CONTEMPORARY FOOD PRODUCTION METHODS

CONVENTIONAL FARMING

The practice of growing large quantities of a single crop, in the short term resulting in high crop yields but not proven as sustainable

Growing the same crop every year is called ‘monoculture’

The advantage of growing monoculture is ‘economy of scale’ basically lower input costs

SUSTAINABLE AGRICULTURE

3 main goals; environmental health, economic profitability, social & economic fairness

Efficiency, effectiveness, viability, fairness & responsibility are key

Growing in popularity

Methods include **green manure** use & **cover crops** which make soil more productive without adding chemical fertilizer

Intercropping; two or more crops planted in the same field at the same time

Advantages = supports biodiversity, limits pests, maximizes space

However it makes using machinery more difficult

Companion growing a system of intercropping where 2 or more crops are planted in close proximity to support each other's growth e.g., corn, beans & squash (corn provides beans with something to climb & attach to, beans provide nitrogen to the soil, squash blocks weeds & retains soil moisture)

Crop Rotation; growing different crops in the same field over successive years

Advantages = changing the crops controls weeds, insects & disease, it protects the soil health e.g., many farmer's use a 4 year rotation is 4 fields with one left 'fallow' or unseeded

No-Tillage Agriculture; tilling refers to turning over soil at the end of a growing season, too much tilling can result in poor soil health, no-tillage has become more popular where holes are drilled into the soil & seeds dropped into the holes

Advantages = soil holds more moisture, more beneficial insects/wildlife will be present, cuts labour costs

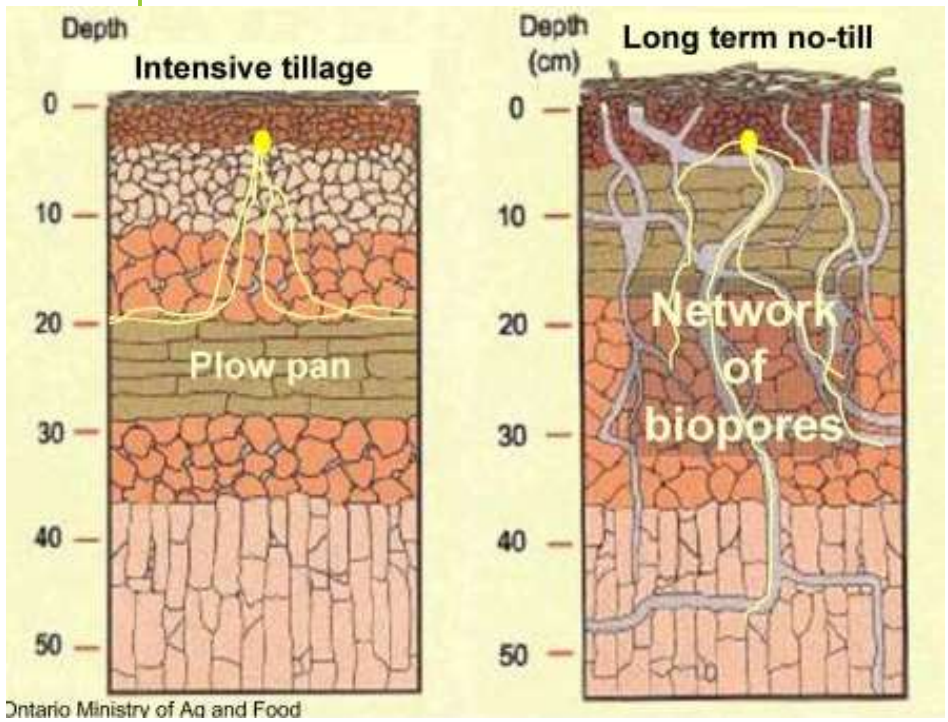
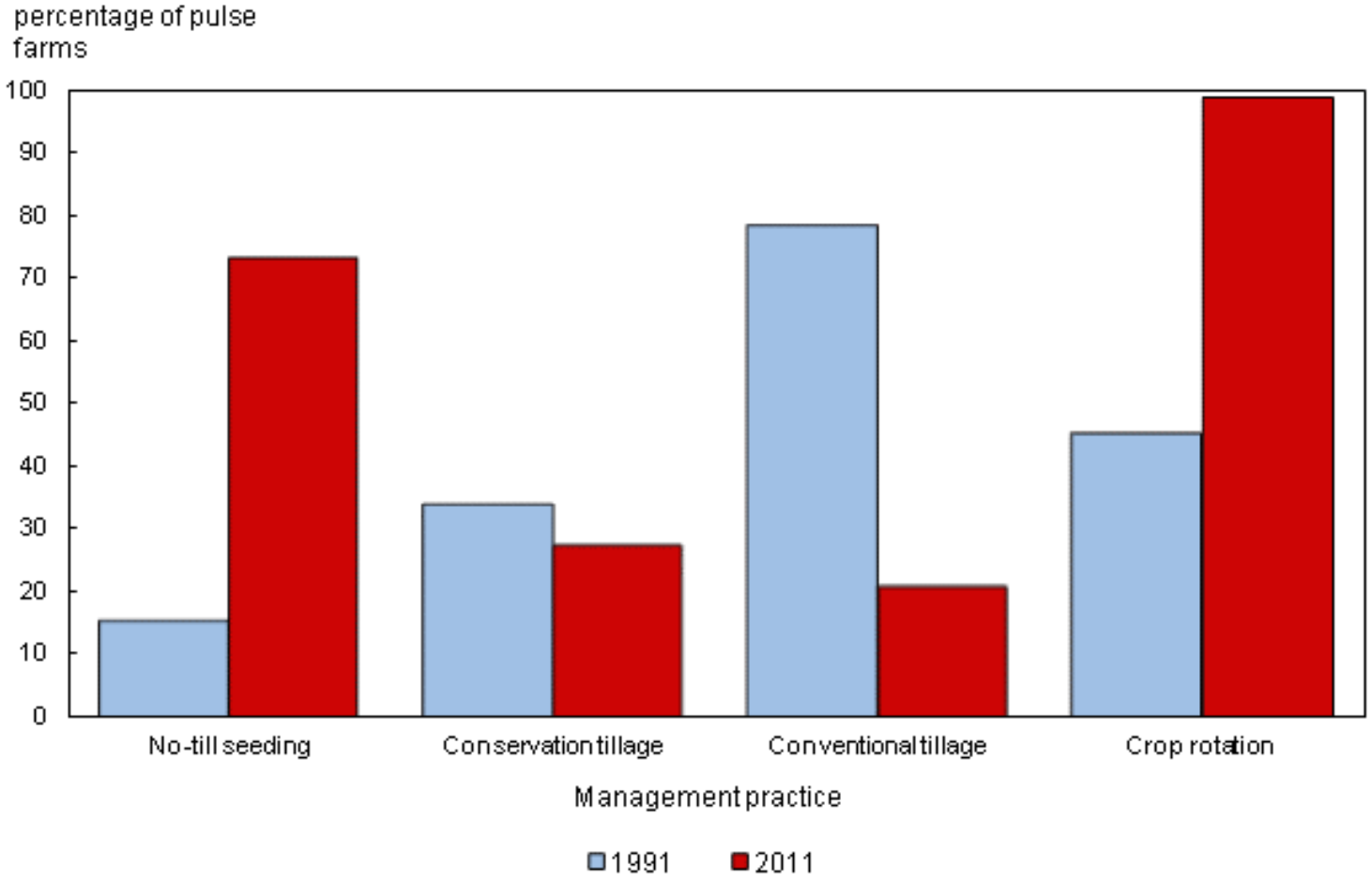


Chart 2
Farms with pulses by different land management practices, Canada, 1991 and 2011

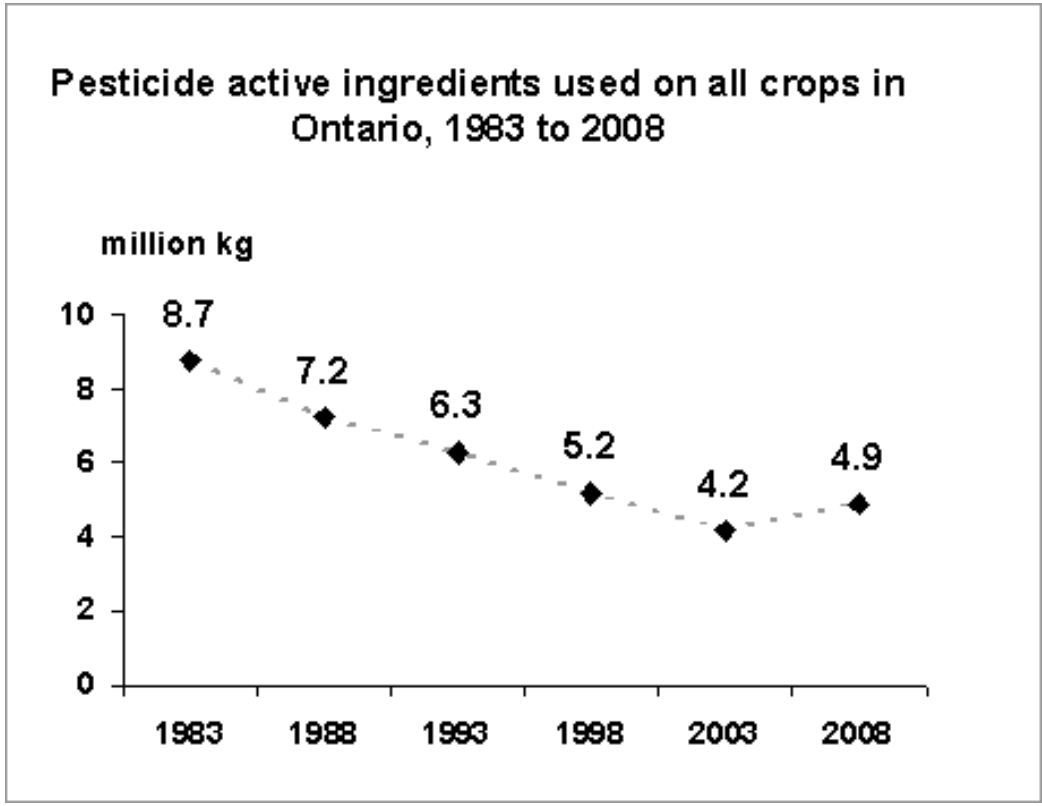


Sources: Statistics Canada, Census of Agriculture, 1991 and 2011

INTEGRATED PEST MANAGEMENT

IPM; controlling pests on farms using natural methods, farmer's track weather patterns & pest populations paying attention to crop development, damage caused & how weather impacts both the pest & crop

Methods include…intercropping, choosing pest resistant crops, using mulch to suppress weeds, using organisms that attack pests, using fans & netting



THE USE OF HORMONES & ANTIBIOTICS

Regulated & restricted by Health Canada & the Canadian Food Inspection Agency

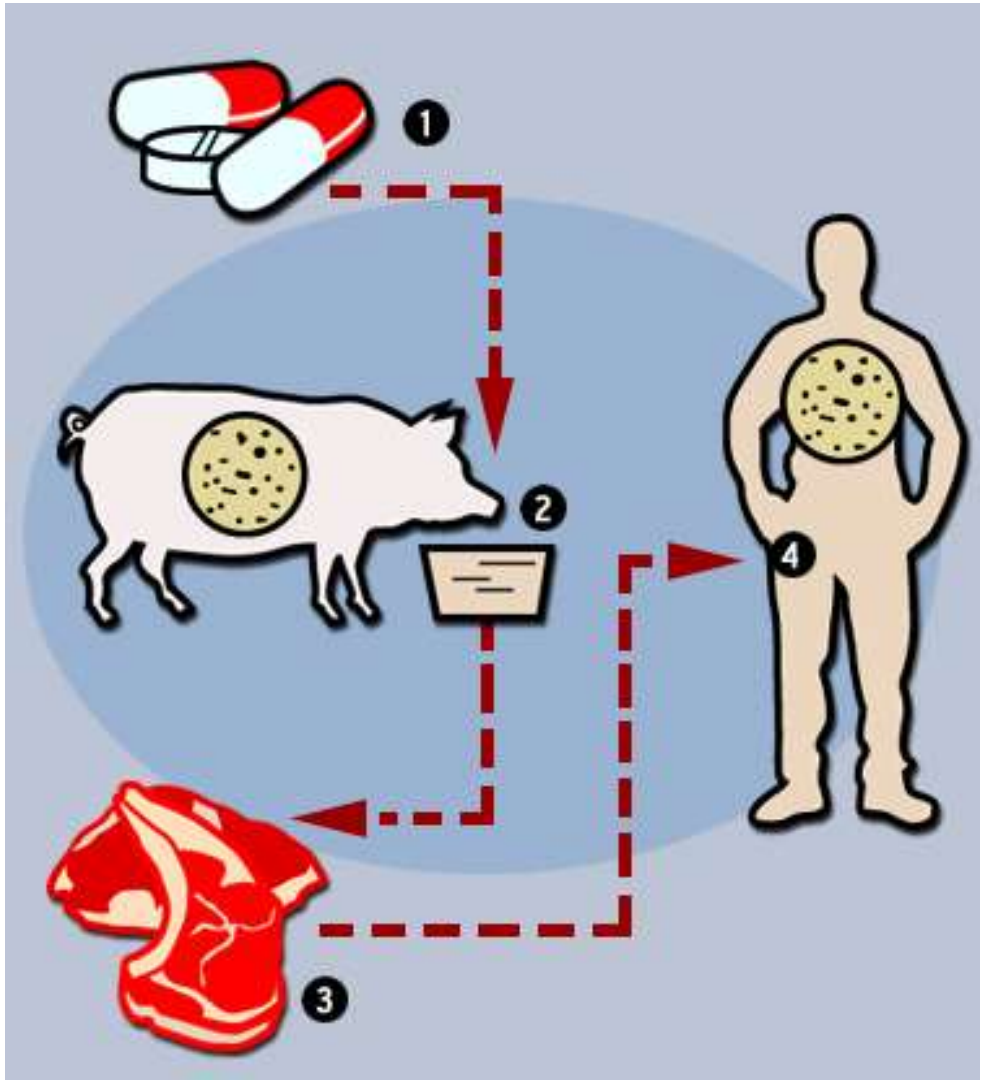
Hormones; all animals naturally produce them, some are added e.g., growth hormones

Growth hormones result in more lean meat, more growth using less food, reduced cost for cattle producers & therefore reduced costs for consumers

Antibiotics; used to make an animal well by killing or reducing harmful bacteria

Products produced by animals given antibiotics cannot be sold

The CFIA ensures that all drugs used in animals are safe & tests products to ensure no antibiotics are present (penalties for producers exist if regulations are not met)



GREENHOUSE FOOD PRODUCTION

An ecosystem unto itself with controlled levels of temperature, light, moisture & nutrients, greenhouses make it possible to have fresh Canadian tomatoes in the winter

Vegetables are primarily grown in a nutrient rich water solution 'hydroponic growing'

Greenhouse growers use IPM

Greenhouse growers must meet standards set by the Ministry of the Environment