

One promille each from the daily shopping basket for cultivated plants and live-stock breeding - A simple and prospecting solution in the field of plant breeding

1. Alternative Financing Models

- i. Consumer participation - the crop promille (Chart 1)
- ii. The crop promille can be collected directly at the POS (point of sale).
(or : 1 per mil for plant breeding and 1 per mil for animal breeding).
- iii. However, this money does not belong to the seller, but to the consumer, who is empowered to distribute it.
- iv. Using appropriate payment instruments (e.g. customer card or block-chain app), a bypass is created all around the production and value chain, directly to the beneficiary breeder - or according to a specific distribution key to the various beneficiary breeders. This means that the subsidy amount does not appear in the retailer's accounts at all.
- v. This system of financing in no way affects economic activities, trade, cash flows or, above all, pricing within the chain.

2. Participation of the value chain (Chart 2)

- i. In the classical model (Chart 3), only seed buyers - farmers, gardeners and fruit growers - have to pay for breeding. However, many following stages also benefit directly from organic breeding. Improved processibility, higher yields, shelf life and transportability of the products and, last but not least, the food quality characteristics for consumers, such as taste and digestibility, implemented by organic breeding, have their economic value.
- ii. There are various reasons why these achievements are not seen at all and adequately compensated for, which cannot be analysed here. More than 95% of the seeds used today in organic cultivation come from conventional varieties and from conventional breeders. So, it represents a safety and reputational risk for all market partners.
- iii. Several WSK partners are cooperating with breeders and have formed joint ventures. This is to solve specific problems (e.g. carrots, sunflowers, broccoli) or to promote organic breeding in general (fair breeding).
- iv. However some of these projects can be successful, they cannot reverse the trend on their own. Either huge pressure from the market is needed (e.g. due to an impending scandal such as the cell fusion varieties used in organic cultivation) or a voluntary commitment to integrate the breeding tasks into the WSK.
- v. Often price distortions are put forward as an argument against a value-added-related participation of the WSK partners. This is the case when a single company is on its way towards true cost accounting alone. However, the problem can be solved together because it affects all parties equally.
- vi. In retail, the usual percentage calculation represents an obstacle. Through this, a surcharge for breeding on the first levels of the WSK generates disproportionate margin and price increments on the following levels. A Full Cost Calculation can remedy this, but it requires some resources.
- vii. Alternatively, a calculation with well graduated rates or with a subtraction of the premium paid on the preceding level can be chosen. This can be done as long as it is shown separately on the invoice, such as value added tax.

3. The classic financing model (Chart 3)

- i. The classic model is based on the 'bottleneck', where the strongest dependence of seed buyers arises when there are no alternatives.
- ii. For years now, the organic market is becoming more and more dependent on conventional breeding and seed companies.

- iii. It is today - in Europe and in the worldwide context - not less in the organic market than in the conventional market, a fact which contributes to the erosion of the unique selling point 'organic'.
- iv. Concentration on the seed market and often excessive seed prices are a direct effect of this model!
- v. The tight situation is aggravated by institutional investors' expectations on returns (e.g. from the bond funds). The seed sector promises the best and most sustainable returns. Their profits today have to be paid by the weakest link of the chain. Just compare the hourly salaries of farmers and harvesters with those of other WSK levels!

4. Notes: Usage-based and Common Welfare-oriented Breeding Financing

Basic Distinctions and Models for the Partnership of the WSK with BioBreeding

User fee or donation?

- i. Whoever produces and sells a product and thereby uses the services of a breeder, i.e. gets an economic or reputational benefit from organic breeding, would also have to pay a service fee. It is not a matter of voluntary action, but of real costs which can be allocated to a particular product and which also belong in the true price calculation of the products. (True Cost Accounting).
- ii. From the tax viewpoint, this is an expenses refund to be valued on the cost side and it is not a donation.
- iii. In this case, only the breeder of the used variety has to decide on the final destination of the fee.
- iv. On the other hand, whoever pays a voluntary contribution, i.e. a donation, is also entitled to determine its purpose. This entitlement can be transferred only by voluntary agreement to others, for example to a committee of a foundation. The payer himself is responsible to ensure the well use of donated funds.

Common welfare - contributions:

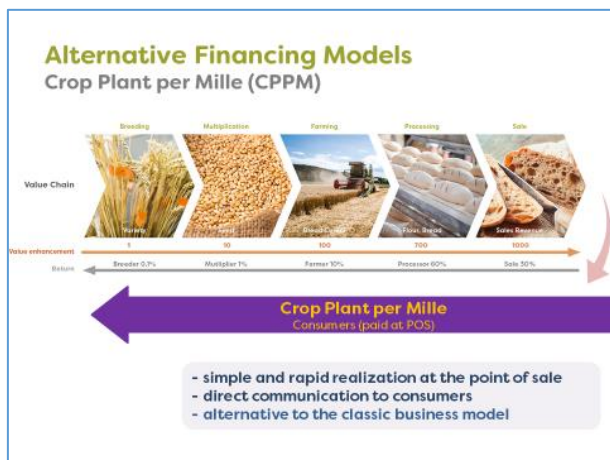
- i. Contributions to the common welfare serves to fulfil social tasks: Preservation and upgrading of bio-diversity, ecosystem services, food sovereignty, human health, and integrity, etc..
- ii. Bio-breeding contributes to various common goods simultaneously.
- iii. The impact of a contribution to the common good can rarely be attributed directly to a single product.
- iv. Therefore, it is better to finance this aspect of the common good by means of a value-added system in accordance to the level of added value for food.
- v. Taking into account the extremely long development cycles of 15-20 years in breeding, it makes sense to differentiate between public welfare contributions and user fees by a 10-year horizon:
- vi. More than 10 years are needed to build up biodiversity in pre-breeding, resistance breeding and to develop sustainability traits such as nutritional efficiency, etc.
- vii. Less than 10 years is the development of marketable varieties: variety testing, registration and plant variety protection as well as maintenance breeding and propagation of early stages for seed production.

a. Not for profit Financing (Chart 4)

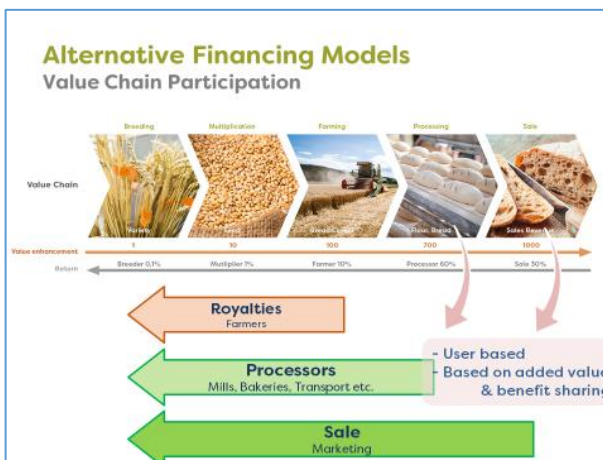
- i. Not for profit' financing to non-commercial breeders through private donations from consumers and foundations is designed mainly for the common good.
- ii. This enables breeding of commercially insignificant (orphan) crops and issues as well as very long-term projects. In this way, innovation areas as well as new biodiversity can be created totally unaffected by the short-term interests of the value chain.

- iii. But the potential for this type of financing is limited. If the varieties produced in this way are used in the organic market, it is indirectly supported by donations: because the market does not pay enough for its own breeding.

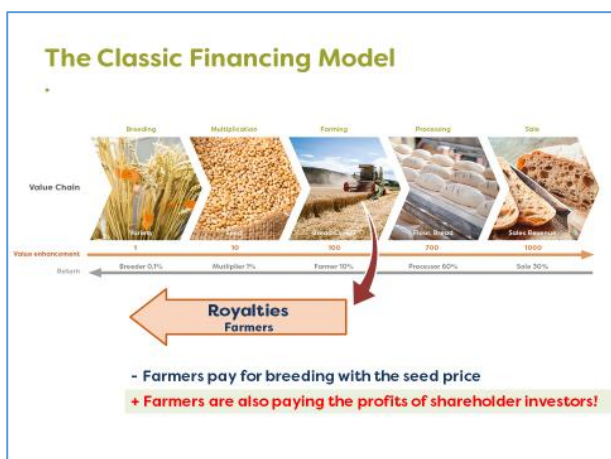
Grafik 1



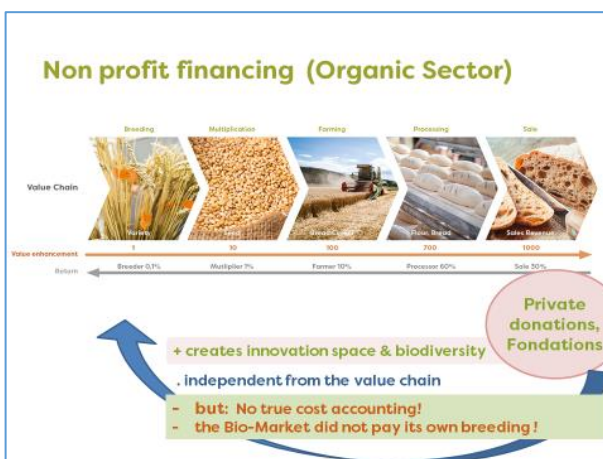
Grafik 2



Grafik 3



Grafik 4



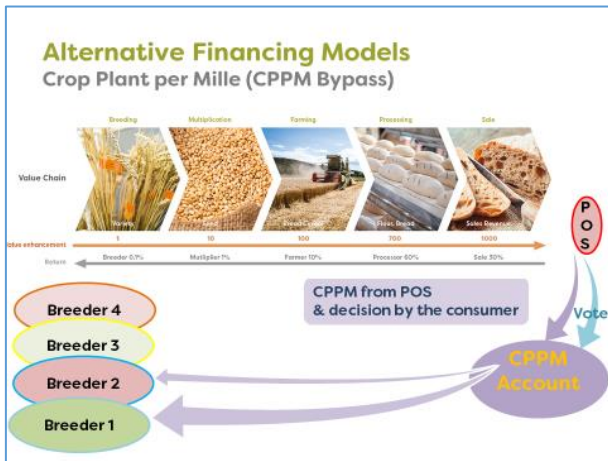
5. Elements of a Commitment

- i. Payment of 2 per mil of the turnover to breeding projects or to a distributing organisation such as the Saatgutfonds.
- ii. Participation in a joint information platform (breeders, WSK partners and other experts). Internal and external communication about organic breeding and its products.

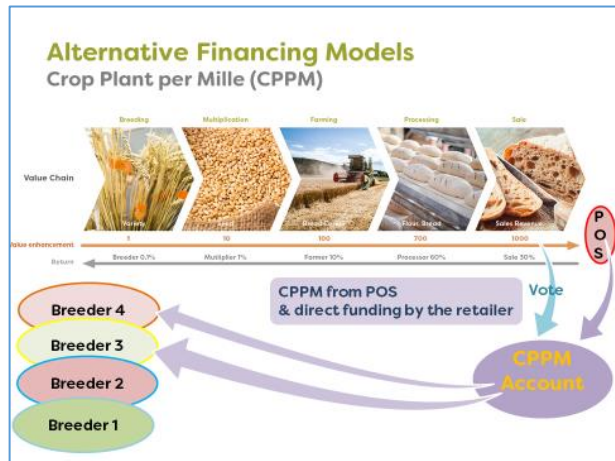
6. Organisation (Charts 5-7)

Charts 5-7 show examples of lean organisational structures that can exist side by side with each other. They are based on direct relationships between the breeders and can therefore do without central administration of money flows. Decision making aids may be generally accessible to partners by a jointly operated information platform (Figure 8). The information about supply and demand is provided and continuously updated by breeders and partners. A group of professionals and peers may be consulted.

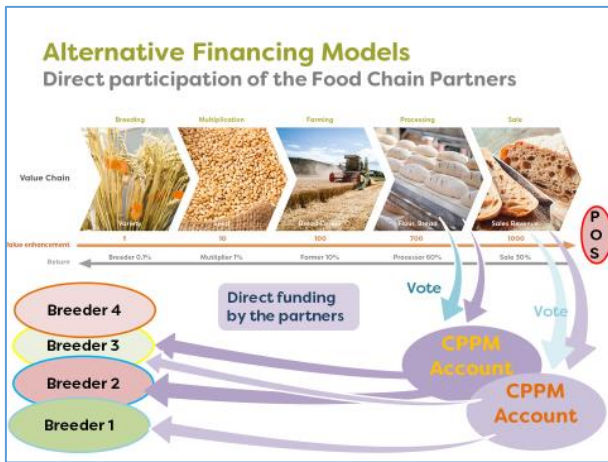
Grafik 5



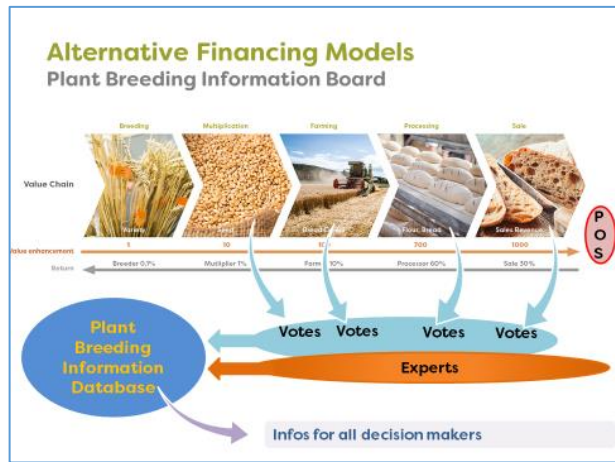
Grafik 6



Grafik 7



Grafik 8



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