

**Significant changes on the agricultural products market** concerning consumer health and product differentiation are requiring new business models. For differentiated high value, high quality products, the conventional commodity market business model is replaced more and more by different relationship business models, where producers and buyers building up personal trade relations. These business models demand new means of communication, enabling close interaction between the supply chain partners (Fig. 1).

**Access to relevant information** can aid farmers in improving their production and can help them to expand their trade networks, bringing improved (high value) products to the consumer.

**Information technology** plays therefore an increasingly important role in linking the members along a high quality product supply chain. The here presented communication and information management approach plays a vital role in fostering the co-learning and business evolution of a value chain. This is important in the light of dynamically changing preferences of consumers and market trends.



Figure 1: Steps along the coffee product track - All supply chain members are connected to a central information management platform.

### The Coffee Product Track

**Tracking product and processing data** helps both to identify production quality and product characteristics and to link this information to the end-point product through all levels of the product track.

**The coffee product track** runs from the field where coffee is grown to farmers associations, exporters, importers, coffee roasters, shops to the end-consumers all over the world.



Figure 2: Product tracking: Field – Export Product – Final Product.

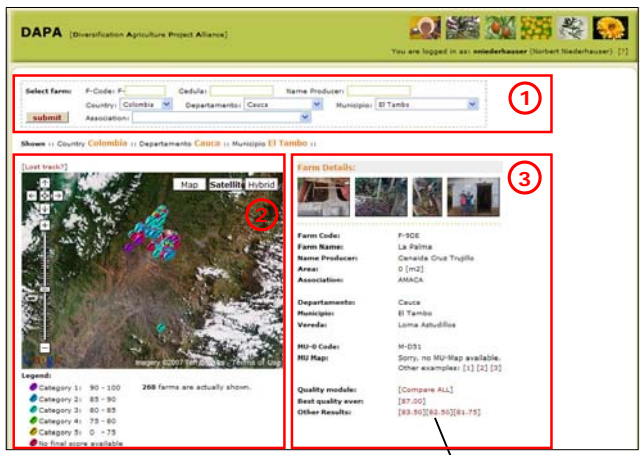


Figure 3: Cinfo Online Map Interface



Figure 4: Coffee Quality Module

### Data Presentation

**All information stored** in the product tracking system is related to GIS data. This feature enables interactive mapping of product and production data on digital maps on an online interface (Fig. 3 Section 2).

**A special interface** enables the consumer to receive coffee origin data (Fig. 3 Section 1). He/She may enter for example the product code shown on the coffee pack and receive a map showing all farms and all farm related information, where and how this coffee was produced (Fig. 3 Section 3).

**Visual data analyses** is also provided by this module. A selection of query items and the input of threshold values can be queried and visualized via this map. The analyst can see certain trends in respect to e.g. coffee quality linked to spatial or environmental factors.



Fig. 5: Exported Cinfo Data can be used in Google-Earth®

### Data Export

**Any data is available** as download-file in different formats: csv-file, MS Excel, Shape-file, Google-Earth® format (Fig. 5) and a special file format for Expector – a software program for statistical analyses.

### Feedback Models

**An intelligent feedback system** provides the farmer with easy-to-understand and relevant information – e.g. a quick overview over his productivity status or the produced coffee quality. An example is shown in Fig. 6: a farm map indicating the productivity status of different management units.

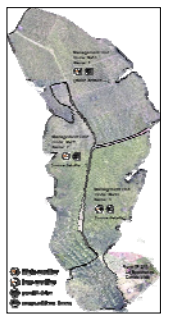


Figure 6: Aerial view image of farm management units and their rating in production and quality.