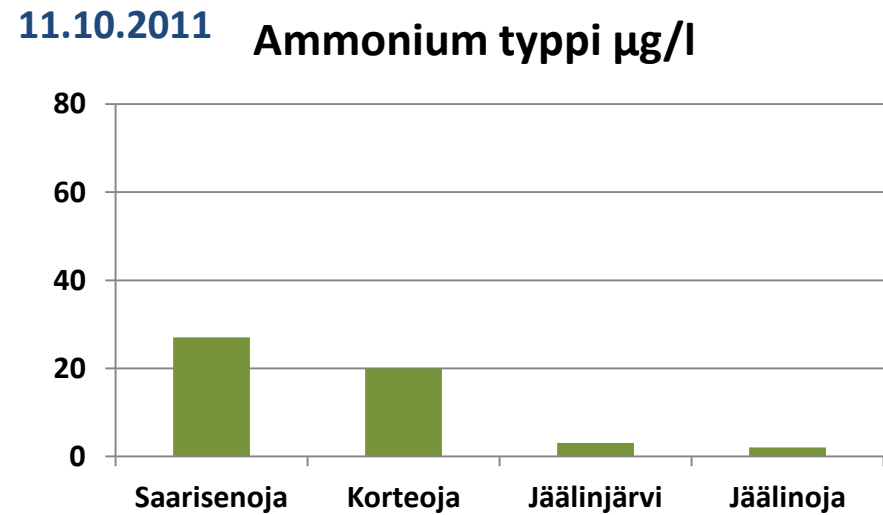
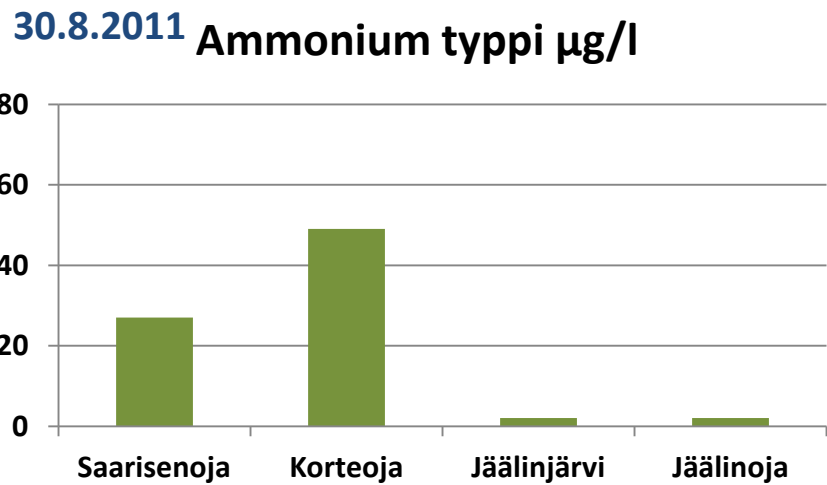
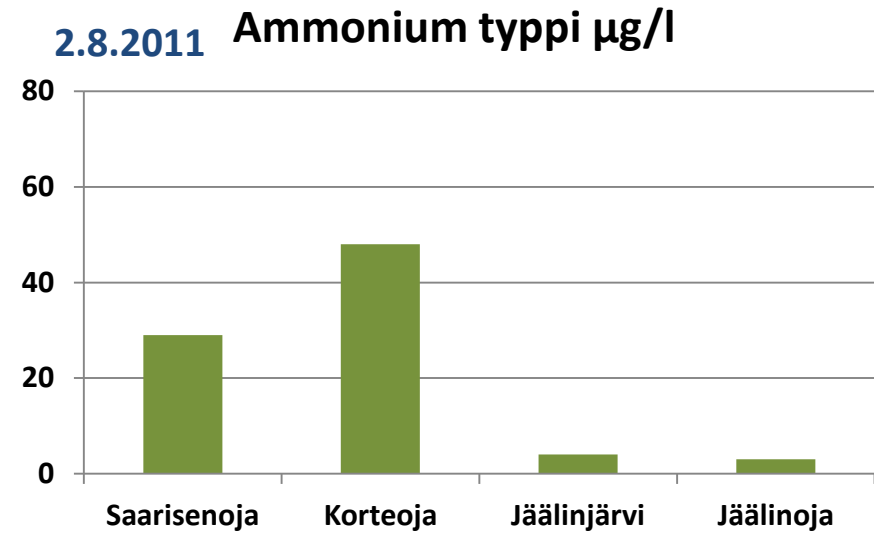
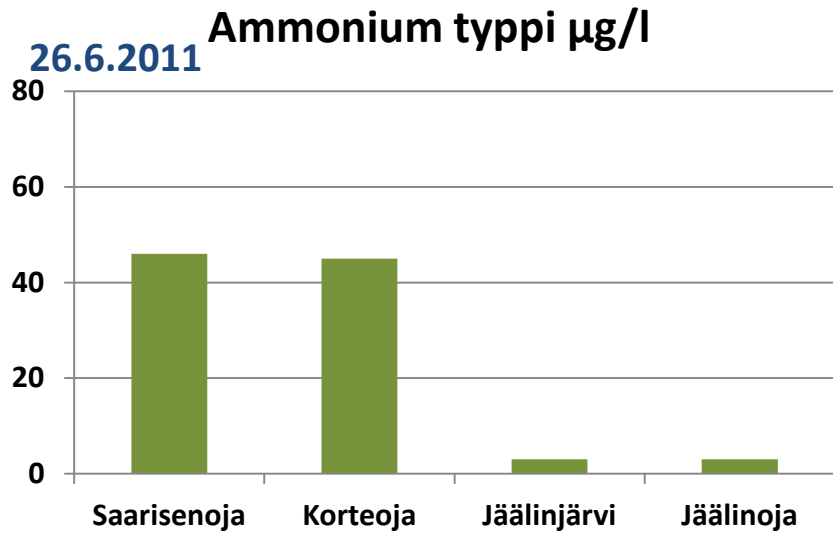


Typpi 2011 N_{kok} kg

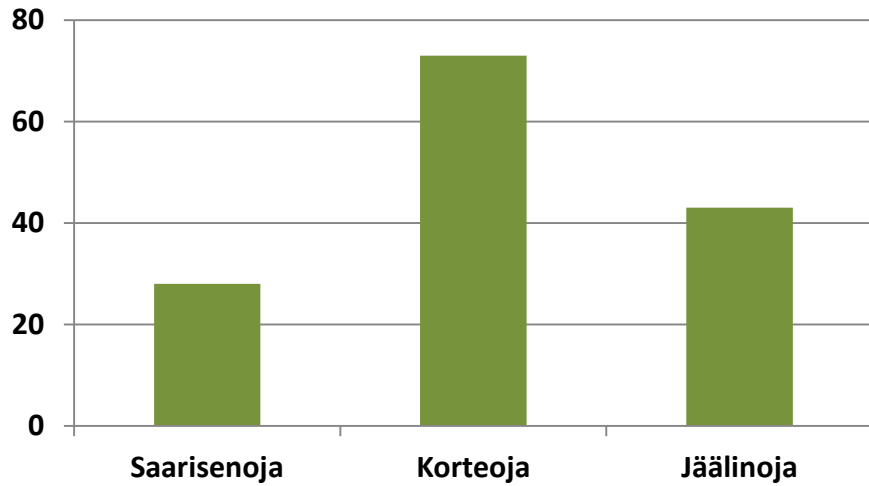
Kertymä 53 kg

Huom: skaalaus!

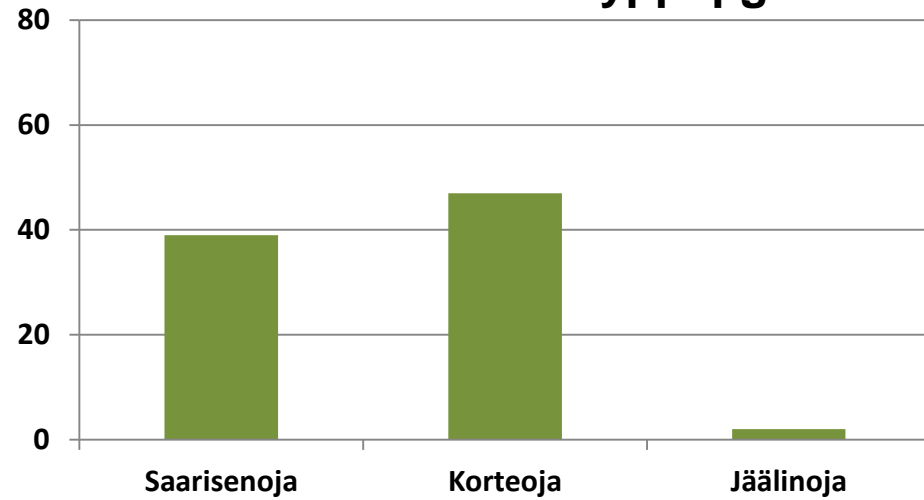




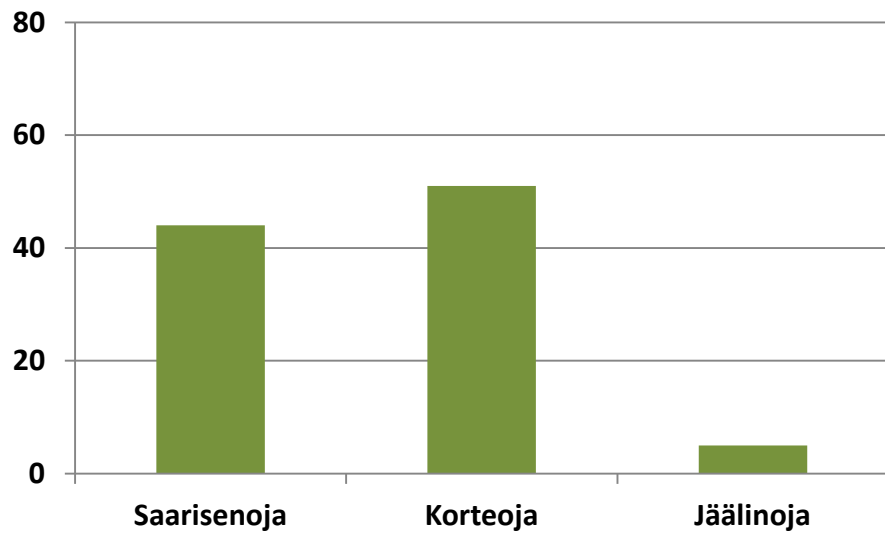
7.5.2012 Ammonium typpi $\mu\text{g/l}$



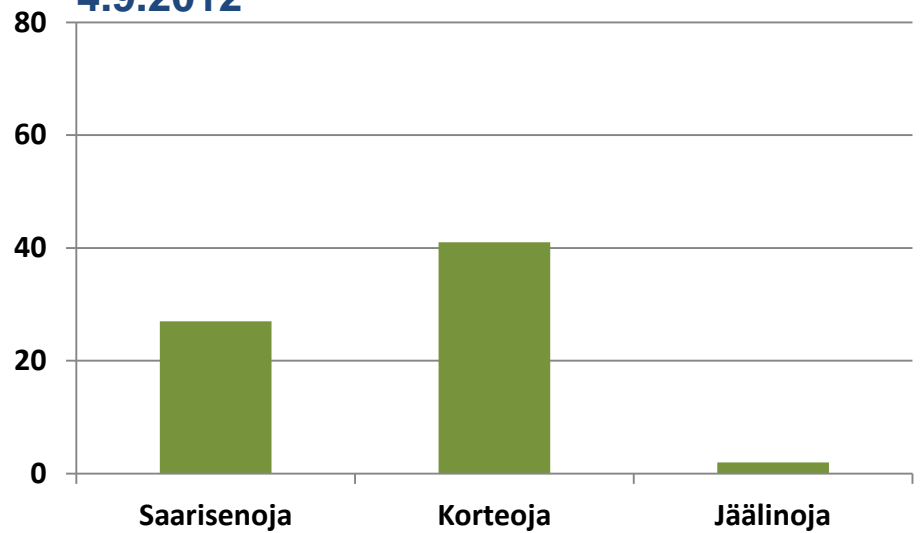
26.6.2012 Ammonium typpi $\mu\text{g/l}$



31.7.2012 Ammonium typpi $\mu\text{g/l}$

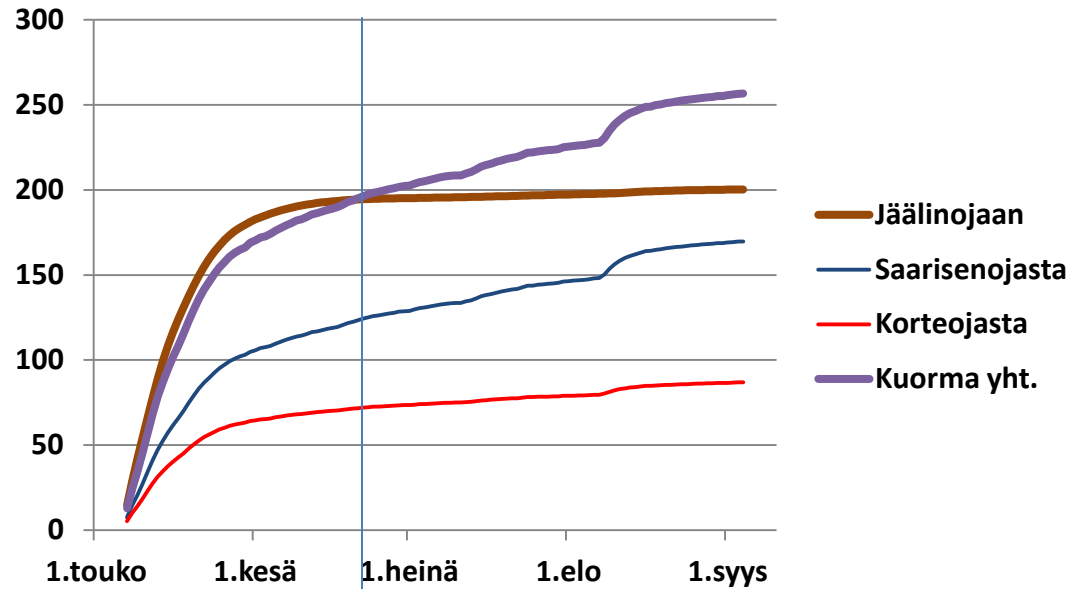


4.9.2012 Ammonium typpi $\mu\text{g/l}$



Ammoniumtyppi 2012 NH₄-H kg

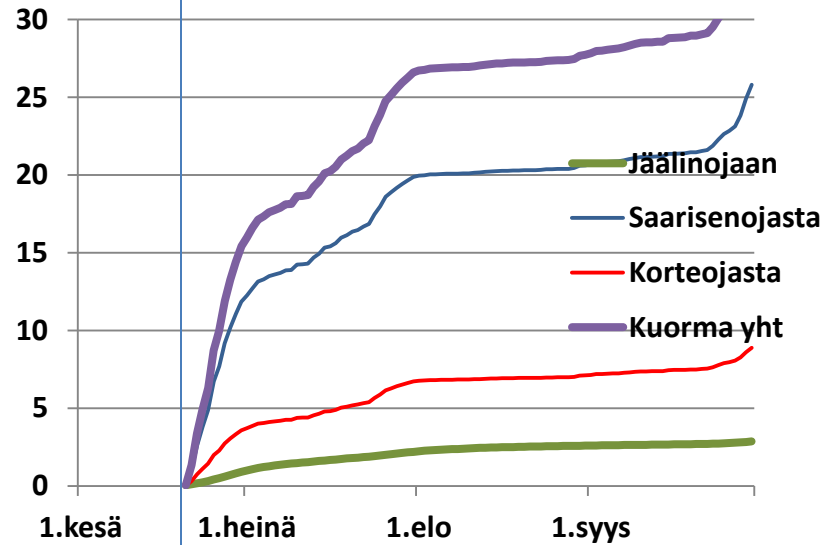
Kertymä 56 kg



Huom: skaalaus!

Ammoniumtyppi 2011 NH₄-H kg

Kertymä 32 kg

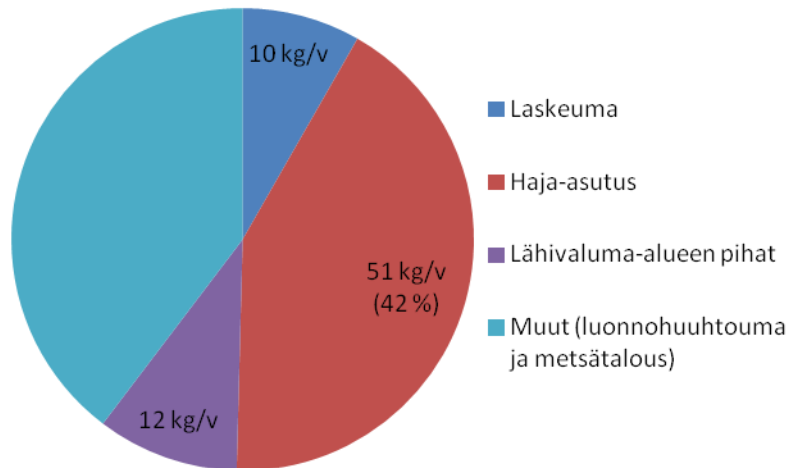


**Ammoniumtyppi
kuluu järvessä!**

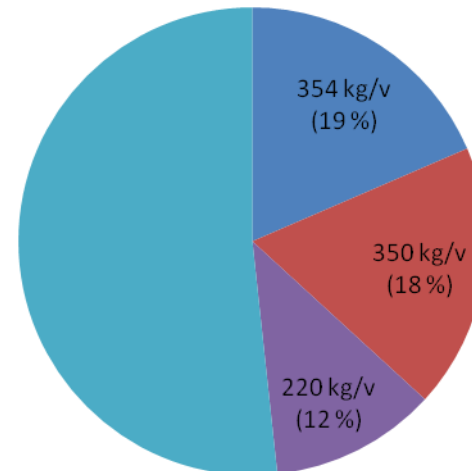
Jäälinjärven ravinnekuormitus

- Vesistömallijärjestelmän vedenlaatuosion kuormitusarvio keskimäärin 121 kgP/v ja 1913 kgN/v
- Alla olevissa kuvaajissa on suhteutettu arvioita lähivaluma-alueen kuormituslähteiden aiheuttamasta kuormituksesta vedenlaatuosion kuormitusarvioon

Fosforikuormitus



Typpikuormitus



Päätelmiä/kysymyksiä

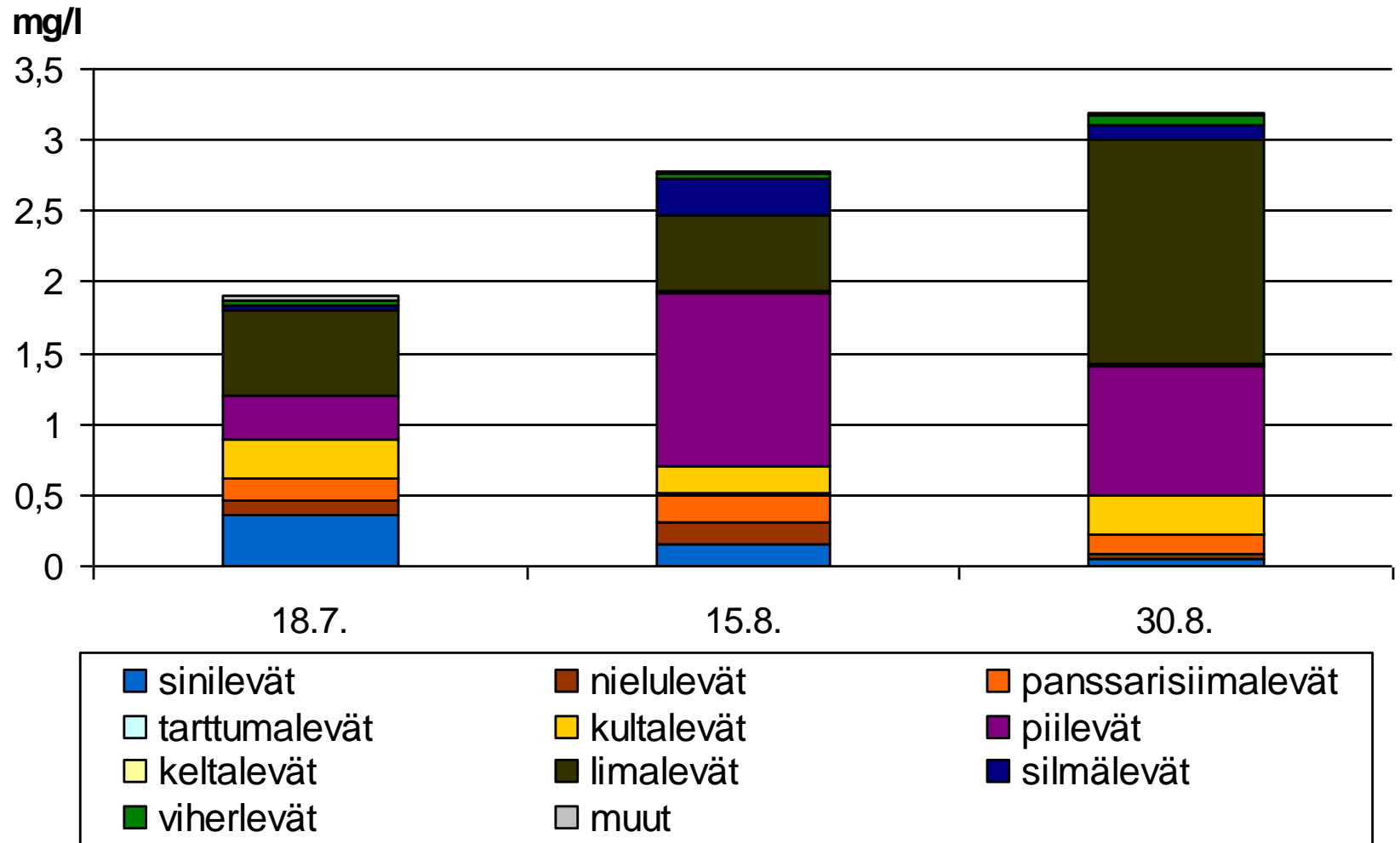
- ❑ Kiintoainekertymä huomattava
 - rautasaostumaa?
 - pääosa kertymästä kesällä
 - => pintavalutuksella hyvät toimintaedellytykset

- ❑ Fosfori ja typpi ”virtaavat läpi”

- ❑ Liukoiset ravinteet kertyvät
 - vrt. limalevä: mikä on liukoisten ravinteiden merkitys?
 - mistä liukoiset tulevat?

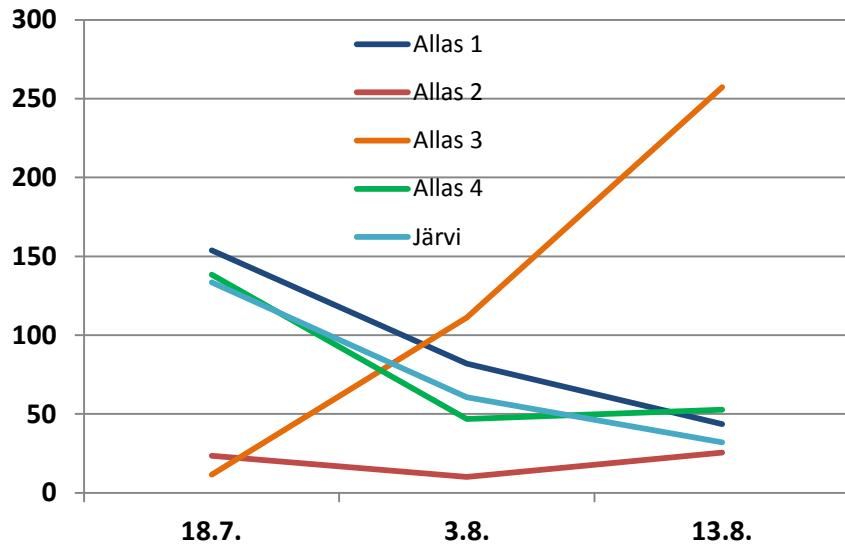
Mikä rooli ravinteilla?

Jäälinjärven plankton ja levät kesällä 2011

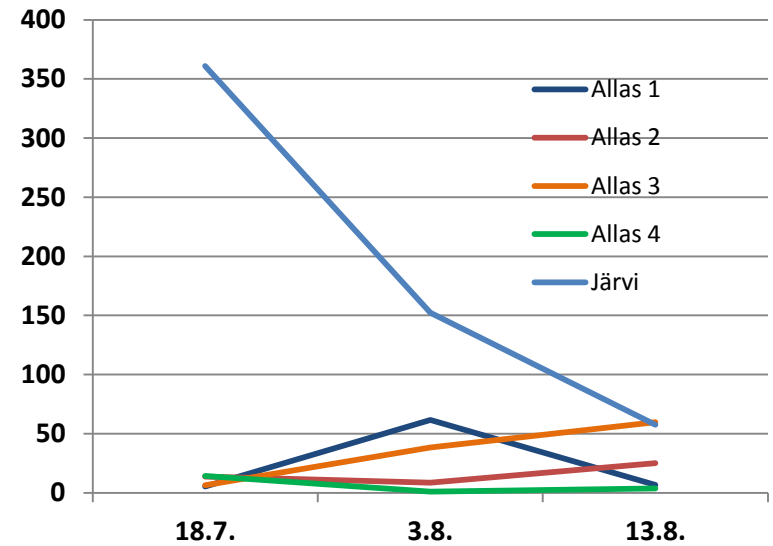


Allaskokeen planktonanalyysit

Äyriäiset



Rataseläimet



Millä menetelmällä järvi kuntoon, kun pulmat ovat

- löyhä pohjasedimentti
- limalevä

Yleisesti tunnettuja:

- Fosforin saostus
- Ravintoketjukurkennostus
- Ruoppaus
- Hapetus
- Vesikasvillisuuden poisto
- Vedenpinnan nosto
- Alusveden poistaminen
- Järven tilapäinen kuivattaminen
- Lisäveden johtaminen
- Sedimentin pöyhintä
- Kipsaus
- Savipeitto
- Hoitokalastus