From an exclusively nutritional point of view, soy appears to be an ideal element for livestock feed: it is a highly nutritious member of the pea family (Leguminosae), with a high, good-quality protein content (up to 37%), with nearly all essential amino acids except methionine, 18% non saturated fatty acids, vitamins A, B (thiamine, ribaflavin and niacin), E and F and many minerals such as phosphorus, calcium, magnesium, iron and copper. Soy was hardly employed at all on dairy farms in the Basque Country until some 25 years ago but has become a dominant element in fodder due mainly to its high protein content.





For the following reasons, however, the use of soy is not compatible with an agroecological approach to feeding livestock in the Basque Country:

- It is not an ideal crop for the physical and chemical conditions of soils in the Basque Country nor its climate. Different varieties of soy have been planted in experimental plots in the province of Araba for example, but at a very small scale. Thus, basing livestock fodder on large amounts of soy necessarily implies buying in, normally in the form of soy imports from different Latin American countries. Such imports themselves imply greater costs in terms of fossil fuels than use of local or adapted sources of protein.
- Most imports of soy are transgene or mixed cargoes of transgene and conventional soy. Neither are compatible with an agroecological approach to feeding dairy cows. On the one

hand, the technology, seeds and sales of transgene soy harvests are completely dominated by a handful of large transnational companies, the antithesis of the philosophy and practice of agroecology. Additionally, contamination of GM-free soy by GM soy is inevitable throughout the farm-food chain given that coexistence between the two is impossible. On the other hand, cultivation of both conventional and GM soy implies intensive use of chemicals (such as the herbicide "Roundup"), which is also incompatible with an agroecological approach to farming.

- Given that cultivation and marketing of the soy exported to the European Union in general and to the Basque Country in particular is in the hands of large transnationals that decide the varieties, technologies and prices used along the farm-market chain, farmers buying such soy as supplement become 100% dependent on the same companies. Once again, this is the antithesis of the agroecological approach which promotes the technological and economic independence of farms.
- Soy cultivation in the global South, particularly in Latin America, is causing serious problems for the local population: loss of access to (expulsion from) farmland; agro-chemical pollution of soils, water and crops / allotments, health problems...
- Livestock consumes the soy as compound feed, not as forage and the greater the percent of soy concentrate consumed, the greater the number of health problems that are observed in a herd.

For all these reasons, the Vista Alegre farm is moving towards fodder supplied according to the agroagrocological ideal, eliminating soy from its dairy cow feeding regime. The advantage that soy offers in terms of its high protein content, does not compensate the disadvantages its use causes socially, environmentally and in terms of human and animal health. In 2011 the Vista Alegre farm stopped using the 20% soy it used to employ in dairy herd feed supplements. Alternatives to soy with an acceptable protein content such as field beans and peas (9.0% and 7.2% respectively) are available at relatively short distances from Karrantza and actually provide other important elements of dairy cow nutrition such as lipids, carbohydrates, vitamins A, B1, B2 and C, and minerals such as potassium, sodium, calcium, iron and phosphorus.

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