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

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

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

Summer/forage common vetch
*Vicia sativa* L.

**Function within TerraLife®:**
- deep rooting
- good mulch cover
- nitrogen fixing

**FOR AN ACTIVE SOIL LIFE.**

Full species list at [www.dsv-saaten.de](http://www.dsv-saaten.de)

TerraLife® WarmSeason
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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.