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Practical aspects related to agroforestry implementation in Flanders

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The spatial organization of an agroforestry field is crucial. When choosing the distances between the trees in a row as well as between the tree rows, it is not sufficient to take only the growing space of an individual tree into account. More aspects are important and highlighted by agroforestry practitioners, among which:

- Sufficient space for machinery and maintenance, between the tree rows as well as at headland area;
- Minimizing tree shading on the crop;
- Maximizing windbreak function;
- Taking into account the purpose (high-quality wood, fruit production, etc.).

It is often recommended to keep a row distance of at least twice the length of mature trees, in order to minimize the reduction in crop production through increasing tree shading. However, the in practice used distances on agroforestry fields, are often based on the width of the widest machine that is used on the field and counts an extra buffer of at least one meter at each side of the tree row. Regarding the planting distance within the row, if a closed tree crown cover is preferred, the trees need to be planted closer than the final tree crown width: e.g., to have a closed tree crown cover for trees with a crown width of 12 m, the trees should be planted at 10 m. However, trees should not be planted too close to each other, because each tree still needs sufficient space to develop his crown. Several factors play a role when determining the orientation of the tree rows. Taking into account the sun and the wind in Flanders, tree rows should be planted as north-south oriented as possible.

Reference:
https://www.agroforestryvlaanderen.be/NL/Publicaties/Projectrapporten/tabid/10008/language/nl-BE/Default.aspx

Figure 1: Design of agroforestry field is crucial for its workability and rentability. Source: Bert Reubens, Consortium Agroforestry Flanders.

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