In Ariège, South-western France, crop-livestock integration between neighbouring farms appears as a promising option for farmers to limit synthetic fertilizer use while relocalising animal feed. Farmers have tried to develop buy-sell scenarios of grain. Doing so, they faced logistic and regulatory barriers that ended up discouraging them. Thus, some farmers re-explored the historical «inverted transhumance», i.e. moving animals from the mountains to graze grassland and cover crops in the valleys and plains in fall and winter.

A 1st example is a corn seed producer growing an oat-vetch cover crop on 82 ha, grazed during 2 winter months by 100 sheep of a mountain farmer, located 80 km away. The latter saves about 8 K€ per year (10 K€ savings on indoor winter feeding of the sheep for 60 days out of which 2 K€ are spent for driving every day to the crop farm to move fences). A high productivity of the sheep was observed due to the high quality of fodder and less parasitism and foot rot. For the crop farmer, cover crop destruction is avoided while an improvement of 16% of corn seed yield is observed due to a quicker mineralisation of nutrients following the grazed cover crop.

In the 2nd example, another farmer moves 130 sheep and baby sheep to four different farms, e.g. an apple-tree farm, two crop farms where sheep graze cover crops and volunteer wheat and a crop-livestock farm. On this latter farm with cattle, sheep proceed to pasture topping and graze earlier with lower compaction risk than cattle. The sheep farmer saves 30 tons of hay and 9 tons of concentrates a year.

A trustful collaboration and planification are key to make these plans work as the crop farmer may need to check the animals and the livestock farmer should adapt to the crop farmer’s practices and needs.
In France MIXED is implemented by AGROOF and INRAE in collaboration. The project is working with two groups of farmers practicing MiFAS (Mixed Farming and Agroforestry Systems) in different ways.

Agriculture in France can be characterized as highly specialized and reliant on inputs (synthetic fertilizers, pesticides, feed, etc.). Indeed, livestock is concentrated in a limited number of regions and has almost disappeared in cropping areas. This segregation in space has led to a disconnection between crop and livestock farms.