

Impacts on Forestry of Changes in Society and Corresponding Land Use

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New Zealand Institute of Forestry Conference 2018

Collaboration

Collaboration “The action of working with someone to produce something”
Oxford Dictionary

Change

Change “Make or become different” *Oxford Dictionary*



1000 AD



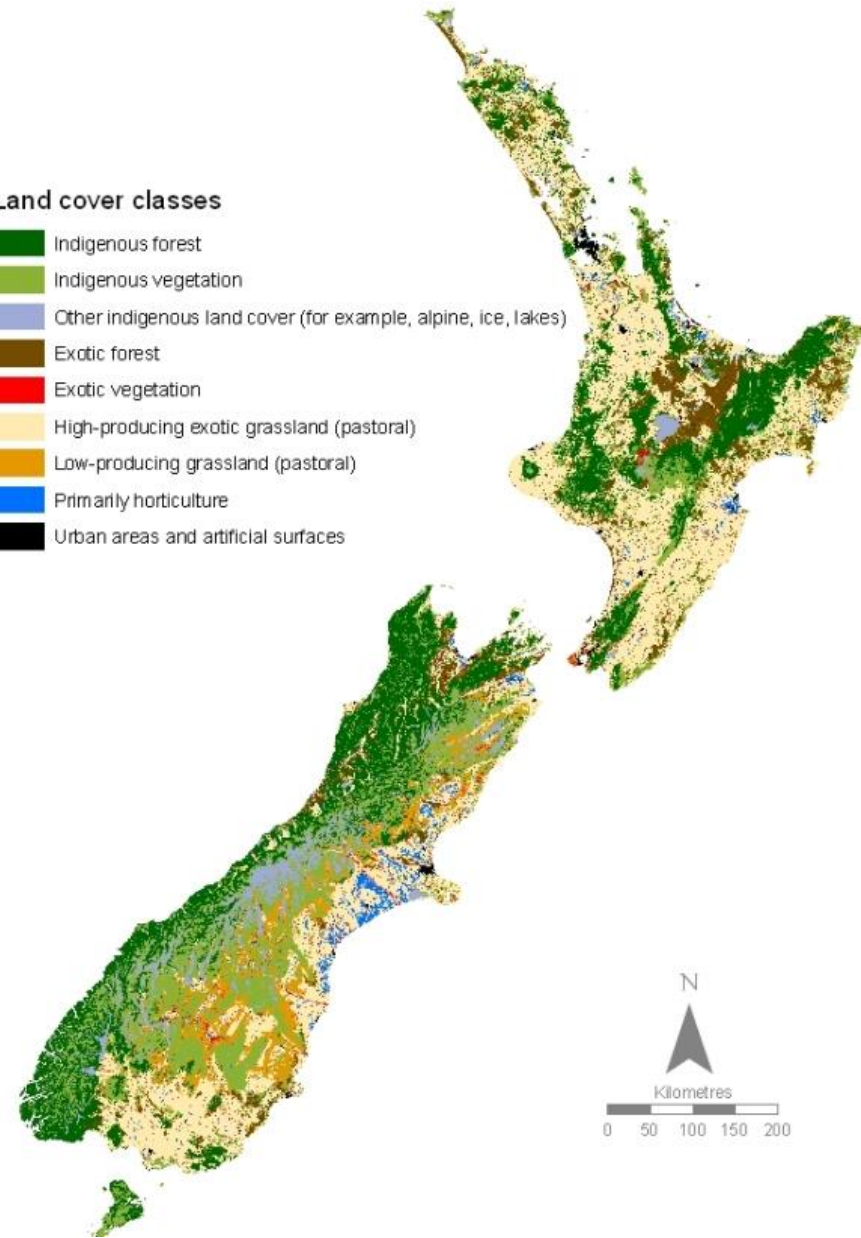
1840

Where have we come from – NZ Forest Cover

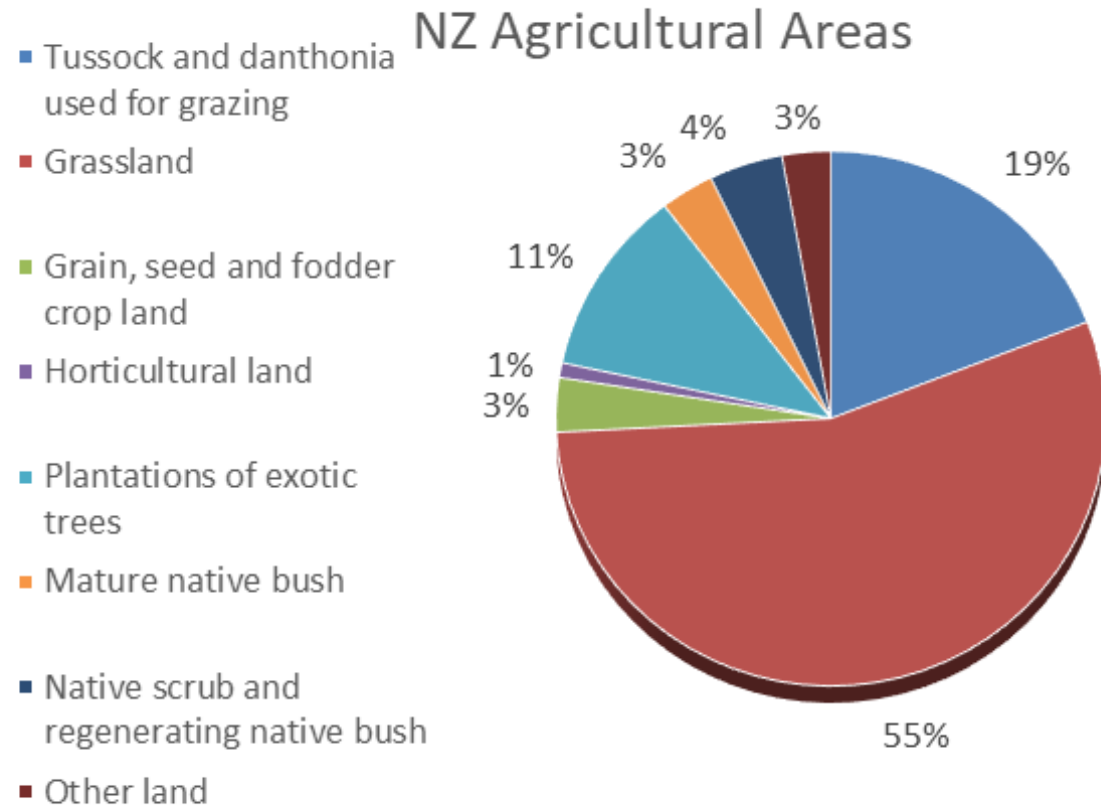
Where are we at Today

Land cover classes

- Indigenous forest
- Indigenous vegetation
- Other indigenous land cover (for example, alpine, ice, lakes)
- Exotic forest
- Exotic vegetation
- High-producing exotic grassland (pastoral)
- Low-producing grassland (pastoral)
- Primarily horticulture
- Urban areas and artificial surfaces

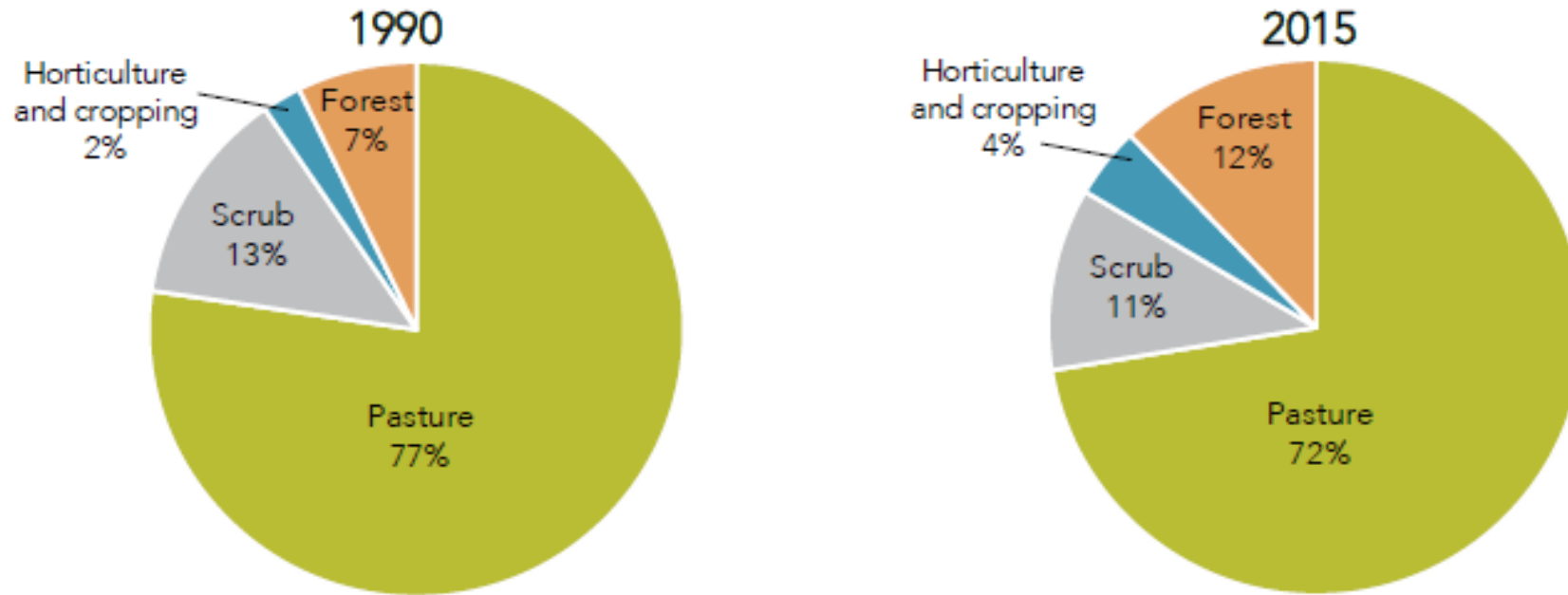


NZ Agricultural Land Use Now



Source NZ Statistics 2012

Figure 10.4 Share of rural land by land uses, 1990 and 2015

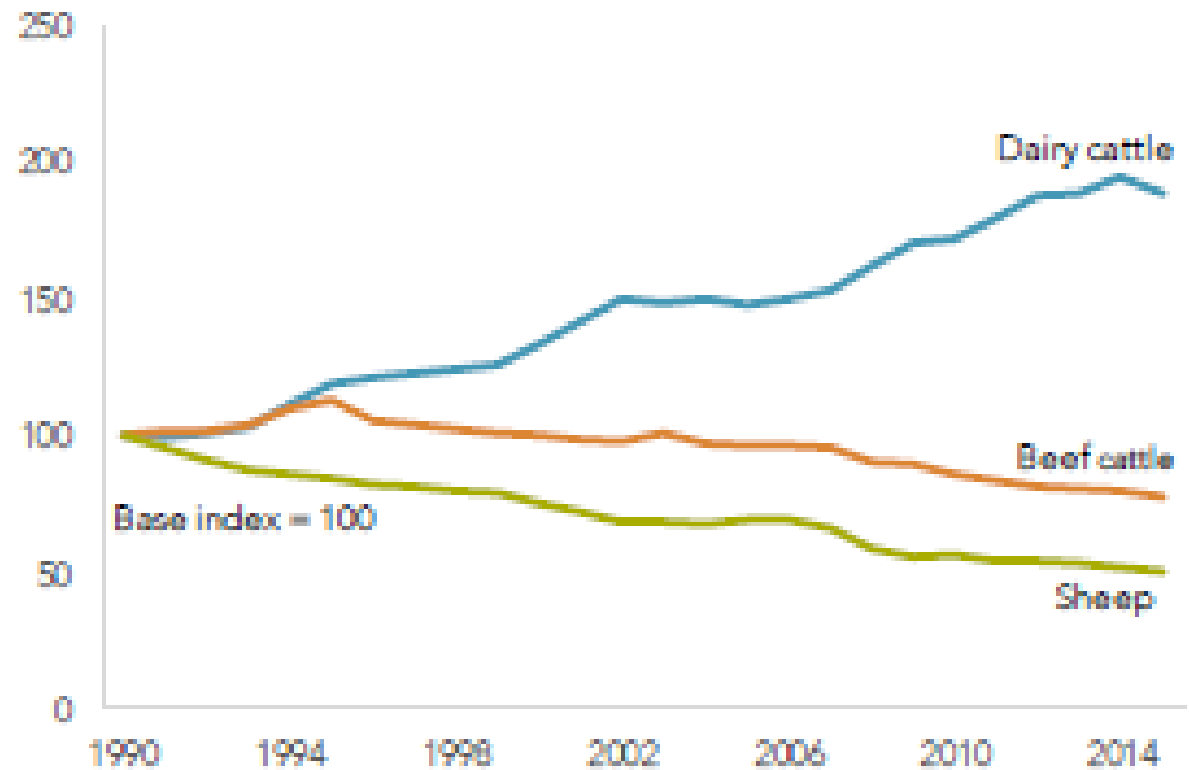


Source MPI (2016a); StatsNZ (2017a)

Rural Land Use – Change over 25 Years

NZ Land Use: Recent Change

Figure 10.6 Relative growth in livestock numbers across sectors, 1990–



New Zealand Productivity Commission Reports

- Housing Affordability 2011
- Using Land for Housing 2015
- Urban Planning 2016



Productivity
Commission Report
Low Emissions
Economy

DRAFT



Low-emissions
economy
Draft report

April 2018

Change: What can we expect

Lets talk about the speed of change

Easter
Parade on
Fifth Avenue,
New York
(1900) – Can
you spot the
car?



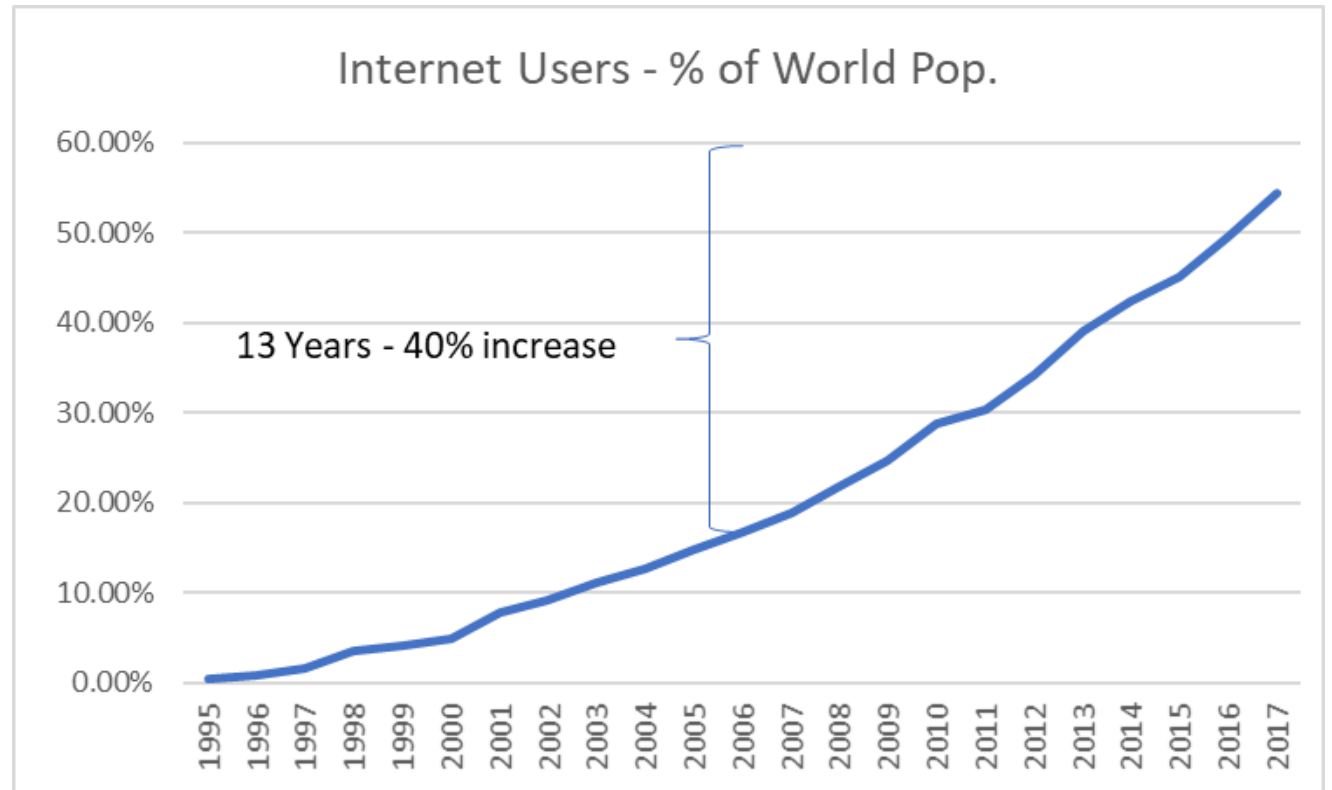


Easter Parade
on Fifth
Avenue, New
York (1913) –
Can you spot
the horse-
drawn
carriage?

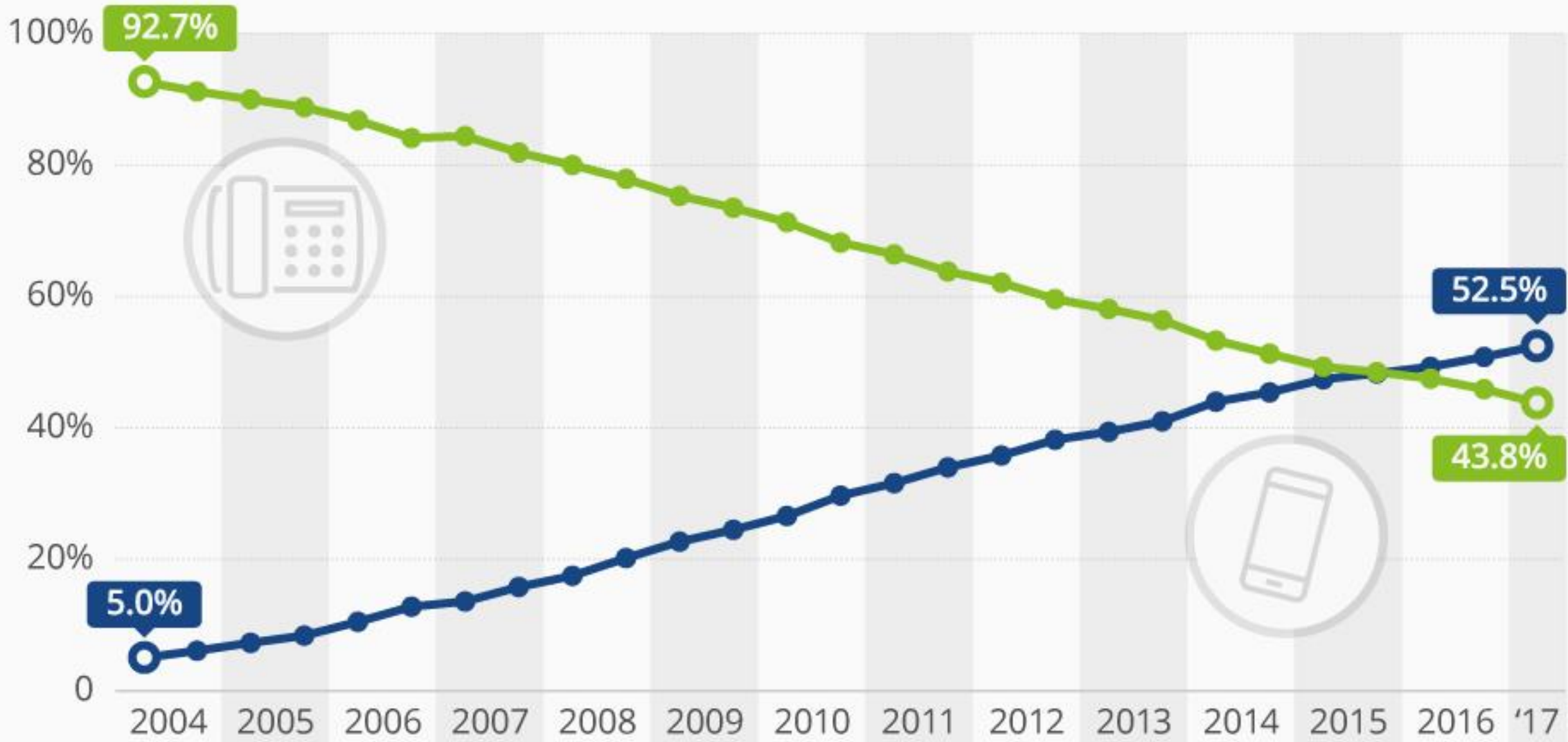




Internet Users across the world



● Landline phone ● Cell phone only



* based on the CDC's biannual National Health Interview Survey of

How will
Technology
impact on our
land use

- What is technology ? “The application of scientific knowledge for practical purposes, especially in industry”. – Oxford Dictionary



So through what lens do you think of Technology?

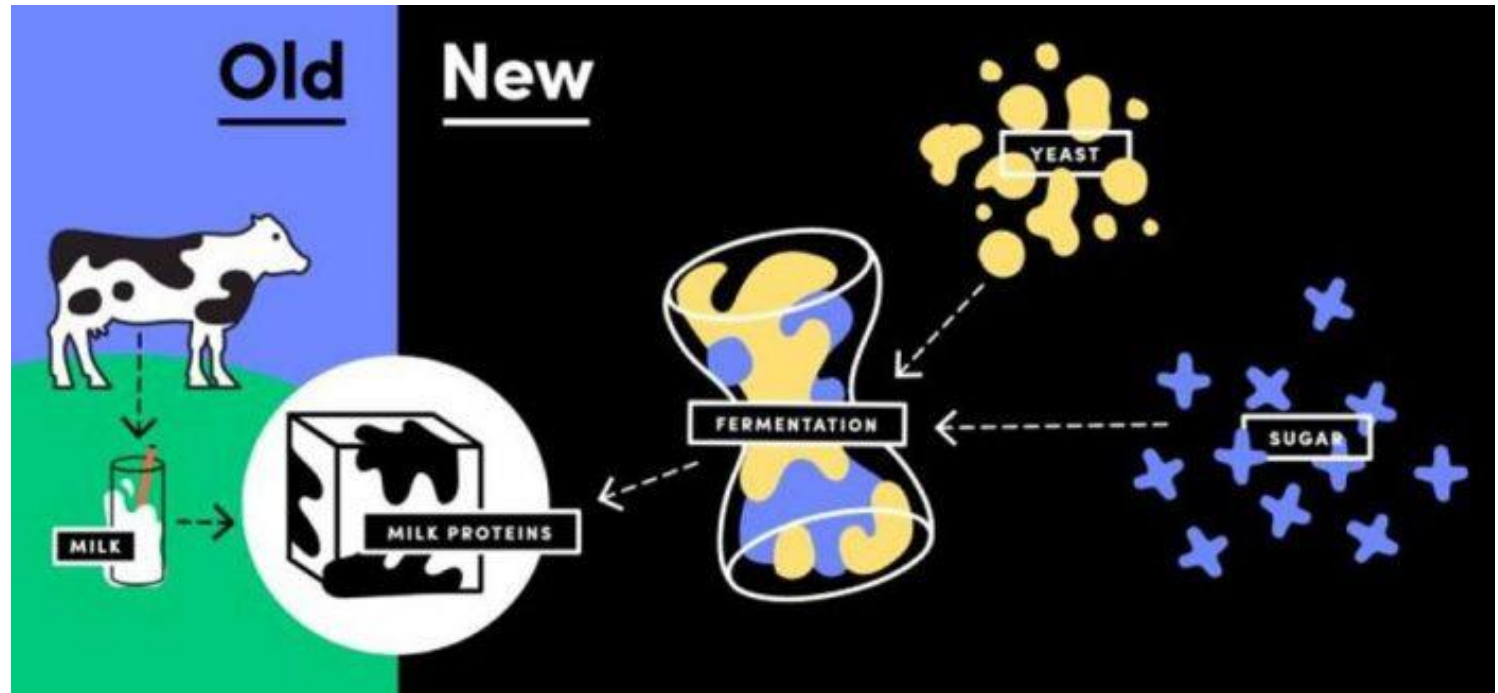
Technology and its future focus and impact

- At the end of the 2017 school year, Bill Gates wrote that incoming college freshmen would do well to study one of the following three majors, given how relevant they'll be in the coming decades.
- Artificial intelligence,
- Energy, and
- Biosciences



Technology and Food

- Milk made using the exact dairy proteins cows create, but with designer yeast instead of cows



Technology and Food

- Brewed milk, chemically identical to the animal-produced equivalents
- 84 per cent less greenhouse gases,
- requires 98 per cent less water,
- 91 per cent less land, and
- 65 per cent less energy than regular milk.



Technology and Food

- Clean Meat
- Also known as lab-grown, in vitro, or cultured meat—is meat that is grown in cell culture, rather than in an animal's body.



Strong Interest in Future Pathways

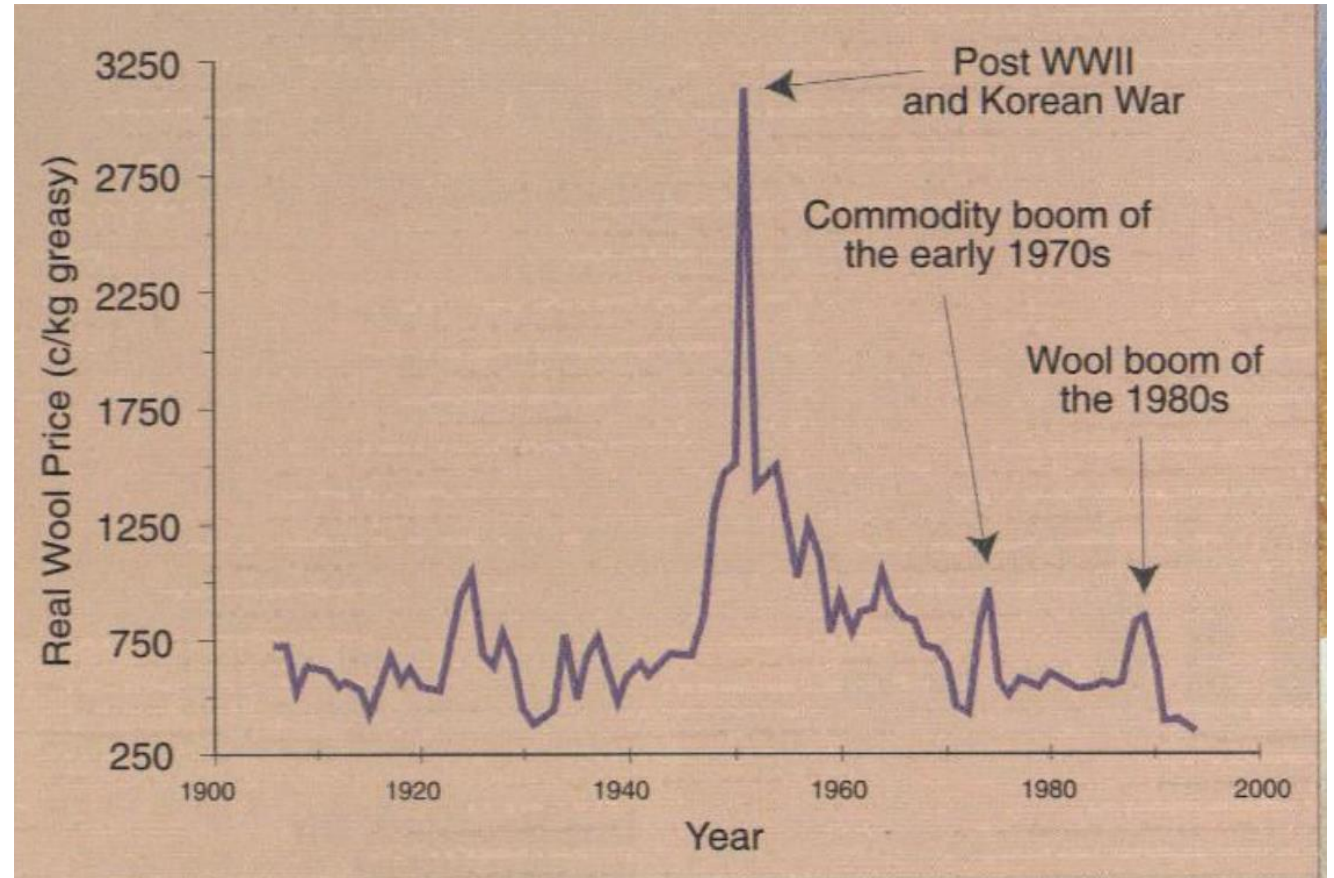
- Memphis Meats, which produces beef, chicken and duck directly from animal cells without raising and slaughtering livestock or poultry, has investors including:
 - Bill Gates
 - Richard Branson
 - Cargill, the second-largest beef producer in the world
 - Tyson, the world's second largest processor and marketer of chicken, beef, and pork



Commentary

- "It's no longer a matter of if, but when, synthetic meat products will be made available to consumers. Synthetic fibres are today the mainstay of the textiles industry, as well as other industries, with wool relegated to niche applications; the result of the 40-year decline of the wool industry,"
- "Back in the 1950s, it's not likely many farmers anticipated that the New Zealand wool boom would end so rapidly by 1966. The same mistake needn't be made with synthetic protein"

Sean Bennett Agri partner of
Crowe Horwath. 8 June 2018



Winds of Change

- Collaboration is the action of working with someone to produce something
- Change has always been with us, it is just speeding up. You can make change, or change can make you
- New winds of change are growing in force
- Let's harness those winds, working with others
- Lets chart a course to enable forests to play an enhanced role in New Zealand's social, environmental, cultural and economic future

