

Extract from the German magazine „Innovation“



COVER CROPS FOR EARLY SOWING

It's all about the right mix!

Christoph Felgentreu · Bückwitz

The aim of cover cropping is to improve soil fertility and boost the efficiency of crop rotations. But the choice of cover crop must be tailored to the farm – and rotation system.

Recent agricultural policy reforms, such as 'greening' requirements or the latest Fertiliser Ordinance in Germany, present farmers with constant challenges, forcing them to rethink and adapt their tried and tested crop rotation practices. Up until now, there has not been a suitable cover crop mix to follow relatively early-harvested crops such as WCS cereals, WCS mixes or early barley harvests.

The TerraLife® range

The TerraLife® WarmSeason mix has been developed to address this need. The new mix is quick to establish, very good at suppressing weeds, resistant to stress and offers the benefits of a biodiverse mix with high potential for mycorrhization. Furthermore, the tendency of the various components to set seed and cause problems as volunteer weeds is extremely low. However, the linseed in the mix can and should set seed because the fats and lipids

„We are extremely satisfied with TerraLife® WarmSeason. The Abyssinian mustard caught our eye at the 2016 DLG Field Days, and now it's looking really spectacular. On the 18 August, we drilled the WarmSeason under very dry conditions. Our cover crop should form a dense canopy, produce deep, penetrative roots, nourish soil organisms and conserve nutrients. The mix is growing exactly as we had hoped!“

Peter Fröhlich, Winkelhausen (Neuburg-Schrobenhausen, Upper Bavaria)

Dairy farm with biogas plant, crop rotation: Maize, 50% cereals (wheat, barley, triticale for grain and WCS cereals), forage/biogas WCS



TerraLife® WarmSeason

Overview of individual species



Summer/forage common vetch
Vicia sativa L.

Function within TerraLife®:

- > deep rooting
- > good mulch cover
- > nitrogen fixing



Full species list at
www.dsv-saaten.de



Linseed, flax
Linum usitatissimum L.

Function within TerraLife®:

- > dry germinating
- > deep rooting
- > silicon fixing
- > mycorrhization-promoter
- > tap rooting



Egyptian clover
Trifolium alexandrinum L.

Function within TerraLife®:

- > dry germinating
- > deep and tap rooting
- > nitrogen fixing
- > low site, soil and nutrient requirements

“FOR AN ACTIVE SOIL LIFE.”



Safflower
Carthamus tinctorius L.

Function within TerraLife®:

- > tap rooting
- > flowering



Sorghum
Sorghum sudanense

Function within TerraLife®:

- > extensive root structure
- > mycorrhization-promoter



Abyssinian mustard
Brassica carinata

Function within TerraLife®:

- > early sowing – maximises photosynthesis activity
- > drought and heat-tolerant
- > good ground cover
- > long vegetative phase = reduces the risk of volunteer seeds
- > good use of available nitrogen
- > adds splash of colour



Niger
Guizotia abyssinica

Function within TerraLife®:

- > dry germinating
- > shallow rooting
- > good mulch cover
- > mycorrhization-promoter

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„EROSION PROTECTION AND GOOD TILTH ARE CRUCIAL FOR MINIMUM TILLAGE.“



„We love the Abyssinian mustard because it's quick to establish and bolt-hardy, AND ramblers exploring the area round Schiller's birthplace Marbach upon Neckar love it because it brings a splash of colour. For the past 30 years, we have drilled the follow-on crops directly into the mulch without tilling, so we expect erosion protection, nutrient conservation and good tilth condition from WarmSeason.“

Florian Petschl, Marbach upon Neckar:

He farms 2000 fattening pigs, 160 sows, 100 ha in a four-field crop rotation comprising maize, sugar beet/beetroot, winter barley and winter wheat.

stored in the seed provide an excellent and essential food for fungi. In turn, soil fungi play an active role in the formation of humus. Developing a cover crop mixture is a long-term process. Before we add a new mixture to the TerraLife® range, we test a prototype in a series of multi-stage trials at several locations. Since each individual component in the mix performs a specific task, we also test for interactions between species, as certain plant combinations are known to produce strong effects which may not necessarily be beneficial.

Black oats (*Avena strigosa*) are a good example of this phenomenon – they inhibit the germination of brassicas.

The composition of the mix is optimised once the preliminary trials have been completed.

We then conduct on-farm trials to test how the mix ultimately performs.

The new TerraLife® mix is not named until we are satisfied that everything is just right.

WarmSeason contains a new component – the Abyssinian mustard 'Redbone' – which gives it a special colour. The unique red variety of the genus *Brassica carinata* has the added benefit of being exceptionally drought-tolerant and suitable for early sowing.

The dazzling orange blooms of the safflower and red leaf colour of the Abyssinian mustard will bring cheer to the farmer and to the general public, who often view agriculture with suspicion. Agriculture is and will always be an emotive subject.

Outlook

At present we are working on a new mix to complement WarmSeason – TerraLife® CoolSeason. Intensive tests and trials are currently underway because the successful establishment of cover crops on cold sites calls for species and varieties which grow and interact optimally under adverse weather conditions.



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„RAPID EMERGENCE OF THE COVER CROP IS ESSENTIAL.“

„In Wetterau we typically harvest early in the season as the weather tends to be warm and dry, with good soil conditions. This year, as in many other places, the summer was wet, which delayed sowing the cover crop to 22 August. Rapid emergence of the cover crop is really important for us. Despite the harsh conditions, the new DSV mix was quick to establish. As we have very mild winters, we also want to be sure that the crop dies back rapidly in winter.“

GbR Walter, Wöllstadt in der Wetterau, Hessen

Farming 100 ha, suckler cows, and following a crop rotation of sugar beet, winter wheat, maize, winter wheat or sugar beet, winter wheat, winter wheat, winter barley

