DSV TerraLife® 2025

Plant cultivation systems with species-rich crops, companion crops and undersown seeds

Stable soil for a strong cultivation system

DSV

Innovation for your growth

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DSV

Deutsche Saatveredelung AG (DSV) is one of the leading medium-sized plant breeding and seed companies in Germany. DSV is specialised in the breeding, production and distribution of forage and turf grasses, oil crops, clovers, various cover crops, cereals, maize and sorghum.

If individual species and varieties are not available, they are replaced by equivalent ones. The seed percentages are subject to natural variation and the values given are for guidance only.

Organic inspection body: DE-ÖKO-039

TerraLife® CoverCrops – mixtures for every crop rotation

Mixtures	Main focus: legume free (Page 6)	legume focused (Page 7)	early sowing (Page 8)	allround mixture (Page 9)	potato rotation (Page 11)	beet rotation (Page 12)	late sowing (Page 12)
AquaPro ●	●		●			●	
VitaMaxx DT	●						●
N-Fixx / N-Fixx 50 ●		●					
EarlySummer ●			●				
WarmSeason			●				
MaizePro DT / DT30 / DT50		●		●			
Rigol DT				●			
SolaRigol ●		●			●		
SolaRigol R					●		
BetaSola					●	●	
BetaMaxx DT						●	
BetaMaxx 30 / 50 ●		●				●	
CoolSeason							●
SoilProtect							●
ForageRooter ●		●					●
Organic Mixtures							
AquaPro Organic	●		●				
BioMaxx Organic	●			●			●
GreenPower Organic ●		●	●				
MaizePro Organic				●			
Solanum Organic		●			●		
BetaMaxx Organic ●		●				●	
ForageRooter Organic ●							●

DT = tillage radish Deeptill | The following applies to all mixtures: If individual species and varieties are not available, they are replaced by equivalent ones.

● ● = Particularly suitable for oilseed rape crop rotations ● ● = Focus suitability ● ● = also suitable for

Stable soil for a strong cultivation system

The stability of soil aggregates is an important physical indicator of soil health.

A soil aggregate is a coherent unit of soil particles that are bonded together by organic substances, clay, minerals and roots. The larger the soil aggregates, the more stable the soil structure and the pore spaces in which air and water circulation take place.

Enlarging and stabilising the soil aggregates improves trafficability after precipitation, increases resistance to heat and drought and promotes water availability.

+ 11 %
Silage maize yield
in dry years

+ 11.5 %
Soil water
for maize sowing

+ 19 %
Water stable
soil
aggregates

Your profit
through
cover crop mixtures

- 80 %
Nutrient
leaching

+ 4 %
Winter wheat yield
in the crop rotation
after maize

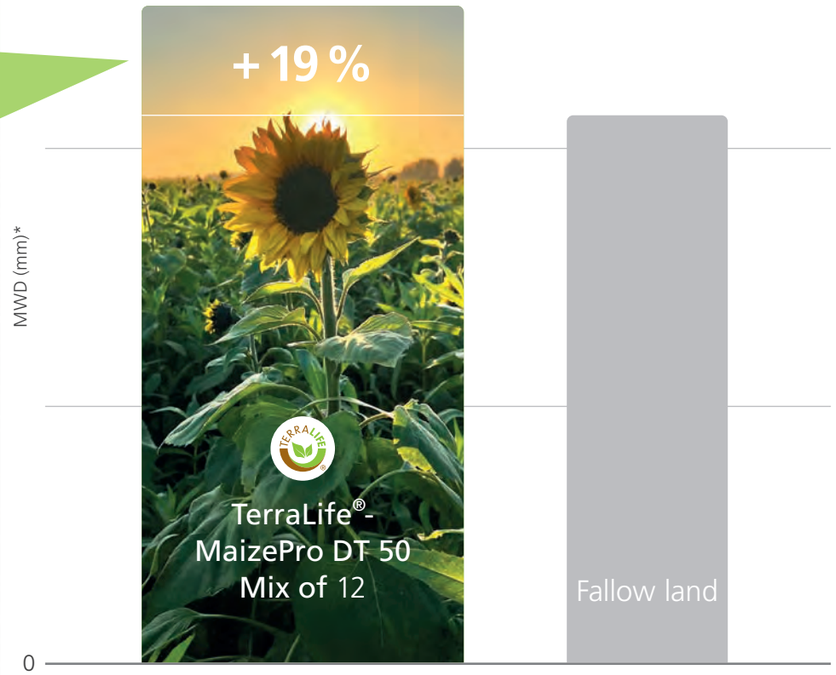
Results compared to fallow land, CATCHY project

TerraLife® makes the difference

Cover crops have been shown to improve the formation of water-stable soil aggregates compared to fallow land. The highest potential was determined in the 9-year cover crop project CATCHY for the species-rich mixture TerraLife®-MaizePro with 12 components.

The PLUS for soil health

TerraLife®-MaizePro DT 50 increased the diameter of water-stable soil aggregates (MWD*) by **19 %** compared to fallow!



Further results from the CATCHY research project can be found on page 19.

* Average weighted diameter of the soil aggregates

Source: modified according to Gentsch et al. 2024

Legume-free mixtures

TerraLife®-AquaPro

Safe nutrient conservation for water protection areas and rapeseed crop rotations

- Ideal for oilseed rape crop rotations
- Tolerates dry conditions
- Very good nitrogen storage

As a legume-free mixture, AquaPro is the first choice for water protection areas, as the containing species are particularly good at absorbing and storing available nutrients. Nutrient retention over the winter is guaranteed and the risk of possible leaching is reduced. AquaPro is particularly suitable as a cover crop before grain legumes and in oilseed rape crop rotations.

Tip: Increase seed rates by 10 % in areas where additional fertilisation is not possible.

Also available as TerraLife®-AquaPro Organic.

Legume-free: Absorbs excess nutrients and retains them in the soil

Sowing rate: 25–30 kg/ha
Optimum sowing date: End of July to no later than 25 August
Crop rotation: Oilseed rape, grain legumes, sugar beet, cereals, maize

0 % Legumes
0 % Cruciferous — Seed content in % (Ø)

Bristle oat, sorghum, niger, linseed, phacelia, sunflower

TerraLife®-VitaMaxx DT

Fast-growing mixture for livestock farms to optimise nutrient utilisation and conservation

- Suitable for late sowing
- Good nitrogen and phosphorus storage
- Scatter sowing, cutter sowing and combine sowing are possible

VitaMaxx DT is a fast-growing, legume-free cover crop mixture and is therefore also well suited for use in water protection areas. The mixture produces a lot of biomass, which serves as a source of food for earthworms and other soil organisms for a long time and conserves nutrients over the winter.

For organic farming: TerraLife®-BioMaxx Organic

Sowing rate: 20–25 kg/ha
Optimum sowing date: End of August to beginning of September
Crop rotation: Legumes, cereals, maize

0 % Legumes
<50 % Cruciferous — Seed content in % (Ø)

Bristle oat, buckwheat, niger, mustard, linseed, false flax, abyssinian cabbage, phacelia, deep-rooted radish, sunflower

Legume-emphasised mixtures

TerraLife®-N-Fixx
TerraLife®-N-Fixx 50

Rapid soil cover and nitrogen fixation

- Very good freeze-off
- Very good nitrogen accumulation
- Rich bee feed

N-Fixx is ideal for maize and winter cereal crop rotations. The mixture is shooting resistant and is also suitable for early sowing dates.

N-Fixx 50 can be fertilised without restriction by the legume content in federal states where the legume content in the catch crop mixture reduced to a maximum of 50 %.
Please refer to the current legal texts.

Also suitable as a summer cover crop (min. 6 – 7 weeks vegetation period).

The small-grain field bean MELENKA in TerraLife®-N-Fixx provides additional nitrogen

For organic farming: TerraLife®-GreenPower Organic.

N Potential approx. **100 kg/ha**

Sowing rate: 40–45 kg/ha
Optimum sowing date: End of July to 25 August (before rape until 15 July)
Crop rotation: Cereals, maize, oilseed rape, sugar beet

N-Fixx — **N-potential: approx. 100 kg/ha**
<75 % Legumes
0 % Cruciferous

Field pea, common vetch, Egyptian clover, linseed, sparrose clover, field bean, sunflower, niger, serradella, sorghum, phacelia

N-Fixx 50 — **N-potential: approx. 80 kg/ha**
<50 % Legumes
0 % Cruciferous — Seed content in % (Ø)

Field pea, common vetch, sunflower, linseed, sorghum, phacelia, niger, Egyptian clover, sparrose clover, field bean

Mixtures suitable for early sowing

TerraLife®-EarlySummer

Ideal for early sowing dates

- Crop rotation neutral and ideal within oilseed rape crop rotations
- Suitable for early sowing
- Good soil incorporation in spring

The demand for mixtures that tolerate warmth and early sowing dates is growing. EarlySummer is ideal for early sowing dates and prefers to grow in warm conditions. The potential for the development of volunteer seeds is low. Its balanced composition makes it suitable for many crop rotations. Sorghum, phacelia and niger provide mass formation, linseed grows in deeper soil layers and sparrose clover ensures additional nitrogen fixation.

N Potential approx. 60 kg/ha

Sowing rate: 20–25 kg/ha
Optimum sowing date: End of June to mid-August
Crop rotation Cereals, rape, sugar beet, maize

<25 % Legumes

0 % Cruciferous

Seed content in % (Ø)

Sorghum, sparrose clover, niger, linseed, phacelia

TerraLife®-WarmSeason

Time for growth

- Suitable for early sowing and dry conditions
- Long vegetative growth
- Maximum photosynthesis

WarmSeason is ideal for very early sowing, e.g. after early harvested cereals or wholecrop silage mixtures. The specially balanced components tolerate very warm conditions well and have long vegetative growth, which reduces the risk of seeding. In addition, early sowing leads to strong rootgrowth and maximum photosynthesis.

! WarmSeason is not suitable for narrow beet crop rotations.

N Potential approx. 60 kg/ha

Sowing rate: 25–30 kg/ha
Optimum sowing date: End of June to beginning of August
Crop rotation: Cereals, maize, sugar beet[1], legumes[1]
[1] Consider crop rotation diseases

<25 % Legumes

<25 % Cruciferous

Seed content in % (Ø)

Sorghum, common vetch, niger, linseed, field pea, Egyptian clover, abyssinian cabbage

All-round mixtures

TerraLife®-MaizePro

Balanced, partially winter-hardy cover crop for maize crop rotations

TerraLife®-MaizePro DT 50
TerraLife®-MaizePro DT 30
TerraLife®-MaizePro DT

- Leaves an optimal soil structure
- Promotes root penetration
- Very good N utilisation
- Partially winter-hardy

MaizePro DT is the ideal mixture for following maize crops. It specifically supports the mycorrhisation of maize and thus improves the soil structure. If the catch crop is successful, tillage to the depth of the maize placement horizon is sufficient in spring. This maintains capillarity, which ensures the availability of germination water.

With more than 30,000 ha cultivated annually, TerraLife®-MaizePro is the first choice as a cover crop for many farmers!

MaizePro DT is available in the 30 and 50 variants with a reduced proportion of legumes (<30 % or <50 %) and can therefore be fertilised without restriction by the proportion of legumes, depending on the federal state regulations. Please refer to the current legal texts.

Also available as TerraLife®-MaizePro Organic.

N Potential approx. 80 kg/ha

Sowing rate: 30–35 kg/ha; MaizePro DT: 40–45 kg/ha
Optimum sowing date: Mid-July to end of August (before rape until 15 July) (as a flowering mixture end of April to end of May)
Crop rotation: Cereals, maize, oilseed rape[1]
[1] Consider crop rotation diseases

MaizePro DT 50 — N-potential: approx. 80 kg/ha

<50 % Legumes

<25 % Cruciferous

Field pea, sorghum, common vetch, linseed, sunflower, niger, hairy vetch, Egyptian clover, abyssinian cabbage, deep-rooted radish, serradella, phacelia, crimson clover, Persian clover, Swedish clover, red clover, white clover

MaizePro DT 30 — N-potential: approx. 60 kg/ha

<25 % Legumes

<25 % Cruciferous

Sorghum, niger, linseed, field pea, sunflower, phacelia, common vetch, abyssinian cabbage, deep-rooted radish, Persian clover, serradella, red clover, white clover

MaizePro DT — N-potential: approx. 80 kg/ha

<50 % Legumes

<25 % Cruciferous

Seed content in % (Ø)

Winter rye, field pea, sorghum, abyssinian cabbage, niger, sunflower, phacelia, linseed, Persian clover, white clover, deep-rooted radish, crimson clover, hairy vetch

All-round mixtures

TerraLife®-Rigol DT

Strong root formation stabilises the soil structure

- Proven in practice over the long term
- Very deep rooting
- For compacted soils

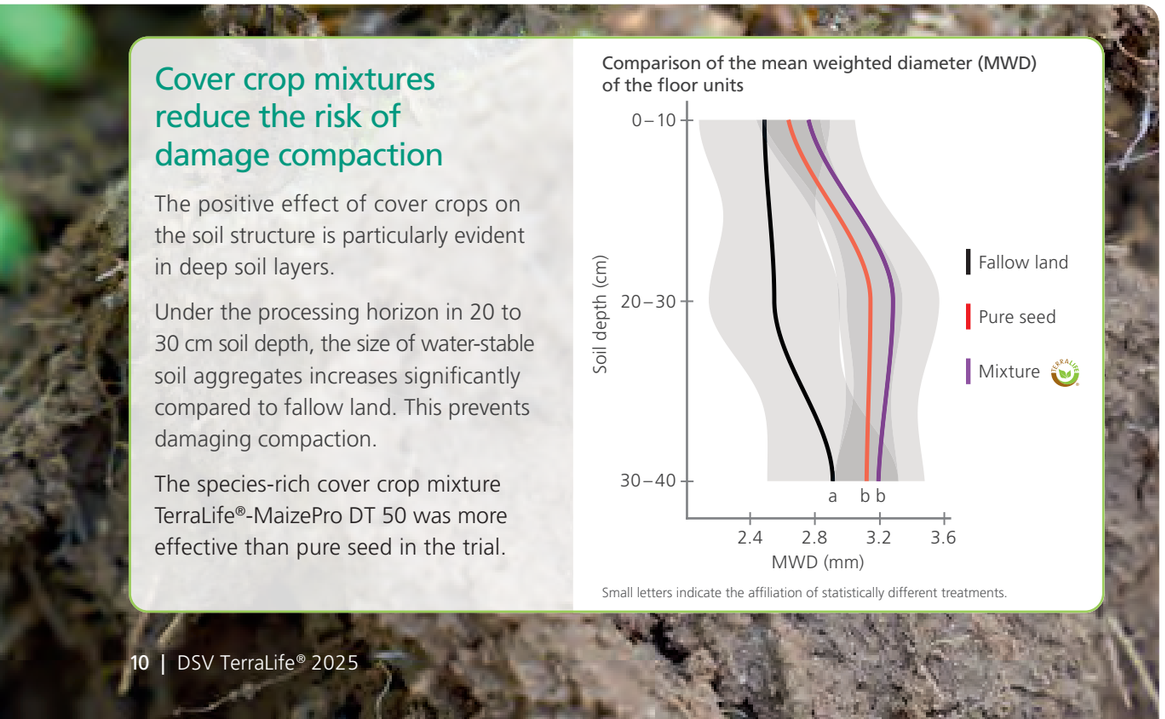
The cover crop mixture Rigol DT is extremely effective in penetrating soil compaction, as the plant species it contains have an intensive root performance. Numerous root channels are created, which can be utilised by the following crop for rapid root penetration. At the same time, Rigol DT ensures good soil shading and rapid fine rooting of the A horizon and good above-ground biomass production. The proportion of legumes leads to good humus and nutrient accumulation. The favourable C/N ratio allows rapid N availability for the subsequent crop. Rigol DT is one of the oldest TerraLife® mixtures and has proven itself over many years.

N Potential approx. 30 kg/ha

Sowing rate: 20–22 kg/ha
Optimum sowing date: End of July to end of August
Crop rotation: Cereals, maize[1], oilseed rape[1]
[1]Consider crop rotation diseases

<25 % Leguminosen
<50 % Cruciferous
Seed content in % (Ø)

Bristle oat, sorghum, common vetch, field pea, deep-rooted radish, linseed, niger, sunflower, phacelia, Egyptian clover, false flax, abyssinian cabbage



Cover crop mixtures reduce the risk of damage compaction

The positive effect of cover crops on the soil structure is particularly evident in deep soil layers.

Under the processing horizon in 20 to 30 cm soil depth, the size of water-stable soil aggregates increases significantly compared to fallow land. This prevents damaging compaction.

The species-rich cover crop mixture TerraLife®-MaizePro DT 50 was more effective than pure seed in the trial.

Comparison of the mean weighted diameter (MWD) of the floor units

Small letters indicate the affiliation of statistically different treatments.

Mixtures for potato crop rotations

TerraLife®-SolaRigol
TerraLife®-SolaRigol R

The catch crop mixture for potato crop rotations

- Reduces susceptibility to disease in potato crop rotations
- Promotes soil fertility
- Ensures rapid rooting of the potato

SolaRigol is a balanced mixture specially adapted to potato cultivation, which shades the soil well, ensures intensive rooting and increases biodiversity. Blue lupin and linseed create deep root channels. The soil structure is ideally prepared for cultivation in ridges which reduces erosion within the ridges. In addition, blue lupin reduces the infestation of tobacco rattle virus in potatoes like no other plant species. The common vetch has a particularly positive effect on soil bacteria that protect the plants from pathogens.

For organic farming: TerraLife®-Solanum Organic.

N Potential approx. 80 kg/ha

Sowing rate: 55–60 kg/ha, SolaRigol R: 55–60 kg/ha
Optimum sowing date: Mid-July to 15 August
Crop rotation: Oilseed rape, potatoes, cereals, maize, sugar beet (SolaRigol R: Cereals, maize, potatoes)

SolaRigol — N-Potential: ca. 80 kg/ha
<50 % Legumes
0 % Cruciferous

Blue lupin, common vetch, sparrose clover, bristle oat, linseed, field pea, niger, Egyptian clover, serradella

SolaRigol R — N-Potential: ca. 30 kg/ha
<75 % Legumes
<25 % Cruciferous
Seed content in % (Ø)

Field pea, common vetch, oil radish (nematode-resistant Cat. 1), blue lupine, Egyptian clover, Persian clover, niger

Mixtures for beet crop rotations

TerraLife®-BetaSola

The nematode-reducing mixture for sugar beet and potato cultivation

- Nematode reduction & soil protection
- Wide range of effects
  Heterodera schachtii and *Trichodorus*
- Specially adapted to potato and beet production technology

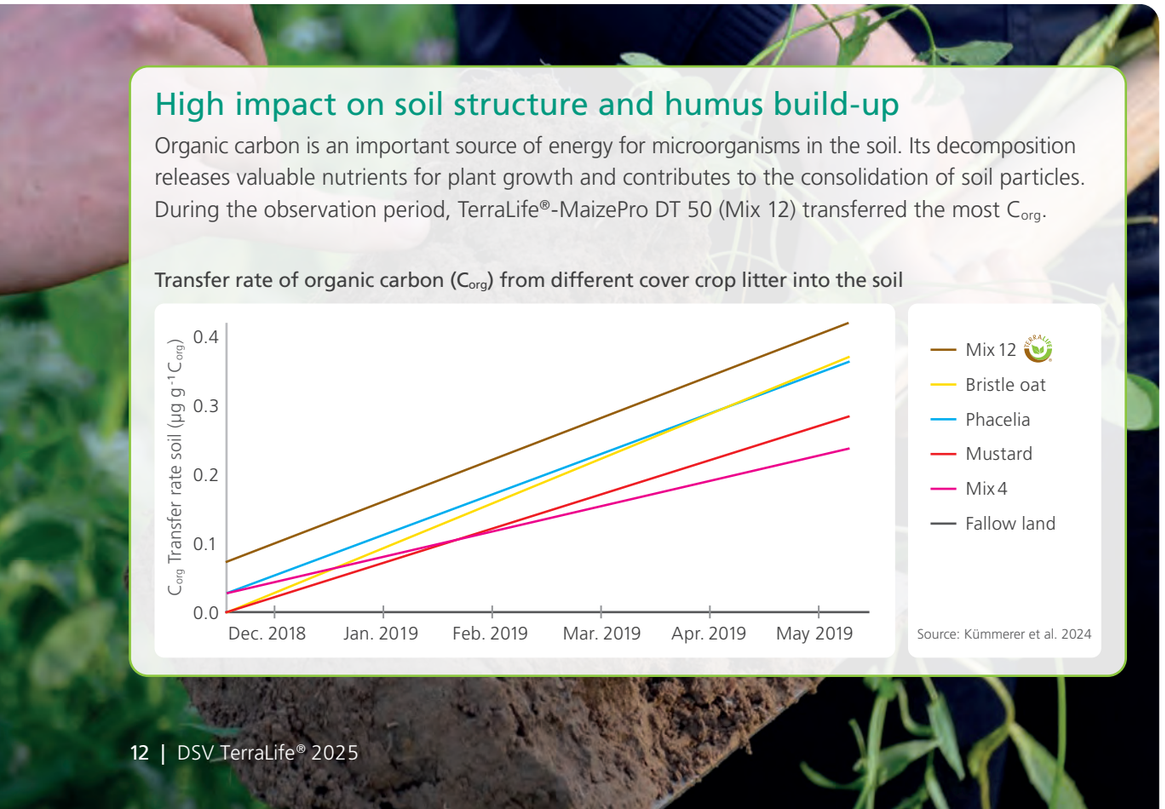
The combination of species in BetaSola has a broad spectrum of activity. For example, the different nematode-resistant oil radish varieties help to reduce beet nematodes. Multi-resistant oil radish is also resistant to root gall nematodes. Another advantage of oil radish varieties is their different growth periods. This means that nematodes are attracted for as long as possible. The mixture partner bristle oat also reduces root nematodes *(Pratylenchus)*. Vetch and Egyptian clover fix nitrogen and promote shading.

N Potential approx. **60 kg/ha**

Sowing rate: 35–40 kg/ha
Optimum sowing date: Mid-July to end of August
Crop rotation: Potatoes, sugar beet, cereals, maize

<25 % Legumes
<50 % Cruciferous
Seed content in % (Ø)

Oil radish, common vetch, bristle oat, niger, Egyptian clover



High impact on soil structure and humus build-up

Organic carbon is an important source of energy for microorganisms in the soil. Its decomposition releases valuable nutrients for plant growth and contributes to the consolidation of soil particles. During the observation period, TerraLife®-MaizePro DT 50 (Mix 12) transferred the most C_{org}.

Transfer rate of organic carbon (C_{org}) from different cover crop litter into the soil

Source: Kümmerer et al. 2024

TerraLife®-BetaMaxx

The catch crop mixture for sugar beet cultivation

TerraLife®-BetaMaxx 50
TerraLife®-BetaMaxx 30
TerraLife®-BetaMaxx DT

- Safe freeze-off
- Creates ideal seedbed conditions for sugar beets
- Also for oilseed rape crop rotations

BetaMaxx creates ideal conditions for the successful cultivation of summer crops, especially sugar beet. This is particularly helpful for beet in dry periods. As it does not contain any cruciferous plants, BetaMaxx can also be used in vegetable cultivation and in combined oilseed rape and beet crop rotations. BetaMaxx is not suitable for the biological control of *Heterodera schachtii* (in this case we recommend TerraLife®-BetaSola).

BetaMaxx is available in the 30 and 50 variants with a reduced proportion of legumes (<30 % or <50 %) and can therefore be fertilised without restriction by the proportion of legumes, depending on the federal state regulations. Please refer to the current legal texts.

! BetaMaxx DT is not suitable for close beet crop rotations with nematodes.

Also available as TerraLife®-BetaMaxx Organic.

N Potential approx. **80 kg/ha**

Sowing rate: 40–45 kg/ha; BetaMaxx DT 30–35 kg/ha
Optimum sowing date: Mid-July to 25 August
Crop rotation: Oilseed rape, sugar beet, cereals, maize (BetaMaxx DT: Cereals, maize, sugar beet, oilseed rape)[1]
[1] Consider crop rotation diseases

BetaMaxx 50 N-potential: ca. 80 kg/ha
<50 % Legumes
0 % Cruciferous

Blue lupin, field pea, bristle oat, common vetch, niger, linseed, Egyptian clover, phacelia, serradella

BetaMaxx 30 N-potential: ca. 60 kg/ha
<25 % Legumes
0 % Cruciferous

Blue lupin, bristle oat, niger, field pea, common vetch, Egyptian clover, phacelia, linseed, serradella

BetaMaxx DT N-potential: ca. 30 kg/ha
<25 % Legumes
<25 % Cruciferous
Seed content in % (Ø)

Bristle oat, field pea, common vetch, niger, deep-rooted radish, phacelia, linseed, serradella, abyssinian cabbage, Egyptian clover

Mixtures suitable for late sowing

Winterhardy TerraLife® mixtures can be sown after a late main crop harvest.
The winter-hardy components bind nutrients ideally and protect against leaching.

TerraLife®-SoilProtect

Winterhardy base mix

- As pure seed or as a hardy combination with other TerraLife® mixtures
- High shade tolerance of the plants enables optimum development even under maize
- Species-rich and vigorous

Customised solutions are sometimes necessary: If several cover crop objectives are to be combined, SoilProtect can be mixed with other TerraLife® mixtures to provide a winter-hardy basis. The species in SoilProtect intensively stabilise the soil structure.

TerraLife®-SoilProtect is also very suitable for sowing under maize. The species tolerate shading of maize and provide excellent winter soil cover after maize.

N Potential approx. **80 kg/ha**

Sowing rate: 30–35 kg/ha, as undersowing: 15–20 kg/ha
Optimum sowing date: End of August to mid-September in bare seed, from mid-May as undersown mixture (e.g. winter wheat, maize from 8-leaf stage)
Crop rotation: Oilseed rape, cereals, maize, potatoes, sugar beet

<50 % Legumes
0 % Cruciferous — Seed content in % (Ø)

Hairy vetch, perennial ryegrass, linseed, crimson clover, Swedish clover, ribwort plantain

TerraLife®-CoolSeason

Ideal for late sowing and cool regions

- Very good winter erosion protection
- Good structure and humus formation
- Cover crop in preparation for set-aside usage

CoolSeason consists of freezing and winterhardy species. This preserves nutrients extremely well and efficiently prevents them from being washed out. The mixture is very structure-forming, promotes the formation of humus in an ideal way and is also ideal as a wildflower cover crop.

N Potential approx. **30 kg/ha**

Sowing rate: 12.5–15 kg/ha
Optimum sowing date: End of August to end of September
Crop rotation: Cereals, maize

<50 % Legumes
<75 % Cruciferous — Seed content in % (Ø)

Winter rye, bristle oat, crimson clover, winter forage rape, turnip rape, Hungarian vetch, abyssinian cabbage, Persian clover, deep-rooted radish, linseed, false flax

TerraLife®-ForageRooter

The high-yield classic Landsberg mixture

- High-protein feed
- Good winter hardiness
- Excellent improvement of the crumb structure

Thanks to its intelligent composition, ForageRooter actively promotes the soil life and water balance. The proportion of water-resistant soil crumbs is increased, which improves water infiltration and significantly stabilises the soil structure. Its growth is suitable both as green fallow land for high-quality feeding.

Also available as TerraLife®-ForageRooter Organic.

N Potential approx. **80 kg/ha**

Sowing rate: 50 kg/ha
Optimum sowing date: End of August to mid-September in bare seed, from mid-May in undersown crops (e.g. winter wheat, maize from 8-leaf stage)
Crop rotation: Oilseed rape, cereals, maize, potatoes, sugar beet

<50 % Legumes
0 % Cruciferous — Seed content in % (Ø)

Italian ryegrass, crimson clover, hairy vetch

TerraLife® CompanionCrops:
The interactive combination with the main crop

TerraLife®-BrassicaPro

The companion crop for rapeseed professionals

- Optimises the nutrient dynamics
- Promotes soil life
- Good freeze-off properties

The carefully selected combination of different plant species promotes soil structure and the nutrition of soil life. The nutrient dynamics can be balanced through interaction of the different plant species. Depending on the location and year, the varied plant community can support weed suppression and distraction of insect pests in autum if it develops sufficiently. In addition, it does not compete with the main crop. The high proportion of legumes has a positive effect on the C/N ratio. BrassicaPro can also be used as a legume-emphasised cover crop mixture, for example in oilseed rape crop rotations.

Sowing rate: Drill sowing 10 – 15 kg/ha, broadcast sowing 20 kg/ha, pure sowing 40 kg/ha
Optimum sowing date: With a normal seed drill shortly before rape; with a two-tank seed drill at the same time as oilseed rape
Crop rotation Oilseed rape, cereals, maize

> 75 %	Legumes
0 % Cruciferous	Seed content in % (Ø)

Blue lupin, linseed, serradella, Egyptian clover, niger, Persian clover

TerraLife®-SolanumPro

The companion crop for potato professionals

- Temperature control in potato ridges
- Promotes soil life
- Strengthens the vitality of potato plants

Seeding SolanumPro in potatoes significantly improves the soil structure. Green ridges significantly control the temperature in the soil. The potato benefits considerably from this. Through the interaction of the different plant species with the soil, the nutrient dynamics can be balanced over the entire growth phase. The deep-rooting species root the soil intensively and nutrients can be bound. The risk of ridge erosion is reduced by the plant and root architecture.

Sowing rate: 15 kg/ha
Optimum sowing date: Depending on the growth type of the potato varieties, approx. EC 9

< 50 %	Legumes
0 % Cruciferous	Seed content in % (Ø)

Common vetch, linseed, perennial ryegrass, ribwort plantain, niger, Persian clover

More about the cultivation of companion crops

TerraLife®-CerealPro formerly M2 Plus

Species-rich companion crop and undersowing mixture for cereal crop rotations

- Not competitive to the main crop
- Intensive rooting
- Diverse composition

CerealPro brings species richness into cereal cultivation. The balanced mixing ratio prevents competition with each other and at the same time stimulates soil life in an extremely diverse way. After the cereal harvest, some of the species are retained and then provide an ideal winter cover crop. The intelligent site cover ensures good weed suppression.

Sowing rate: 10 kg/ha
Optimum sowing date: Spring (March/April)

< 50 %	Legumes
< 5 % Cruciferous	Seed content in % (Ø)

Perennial ryegrass, white clover, crimson clover, horned clover, ribwort plantain, false flax, linseed, phacelia

TerraLife®-ZeaPro

NEW

The grass-free solution for species-rich maize undersowing

- Grass-free, partially hardy mixture formulation
- Shade-tolerant species, perfect for undersowing maize
- Ideally matched combination of legumes and non-legumes

With predominantly hardy species, ZeaPro offers optimum erosion protection and promotes soil life in the long term. This mixture stabilises the soil structureand ensures efficient winter greening after maize cultivation. Ribwort plantain provides a winter-hardy, deep-rooting cover crop during and after maize cultivation. Its nitrification-inhibiting effect protects valuable ammonium from conversion into nitrate and subsequent leaching.

Sowing rate: 30 – 35 kg/ha, as undersowing: 15 – 20 kg/ha
Optimum sowing date: End of August to mid-September in bare seed, from mid-May in undersown crops (e.g. winter wheat, maize from 6 – 8 leaf stage)

< 50 %	Legumes
< 50 % Cruciferous	Seed content in % (Ø)

False flax, Hungarian vetch, linseed, crimson clover, Swedish clover, ribwort plantain

TerraLife® Undersown crops:
Keeping the soil green

Undersowing is a proven arable farming measure. During the growth phase of the main crop, the undersown crop can establish itself in peace and develop its full effect after the main crop harvest.

Maize undersowing

TerraLife®-HumusPlus 1.1
The classic

Sowing rate: 15 kg/ha
Optimum sowing date: 6–8 leaf stage of maize

Perennial ryegrass, Italian ryegrass

TerraLife®-HumusPlus 1.2
Robust and frugal

Sowing rate: 7–10 kg/ha
Optimum sowing date: Directly before or after maize sowing

Red fescue (clustering), tall fescue

Cereal undersowing

TerraLife®-HumusPlus 2.1
Mixture with safe green mass growth

Sowing rate: Pure sowing 40 kg/ha; undersowing 15 kg/ha

Perennial ryegrass, white clover

TerraLife®-HumusPlus 3.1
Easy to care for, slow-growing

Sowing rate: Pure sowing 35 kg/ha; undersowing 15 kg/ha

Red fescue, perennial ryegrass, white clover

Also available as TerraLife®-HumusPro 3.1 Organic.

TerraLife®-HumusPlus 3.2
Easy to care for, slow-growing

Sowing rate: Pure sowing 25–35 kg/ha; undersowing 15 kg/ha

Red fescue, white clover

TerraLife®-HumusPlus 5.1 Organic
Vigorous and rich in legumes

Sowing rate: Pure sowing 35 kg/ha; undersowing 15 kg/ha

Perennial ryegrass, red clover, crimson clover, alfalfa, white clover

More on the cultivation of undersown crops

The effect of catch crops on the soil structure

CATCHY

With support from Federal Ministry of Food and Agriculture by decision of the German Bundestag

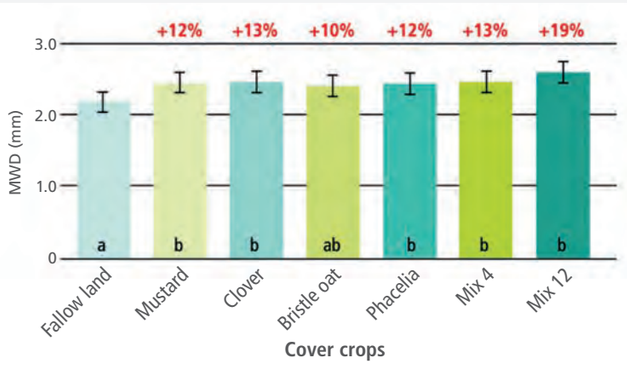
Different effects on the soil structure can be achieved by selecting the crops that grow in the field, whether as catch crops or main crops. For example, studies show that the macroporosity and aggregate stability during the growth of different catch crops depends on their root morphology.

In general, the soil contains a mixture of aggregates of different size classes. Macroaggregates consist of smaller aggregate classes that are held together by organic binders. Larger aggregates in the soil favour larger pore diameters and thus improve the flow of water, air and nutrients in the soil. In the laboratory, the stability of the soil aggregates is measured after a defined application of force (e.g. by water). The more aggregates can withstand this, the more stable the soil structure in the field is against the effects of stress (e.g. harmful compaction, susceptibility to erosion).

Diversity = Stability

The aggregate stability of the different cover crop treatments was measured in the CATCHY long-term trial after the second cover crop. In order to exclude the direct influence of the different plant species, the measurements were not carried out during the vegetation of the cover crop, but under winter wheat.

In the trial, all of the cover crops investigated showed improvements in aggregate stability, with biodiverse mix of 12 (TerraLife®-MaizePro) showing the highest potential (19 %) for improving the MWD.



Influence of cover crop on the mean diameter of water-stable aggregates (MWD) in the soil. The higher the MWD, the larger the average diameter of the soil aggregates after the impact of water.

Small letters show the affiliation of statistically different treatments. The red values indicate the increase in MWD in per cent compared to fallow.

Every soil cultivation (e.g. seedbed cultivation) leads to changes in the aggregate structures and thus to changes in the pore volume in the soil. Cover crops can at least partially compensate for negative effects caused by tillage. All of the cover crops investigated showed improvements in aggregate stability, with biodiverse mixtures showing the highest potential. The long-term establishment of cover crops as an integral part of the crop rotation improves the development of larger and more stable soil aggregates.

Conclusion

Biodiverse cover crop mixtures have been proven to improve the formation of water-stable soil aggregates (Ø +19 %). Mixtures of different species provide even better options than individual components. The resulting optimised soil structure is the basis for healthy soil and the arable farming that takes place on it. Cover crop cultivation can also increase the humus content in the long term if it is continuously integrated into the crop rotation. Due to the favourable C/N ratio of the chaff, the mix of 12 (TerraLife®-MaizePro) showed the highest potential in the CATCHY trials.

More about CATCHY

More Information can be found on our website: www.dsv-seeds.com

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