Walnut

Markets

Form	Retail pack	Price per kg of nuts
Dried per kg	10.00	10.00 – 20.00
Cold pressed oil 250ml *(I kg nuts gives 500ml oil)*	15.00	30.00
Walnut halves 125kg tub	3.50	28.00

I kg nuts gives 500ml oil

Average Yields

At 50 trees per ha (10m spacing between trees, 20 metres between rows – this is approximately half commercial spacing)

	Yield per tree	Yield per acre	Yield per Ha
3-5 year	5kg	100kg	250kg
10-15 years	50kg	1 tonnes	2.5 tonnes
Max Production	75kg	1.5 tonnes	3.75 tonnes

Figures from Paul Alfrey from the Balkan Ecology Project in Bulgaria

Effect on agricultural yield

Livestock

At this level of planting impact on grazing potential would be negligible, initially just the loss of land taken up by the tree planting space - 50 m2 if planted individually. As the trees grew, they would provide shade and shelter for the animals thus likely increasing productivity of the pasture.

Pang et al. (2019a) tested the effect of moderate (45% sunlight) and dense shade (20% sunlight) on forage yields of 43 species, showing most performed better in shade than in full sun.

Crop

Initial impact would be from area taken from a row of trees (0.1ha if 5 x100m rows each 2m wide) As the trees grew there would be some competition between the crop and tree, though the exact yield penalty would depend on the crop, soil, and seasonal variation. However, this loss at the margin might well be more than compensated for by positive factors, such as moderation of temperature extremes or increased predator and pollinator numbers. Trees numbers per ha could be reduced to lessen this risk.

Summary

Financially the income from walnuts is likely to significantly exceed the reduced yield from the intercrop and in a silvopastoral system could be a no-lose situations. However, there will be significant costs to pest control, harvesting and processing to achieve this income.

Further info - Newman, S.M. and Adams, M. 1997. Agronomic and economic aspects of walnut agroforestry in the UK. In: L'agroforesterie pour une développement rural durable. Atelier Intl.- Montpellier (France)- 23-29 juin 1997, pp 223-225