

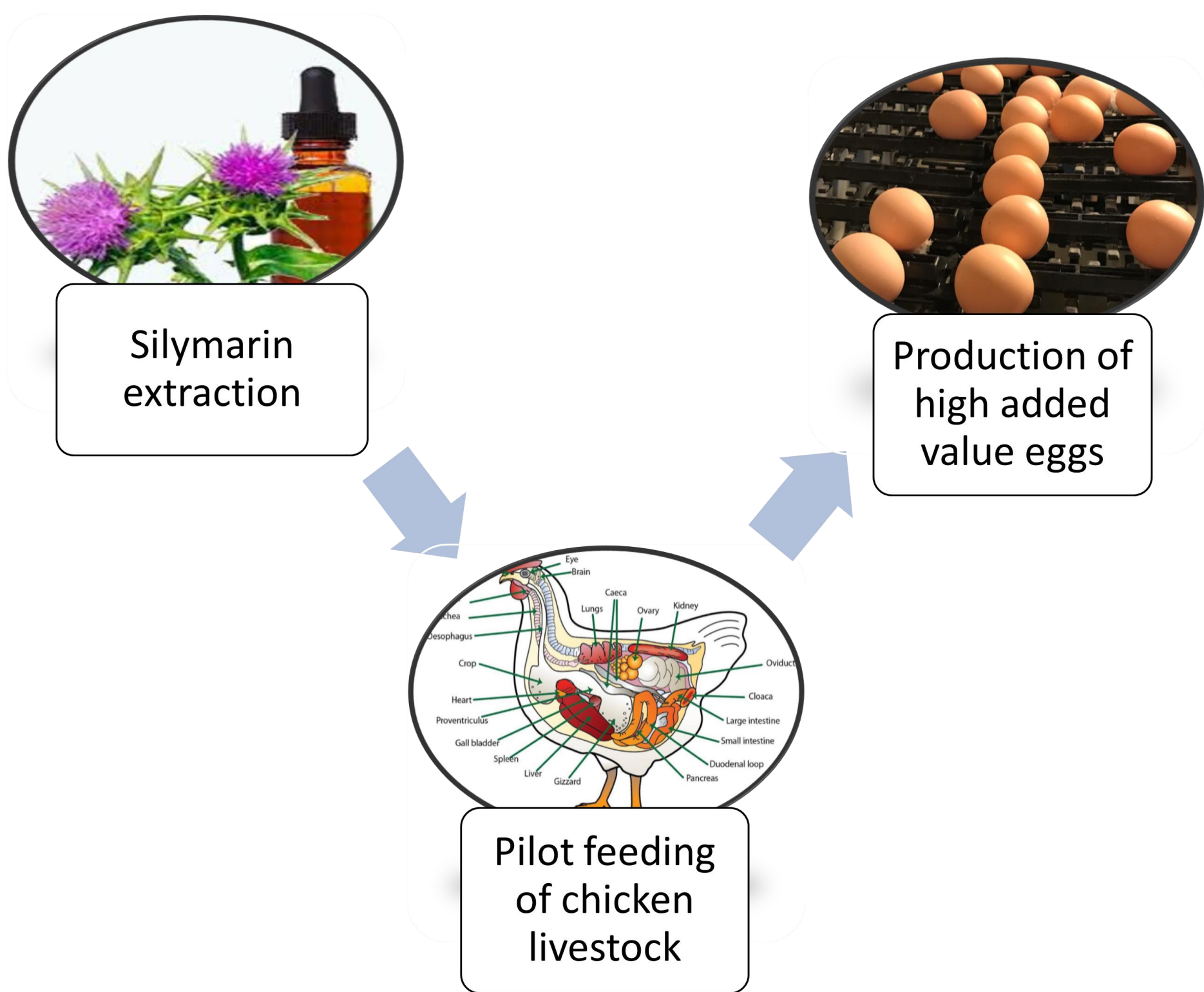


# Natural liver health and well-being of chickens using natural thistle extract for the production of high value eggs



## The Problem

Chickens' liver has a high load of lipid metabolic activity and a high hormonal stimulation in order to produce egg ingredients, thus its health is directly affecting the egg production. The peculiarity of the chicken's liver physiology and the tendency to disfunctions, results in the high rates of Fatty Liver Hemorrhagic Syndrome (FLHS) and is the cause for the high frequency of deaths in egg-raising facilities. Taking into consideration that, 31,5% of Greek egg producing facilities are in the region of Central Macedonia FLHS could have a huge regional impact regarding egg quality and livestock well being.



Project's Concept: a) Thistle milk production b) Supply to chickens c) Evaluate results

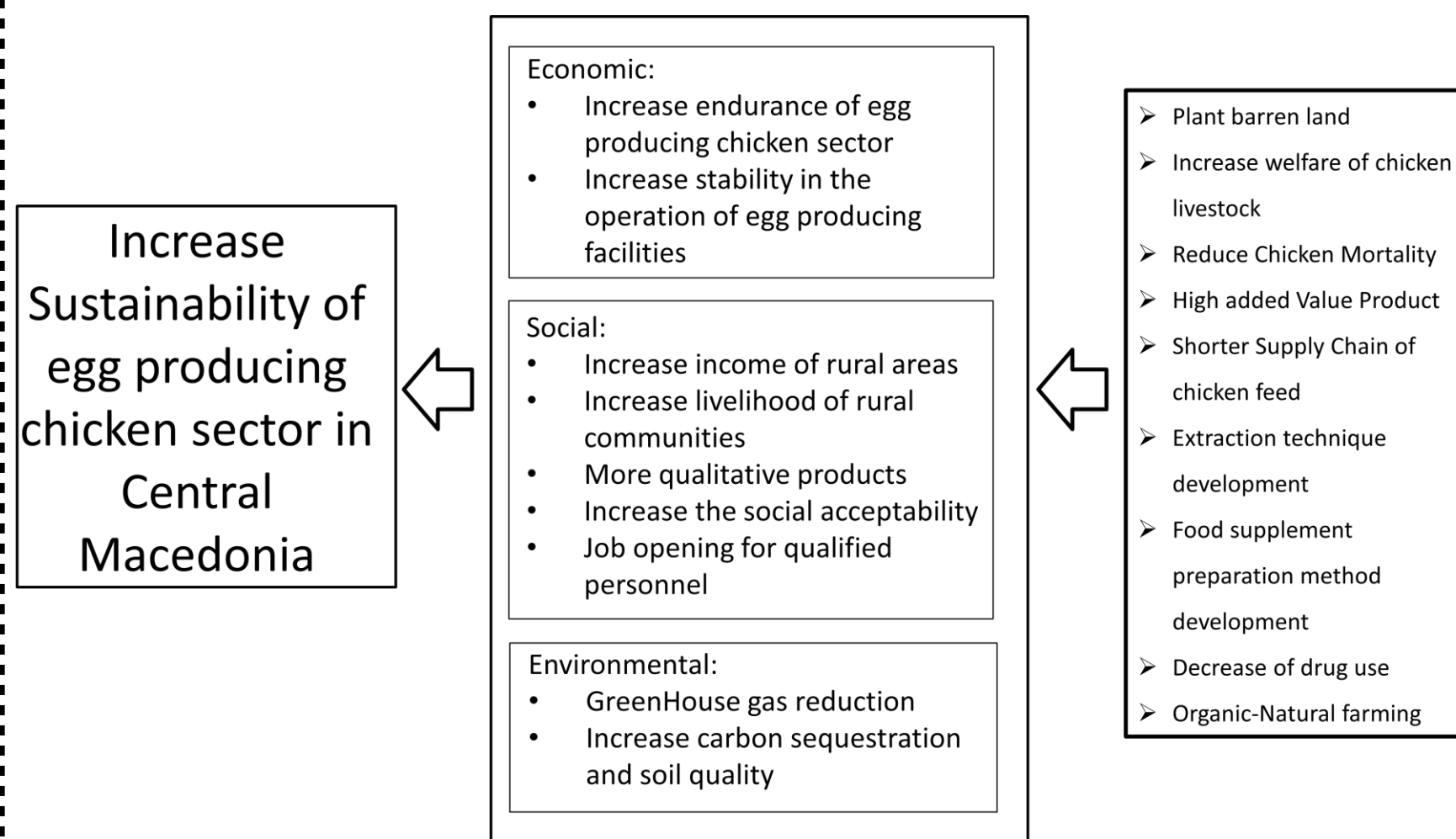
## HepaHealthy\_Egg Overall Objective

HepaHealthy\_Egg project aims to improve the overall health of chicken livestock as well as the quality of the produced eggs in the region of Central Macedonia by using botanical extracts as food supplements in chickens' feed. Furthermore, botanical extracts are expected to lead to increased sustainability due to the decrease of drug use and the utilization of local wild flora.

For that purpose, the benefits of using thistle milk will be examined; based on pilot-research results' evaluation. More specifically, laboratory techniques will be used to examine the internal organs of chickens.

## The Project

HepaHealthy\_Egg project will support the overall improvement of livestock's well being within poultry sector as well as the production of high-added value eggs in the region of Central Macedonia. Therefore, HepaHealthy\_Egg investigate the possibility to benefit chickens' health by developing a food supplement from botanical extract.



Expected Impact of Project in Sustainability

For that purpose, extraction processes of wild flora botany of Central Macedonia and the production of food supplement preparations will be examined. The developed food supplement will be fed in various portions during pilot experiments and the results are expected to be commercially utilized.



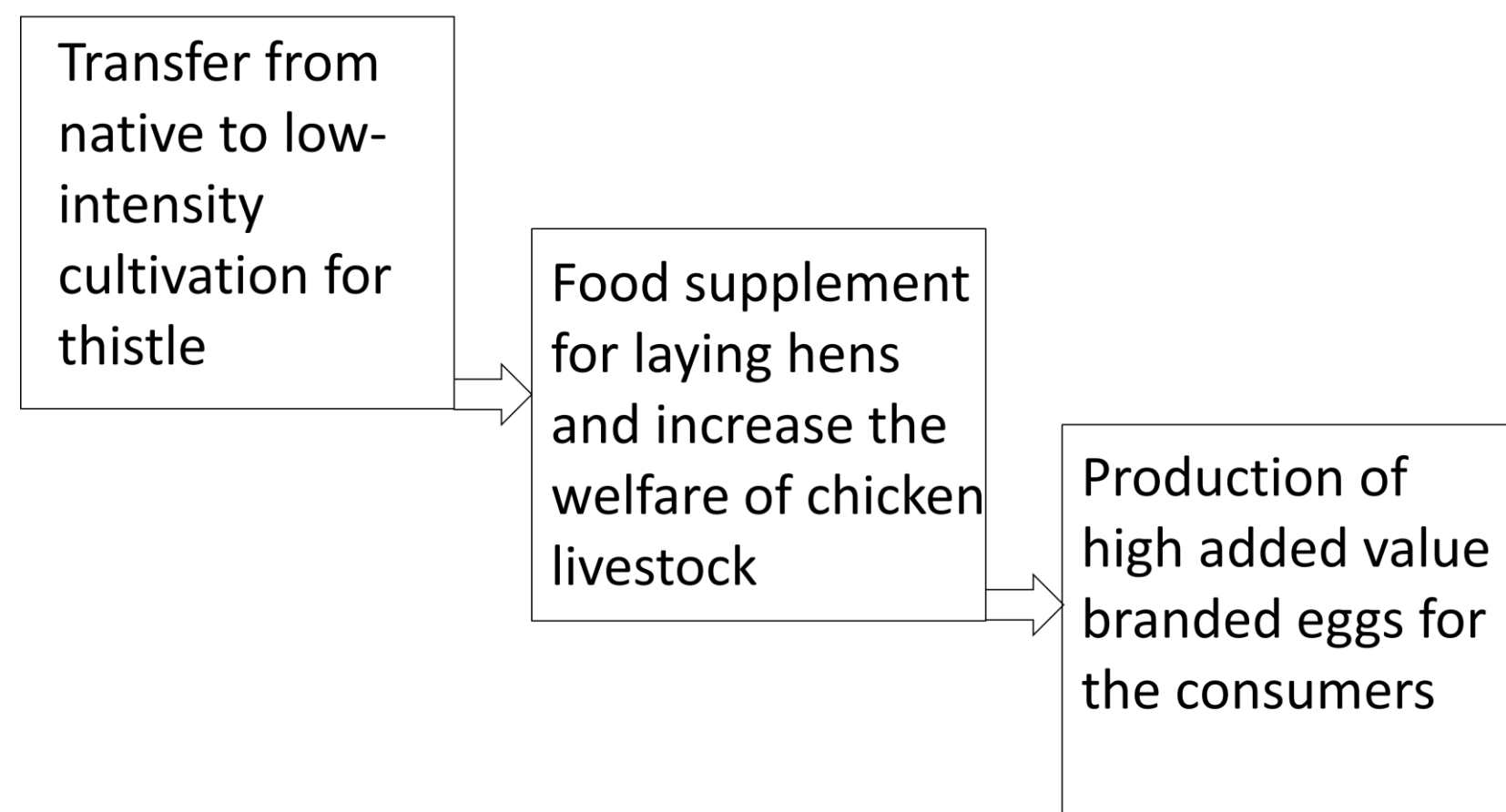
Pilot research: Provide milk thistle preparations to chicken livestock

## Expected Impacts

- Reduction of chicken mortality and improvement of chicken livestock well being;
- Creation of high added value products (eggs) and of a marketing opportunity;
- Increase sustainability by localizing chicken feed supply chain and by reducing drug use for chicken livestock;
- Increase productivity and income in areas with barren land;
- Possible extension to meat producing sector;

## The Approach

HepaHealthy\_egg aims to produce high added value eggs coming from the region of Central Macedonia's egg producing facilities. However, the project outcome will be overall assessed for its contribution to sustainability in regard to social, economic and environmental scope and commercial use of the results will be based on the scenarios that improve the environmental and economic performance of the sector.



Schematic Workflow

## The Pilot Case

Pilot feeding of thistle milk to chicken livestock and comparison of clinical features of the internal organs of these chickens will be employed for drawing conclusions on the effect of this supplement to the welfare of chickens. In extent, thistle milk supplement is intended to be supplied to chickens that are destined for meat production given the benefits from pilot research.

## The Project Partners



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