

Chap 12. Food

Sections 12-5 on “How can we improve food security” and sec 12-6 on “How can we produce food more sustainable” could be read rapidly.

Section 1. The hunger situation in the world.

Food security: daily access to enough nutritious food to have a healthy life.

What do human needs:

macronutrients (carbohydrates, proteins, fats)

micronutrients(vitamins, minerals)

Deficiencies cause problems.

Section 2. Food production

Three major “systems” for food supply:

croplands 77% of the world food. using 18% of the land area.

rangelands, pastures, 16% of world food. Using 29% of the land area.

feedlots

oceanic fisheries, aquaculture 7% of the world food

14 plants (of 50 000 to eat) supply 90% of the world food calories.

3 of those plants give 47 % of the calories consumed and 42 % of the proteins.

The big three plants are rice, wheat and corn.

Production methods

Industrialized agriculture

Traditional agriculture

Industrialized crop production

88% of the increase in the global food production from 1950 is due to the green revolution.

Three steps in the green revolution

1) Develop and plant monocultures of high yield varieties of key crops

2) Use large inputs of fertilizers, pesticides and water

3) Multiple cropping

There was a second generation green revolution at about 1967 connected to dwarf varieties of rice and wheat.

Of great importance for the increased yield is crossbreeding and genetic engineering.

Fish and shellfish production an aquacultures has increased dramatically during later years.

Study the section on pesticides thouroughly.