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## **Why do we need to be open to innovative animal feeding strategies?**

Global population is expected to achieve 9.6 billion people by 2050 and this will make humanity to face very important challenges such as ensuring **food security**, lowering the risk of climate change and meeting the increasing demand for energy. Therefore the use of *smart agriculture* and *modern techniques* in **innovative animal feed** are imperative to overcome these present and future challenges.

In addition to this, the income of developing countries has been increasing and it is expected to continue doing so. A **higher income** is often translated into **higher meat consumption**. (Steinfeld et al., 2006; Guerrero et al., 2013).

Besides, urbanization is another factor to take into consideration since it changes the food consumption pattern (e.g. perishable goods have more opportunity to be traded due to better infrastructure, more consumption of prepared food etc.) (Delgado et al., 2005). In addition to this, urbanization also involves the switch from producers to consumers.

**Innovation in agriculture and livestock production is a must to overcome the present and future challenges that humanity will face related to food security, climate change and energy security.**

**Feed production** is highly resource demanding. With the current

depletion of the natural resources and the ever harsher environmental conditions, the search for alternative and innovative animal feed resources for **livestock production** seems a must to meet the increasing demand of animal products and ensure feed security.

Introducing and promoting underutilized but nutritious feed resources is the challenging roll of animal nutritionists (FAO, 2012).

## **How can we reach innovative animal feed?**

How can we be innovative when it comes to animal feed production? There are some of the criteria that we should take into account:

### **1. It should not compete with human consumption**

As much as 70% of some agricultural commodities are used as animal feed (wheat for poultry, maize for dairy cattle, swine or poultry...). Using the land to grow crops (vegetable proteins) to convert into animal proteins (feeding the crops to animals) is becoming a controversial concept. In terms of sustainability it would be more intelligent to process the crops and feed with them people. Does this mean we need to stop livestock production? Livestock is the backbone of the economy in rural areas and animals provide much more than meat protein: milk, leather, draught work...

We do not need to stop livestock production but try to use underutilized feed resources that do not compete with human consumption: crops by-products, insects for poultry or swine, algae, traditional plants etc. There are many lesser-known and under-utilized plants adapted to local, harsh conditions available today that have tremendous potential as livestock feed! (Read more about "[Use of](#)

[lesser-known plants and plant parts as animal feed resources in tropical regions](#)");

### 2. It should be smart climate change agriculture (SCCA)

*The FAO defines SCCA as agriculture that sustainably increases productivity, enhances resilience (adaptation), reduces/removes GHGs (mitigation) where possible, and enhances achievement of national food security and development goals. In other words, we need to produce more using less land and polluting less. The use of drought resistant crops, aquaponics, conservation agriculture, use of by-products are some ideas that can help us to achieve this goal.*

### 3. If using a waste, even better

Turning waste into animal feed is an ideal situation in which the problem is turned into an opportunity. Pollution is reduced whereas food security is increased. A good example is the conversion of organic waste into proteins (insect production) for the poultry and swine industry. The use of agroindustrial by-products (molasses, dry distillers grains, oilcakes etc) is also an optimal idea.

We include **innovative animal feeding strategies** among our topics that could also support [sustainable and organic farming](#). [Register](#) in our web application in order to build an **innovative animal feed** cycle for your animals [web.farm4trade.com](http://web.farm4trade.com)