

## Context:

- Cover crops are increasingly used for weed management in tropical regions as an alternative to herbicide.
- Selecting the most suitable species of cover crop to be associated with a main crop requires long-term trials.

➔ Objectives: to assess the ability of various cover crops to limit weed growth in Reunion Island

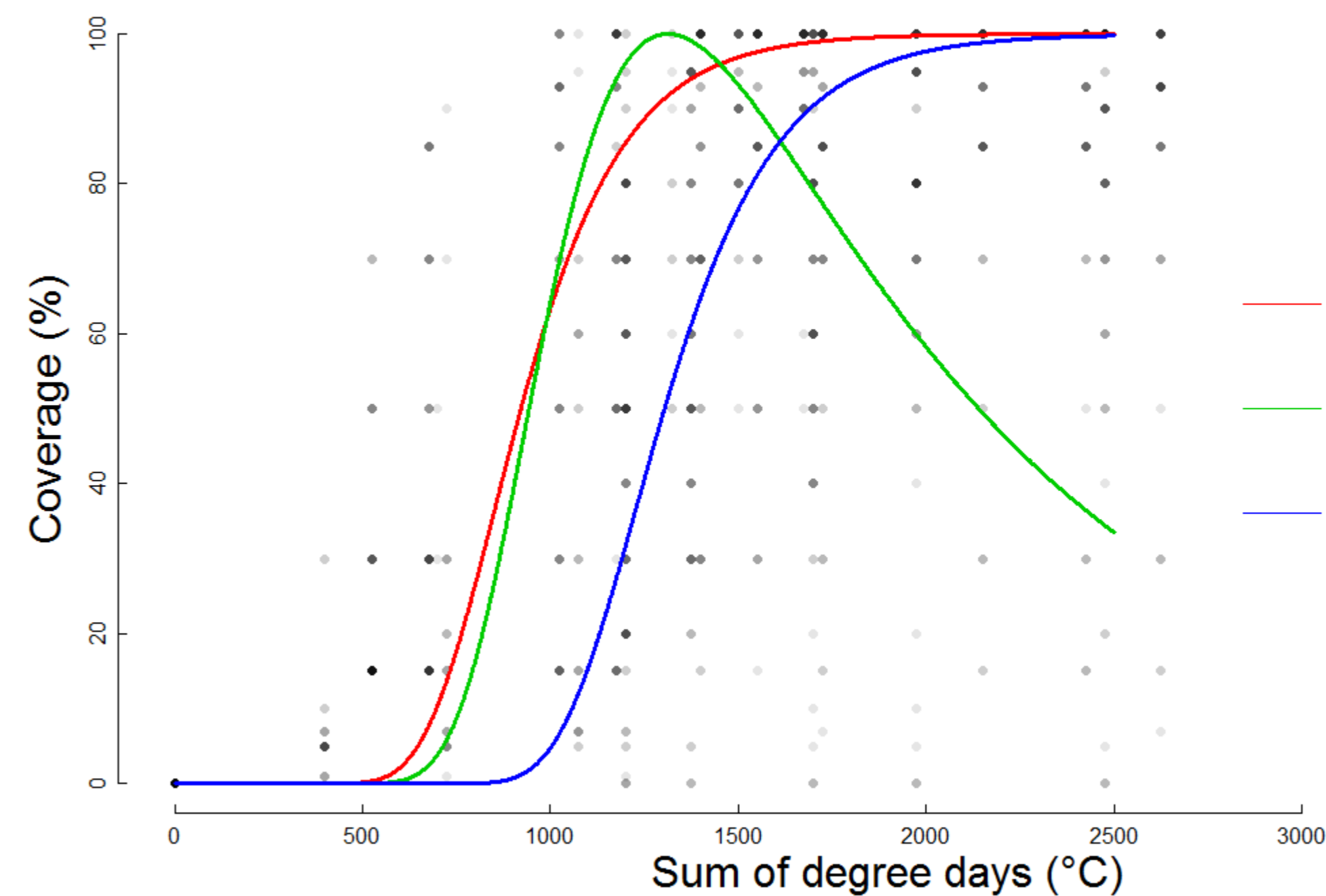
## Collection experiments : to assess the life cycle of cover crops

- 4 trials: 55 species and varieties
- 2 years : 2016, 2017
- 3 sites in Reunion Island: La Mare, Bassin Plat, Colimaçons

*Pennisetum Glaucum (millet)*



*Cajanus Cajan (pigeon pea)*



- Fast coverage
- Short life cycle
- Slow coverage

Improved fallow, 3 mths to 1 yr (e.g. millet)



Short rotation (2-3 mths), intercrop (e.g. Vigna, Guizotia)



Cover crop mixture with short life cycle, intercrop (e.g. Canavalia)



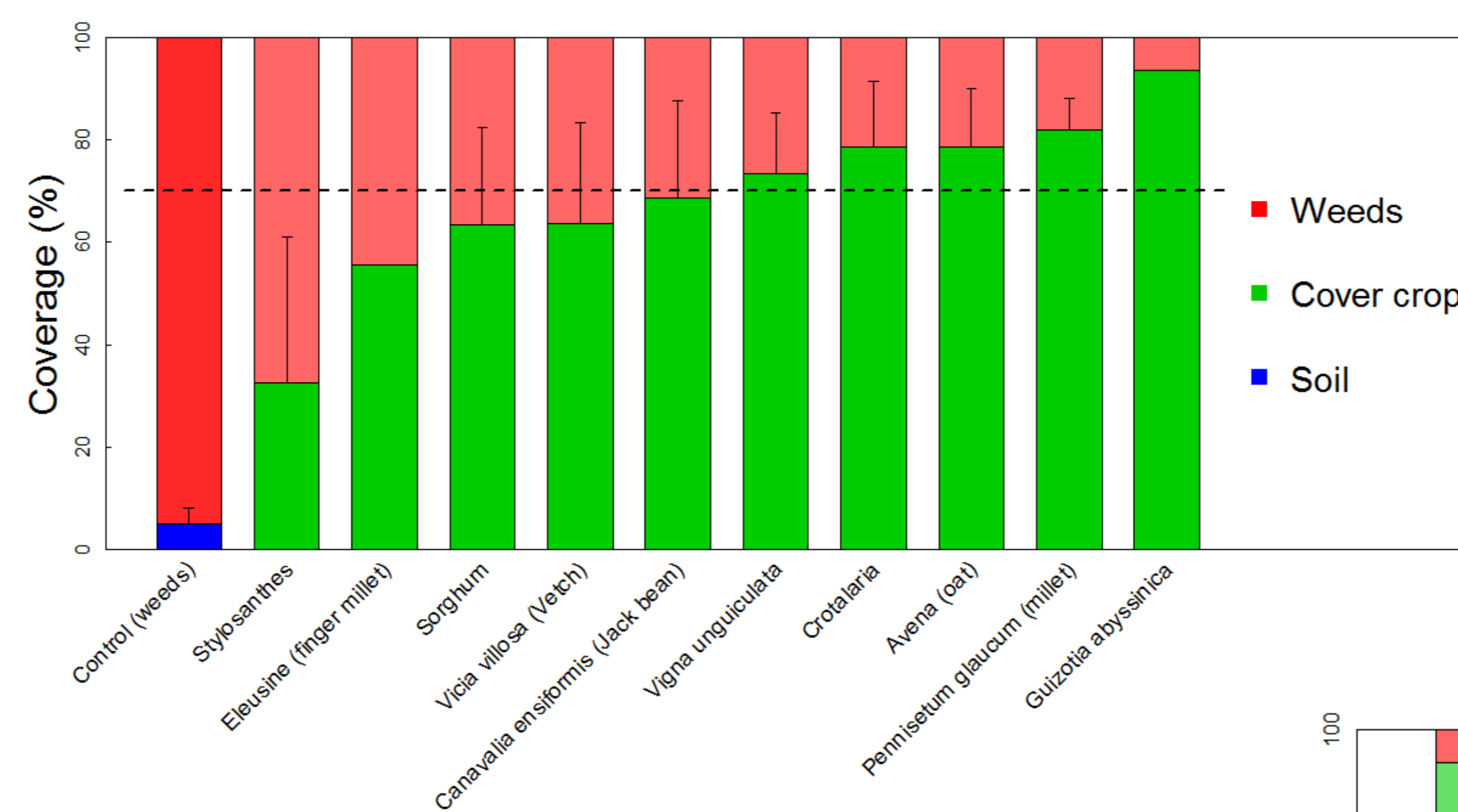
## Large plot & association experiments : to limit weed growth

- 4 trials : 10 espèces or mixture
- 2 years : 2016, 2017
- 2 sites : La Mare & Bassin Plat
- Coverage after 60 days of growth

*Guizotia abyssinica (oil crop)*

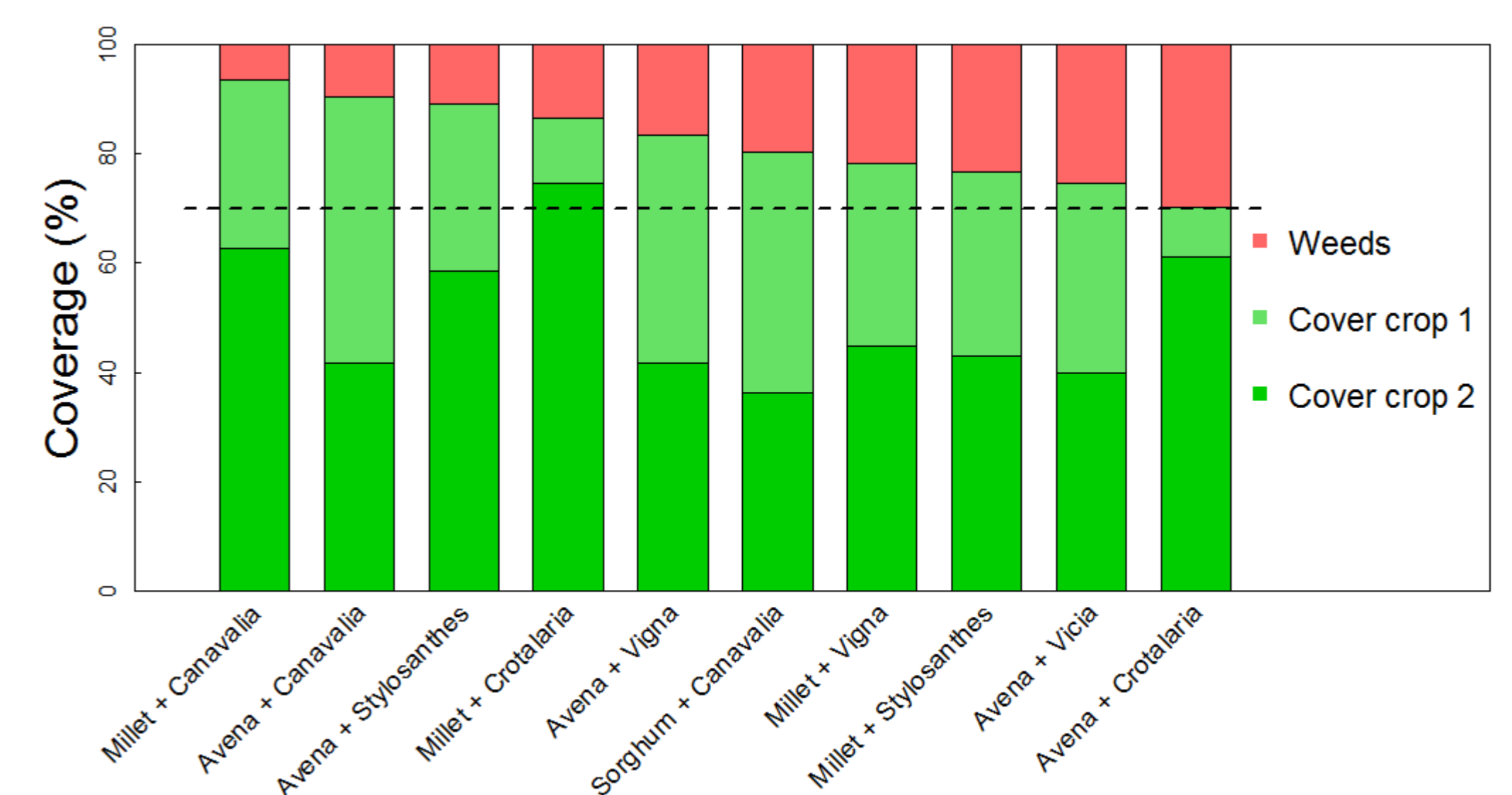


Weeds



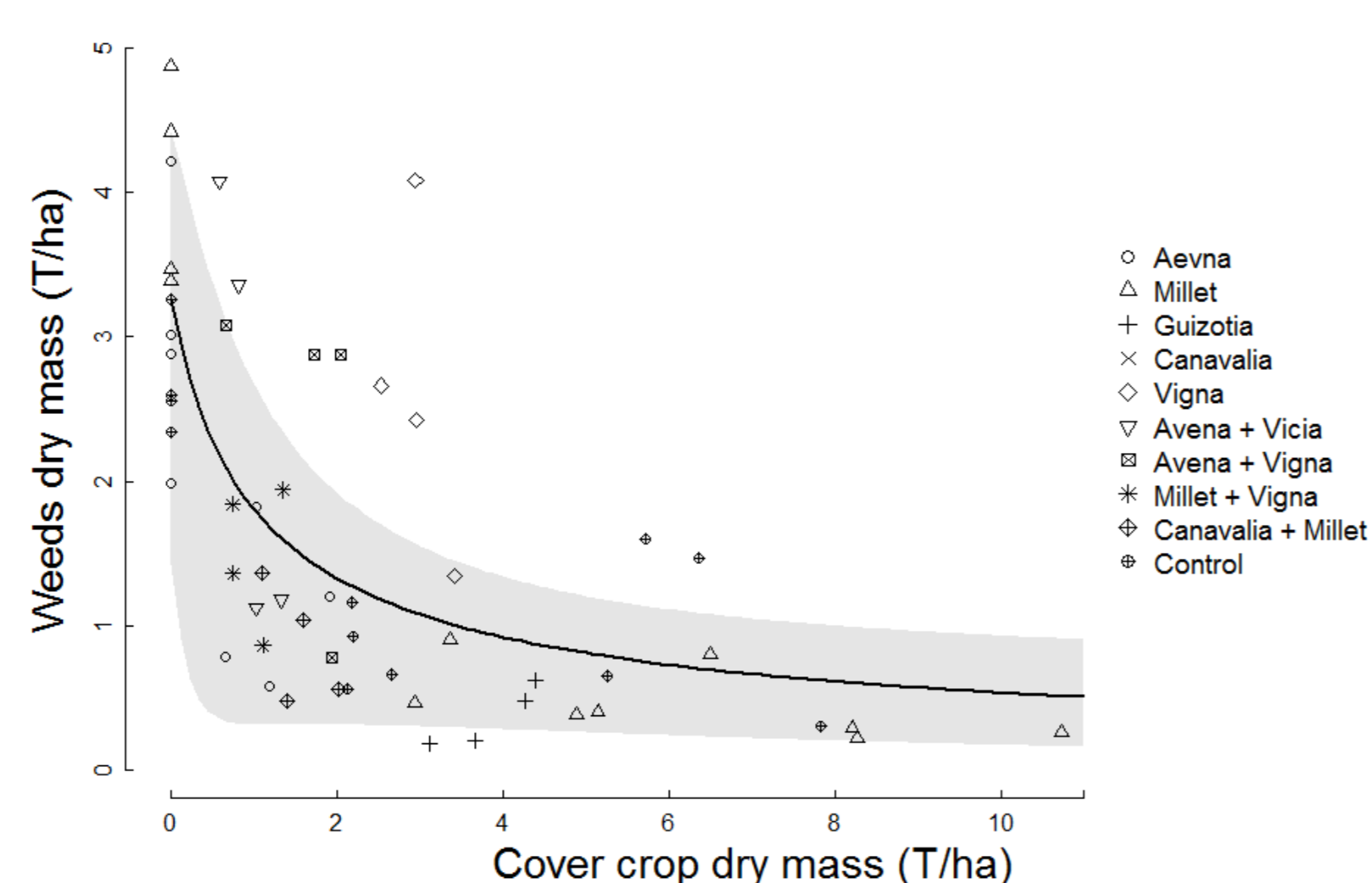
High potential to limit weeds below the 30% threshold.

Optimize species associations



## Conclusion & Discussion

- The more crop cover produce biomass, the more effective they are in controlling weeds :



- Different potentials among cover crops:

