



The Food Pilot Infrastructure Campus Ås

What can Campus Ås offer

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What are the strengths of Campus Ås?

- Knowledge and research about food production, food composition (and their variation), food processing
- Facilities for food production
- Model systems for studies of health effects of food
- Studies on how food contribute to good health
- Value chain perspective
- One-health perspective
- Close cooperation with the food industry
- Our focus is not human medical research





Matpilotanleggene Campus Ås – en motor for forskning, utdanning og innovasjon på Campus Ås.

Fase 1: Infra Pilot Plant Campus Ås
2011-2015: NRF pr.nr. 208674, 27 mill NOK.
Oppgradert og fornyet, men langt fra ferdig.



**Fase 2: Infrastruktursøknad 2018: Videre oppgradering, fornying og optimalisering. Nye behov og prosessmuligheter har utviklet seg.
Søker om 30-50 mill?**

St. melding 9 (2011-2012) – “Velkommen til bords”!

Campus Ås: Har en nasjonal rolle innen forskning, utdanning og innovasjon innen matsektoren og er en strategisk spydspiss for resultatorientert matsatsing

Suksess fordrer tverrfaglig koordinert samarbeid – Campus Ås matpilothallene er skreddersydd!

Nye behov er forankret i nye store forskningsprosjekter og økt samhandling med industrien gjennom bla. brukerstyrte prosjekter som har gitt økt bruk av matpiltanleggene. Fokus på Bioøkonomi krever utvikling av nye prosesser.

Noen eksempler:

Foods of Norway

Foods pro Future

FME: Bio4Fuels

4 nye strategiske programmer på Mat gjennom Matfondavtalen fra 2017 (Nofima)
Flere store IPN- prosjekter (Forskningsprosjekter eid av industrien)

Food Pilot plants Campus Ås



Matpilotanleggene Campus Ås

Partner:



Industrial partners:

Phase I:
Infrastructure project
208674
2011-2015
Collaborators:



Phase II:
Proposed new
infrastructure project
Collaborators:



NIBIO
NORSK INSTITUTT FOR
BIOØKONOMI



Where to find information about the Food Pilot plants?

WWW.NMBU.NO search for **Forskningsanlegg (evt. Matpilot)**

Or use the address:

<https://www.nmbu.no/fakultet/kbm/oppdrag/node/27115>

If you know that the pilot plant is located at Nofima

<https://nofima.no/forskningsanlegg/>



Nofima

What can the Food Pilot plants Campus Ås offer?

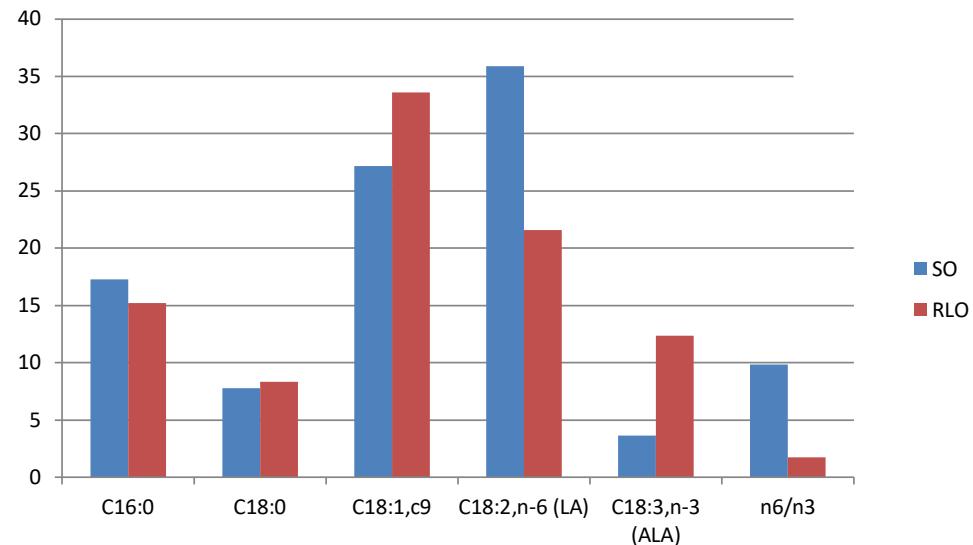


- Production lines for small series
- Possibility to produce food products with particular formulation
- Knowledge about food production, food composition, food processing and analytic capacity

Facilities at Campus Ås – of interest for food/nutrition research



Feeding experiment with chicken using Soya oil vs rape- and linseed oil feed

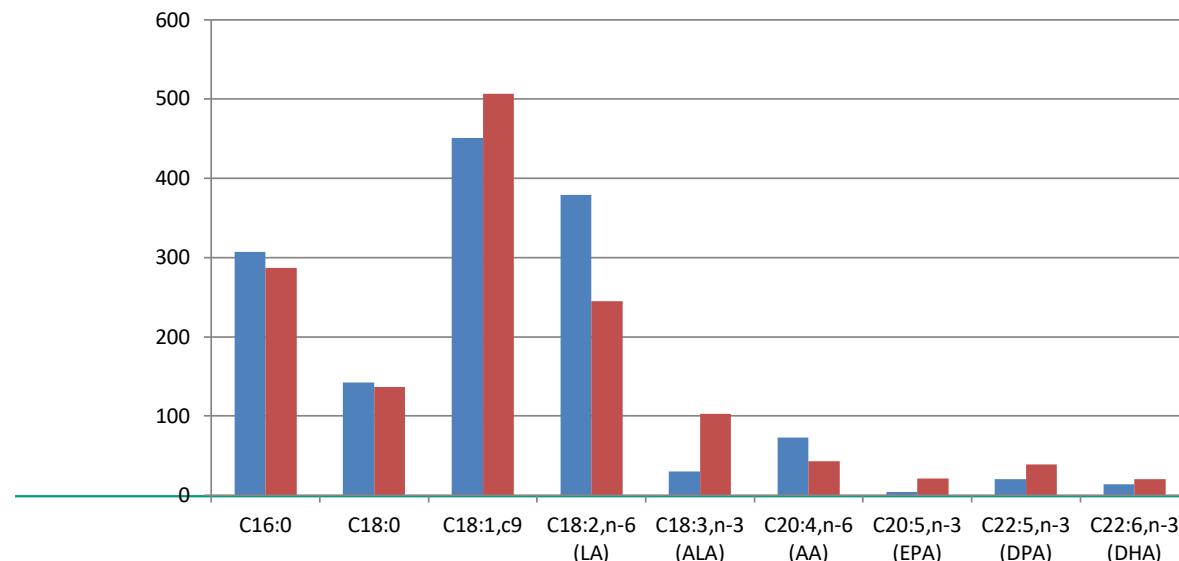


Feed SO
Feed RLO

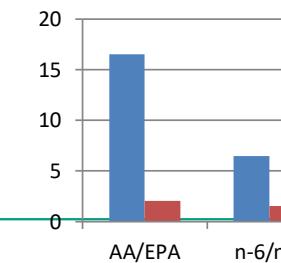
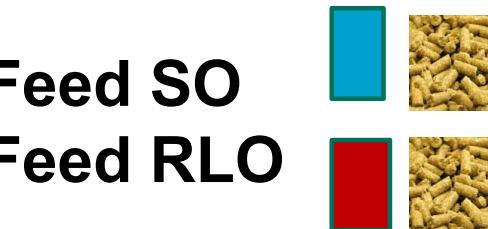


Feeding experiment with chicken using Soya oil vs rape- and linseed oil feed

Fatty acid composition Chicken breast muscle



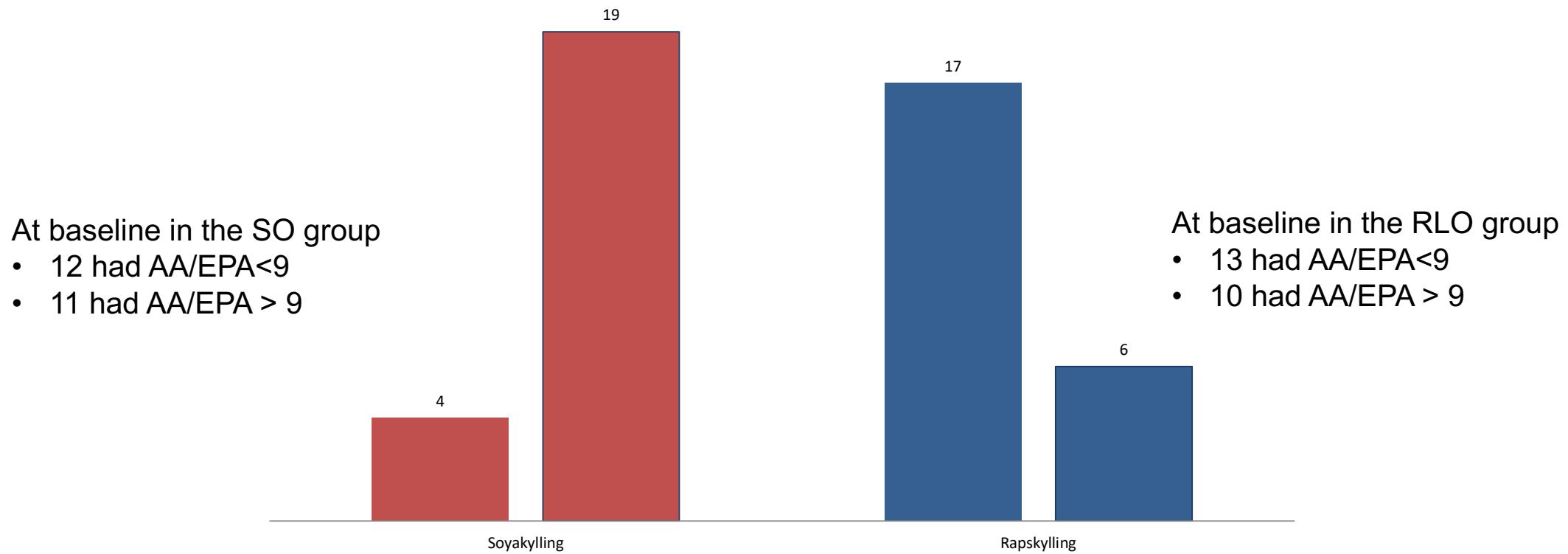
Feed SO
Feed RLO



Intervention experiment (n=23 in each group)

Serum phospholipid fatty acids, AA/EPA ratios

Group eating: SO chicken RLO chicken

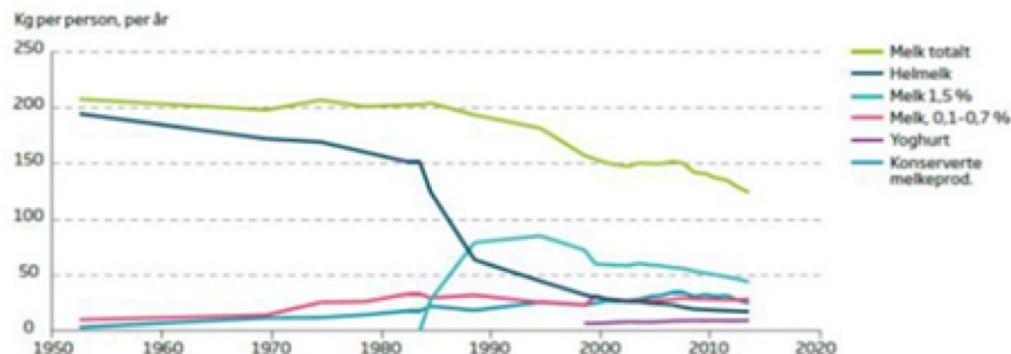


We can change food production towards increased or decreased contents of nutrients



Fra «Utviklingen i norsk kosthold 2014»
(Helsedirektoratet 2015).

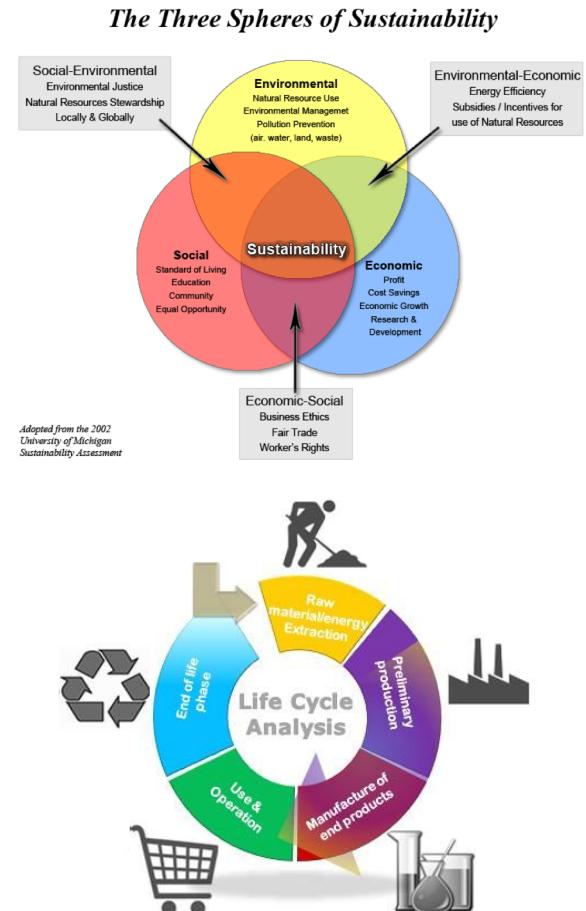
IODINE



Beregnet forbruk av melk og melkeprodukter per person basert på engrosstatistikk (tilgjengelig mengde melk per person).

- Vit-D
- Vit-K
- Selenium

Sustainability assessments:



"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Brundtland commission 1987

Life cycle analyses:

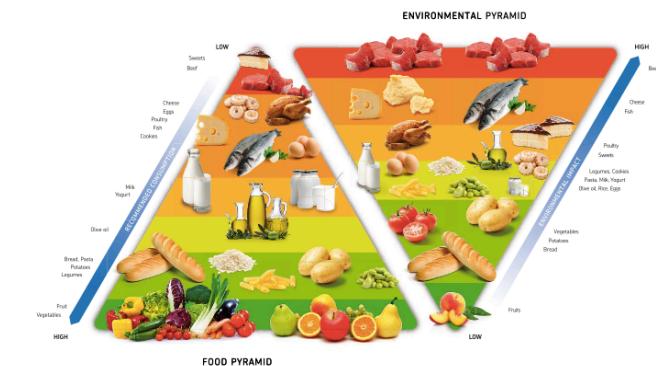
- Global warming
- Freshwater eutrophication
- Marine eutrophication
- Acidification
- Human toxicity
- Freshwater ecotoxicity
- Water usage
- Agricultural area usage
- Total primary energy use
- Consumption of fossil energy
- Social sustainability:

Units used:

- 1 kg food produced
- 1 kg food eaten
- 1 kg protein eaten
- 1 kg protein eaten, absorbed and utilized



Sustainable foods through innovative utilization of plant proteins: Re-newed focus on proteins from plants!



The double food pyramid

Sustainable diets: Diets with low environmental impacts, which contribute to food and nutrition security and to healthy life for present and future generations (UN/FAO)



Why plant proteins?

Global dimension:

Sustainable production

Future food safety

National dimension:

Increased food production

(Stortingsmelding 11, 2017/18)

Sustainable production and diet

Reduce climate emissions (Paris Agreement)

Foods for increased health

Innovations in Norwegian value chains

New attractive and healthy products

