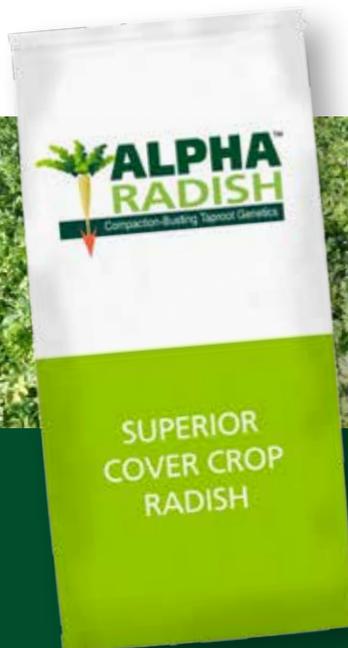




The superior high performance cover crop radish that defeats compaction while adding biodiversity. Chances are you will experience increased crop yields as well.



Packaging planned for 2017 cover crop season.



Featuring genetics selected especially for use as a cover crop (Non-GMO)



GENETIC INTEGRITY

ALPHA Radish™ gives you genetic integrity in every bag. With some cover crop radish brands seed you don't know what's in the bag

A unique cover crop radish variety

DESIRABLE TRAITS *

- ALPHA Radish™ pays you back
- Aggressive taproot genetics drill through hard compaction layer
- Rapid fall growth to capture N
- Dense leaf canopy for maximum weed suppression
- Supported by years of superior results
- Crop yield increases
- No early bolting
- Drilled seeding rates 6 lbs/ac (6 kg/ha)

* See details on reverse side



Ideal for cover crop mixes

Use ALPHA Radish™ as an entry level cover crop, or add to cover crop mixES to help maximize benefits. Below are some good combinations.



Annual Ryegrass can be substituted with Pearl Millet or Sorghum Sudangrass



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NOTE: Visit SunnGlobal.com for benefits and uses and planting guide-lines for the cover crop mixes on this page.

See Resources > ALPHA Radish > Cover Crop Mixes

Technical info at SunnGlobal.com



ALPHA Radish™ Defeats Compaction Naturally

TOPSOIL

BREAK UP HARD COMPACTION LAYER

NUTRIENT RICH SUBSOIL

ALPHA Radish™ genetics feature a taproot proven to aggressively grow through thick layers of compacted soil like the hard clay depicted here.



- Corn yields up average 12 bu/ac
- Soybean yields up 8 bu/ac
- Winter Wheat yields up to 5-7 bu/ac increase*
- Over 10 years of university research and development
- ALPHA Radish™ is genetically superior

* Planting 2-3 lbs of ALPHA Radish™ with winter wheat.

ALPHA Radish™ Snapshot Overview

Uses AS A COVER CROP following cash crop harvest, alone or in mixes
TREAT SPENT SOILS assigned to fallow conditions TO NATURALLY ENHANCE soil fertility and biological soil health without cultivation

Benefits To increase water infiltration and air movement through compaction layers
To capture, store and recycle soil nutrients
To suppress winter annual weeds
To help prevent soil erosion
Roots of following cash crops follow channels created by ALPHA Radish™

Nutrient Capture Captures and holds up to 170 lbs/ac (170 kg/ha) of Nitrogen from deep in the soil profile and from applied nutrients remaining after harvest.

Biomass Above ground, up to 8,000 lbs/ac (8,000 kg/ha). Below ground, up to 3,700 lbs/ac (3,700 kg/ha). Potential total up to 11,700 lbs/ac (11,700 kg/ha). * Depending on growing conditions.

Compaction Relief Taproot has been measured 70" (177 cm) and longer when growing through compacted soil.

Cash Crop Yield University research shows corn yield increase of 11% when planted after ALPHA Radish™. Soybean yield increased 10% in same conditions.

Growth Habit Rapid germination, rapid establishment
Reaches maturity in 45 to 60 days in good growing conditions, daytime temperatures from 50°F to 86°F (10°C to 30°C) with adequate daylight
Broad and dense foliage provides good soil cover
Tuber grows slightly above the surface
Taproot grows through compaction layer into subsoil
Significant hair root system draws nutrients into the tuber
Mature plants with yellowing foliage indicate tuber is filled with available nitrogen
In spring, covered soil warms faster than uncovered
The dense foliage cover decomposes rapidly as temperatures rise, no removal required
Tuber dries out, drawing earthworms, leaving voids in soil for drainage

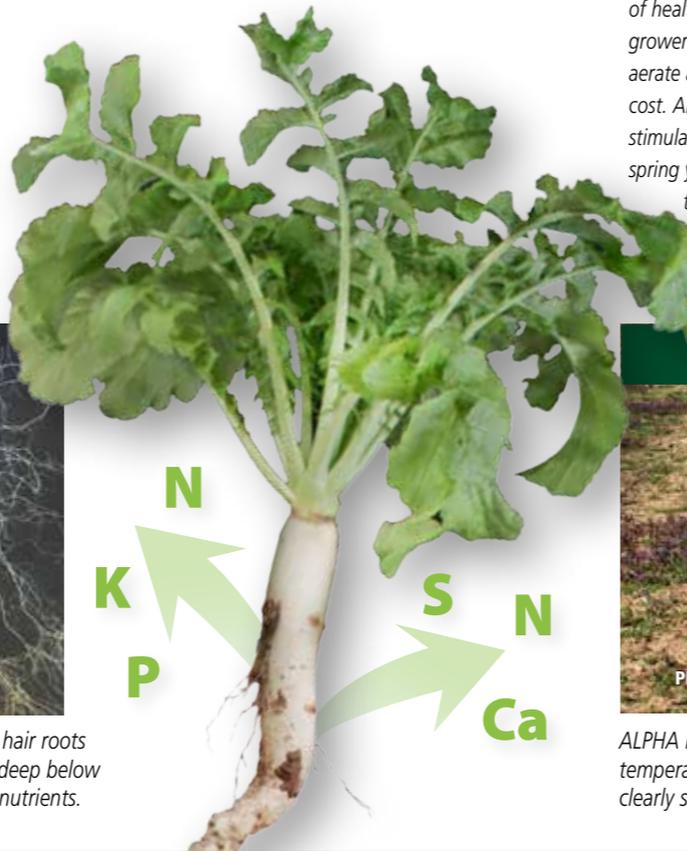
Soil Health

Earthworms are a primary sign of healthy soil. They are every grower's friend because they aerate and enrich soil for no cost. ALPHA Radish™ stimulates their growth. In spring you may be surprised to see so many!

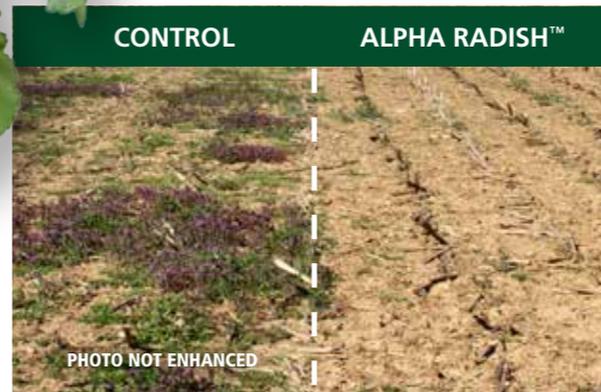


Natural Suppression of Winter Annual Weeds at Spring Warming

SPRING NUTRIENT RELEASE



Massive network of tiny hair roots accompany the taproot deep below compaction to draw up nutrients.



ALPHA Radish™ foliage provides dense cover during winter. As the temperatures rise foliage decomposes. The weed suppression effect is clearly shown on the right, next to a plot grown without ALPHA Radish™.

PLANTING TIPS & SEEDING RATE

Drill Seeder (6 lbs/acre): Using small grass seed box, use alfalfa setting as a guide to set seeding rate. A large seed box can be used, but the setting is very low and somewhat difficult to establish. Use alfalfa as comparable seed on drill charts, reducing by 10%. It's important to calibrate your drill to be able to set the correct seeding rate.

Broadcast/Aerial Seeding (8-10 lbs/acre): Strive for good soil and moisture contact (If fields are moist, fly seeds on. If fields are dry, push seeds in). Standing corn seeding indicator is when 1" patches of sunlight on soil surface are seen, or approximately 4 weeks prior to anticipated harvest time. Standing soybean seeding indicator is at leaf yellowing. Cotton seeding indicator is right before defoliation. Improve success rate by using drop tubes when seeding with a high clearance cover crop seeder.

Precision Planter (4 lbs/acre): 15" rows using 60-cell small milo or sugar beet plates with 4" in-row spacing. Seed is selected for Precision Planting performance.

Nitrogen: Requires 40-60 lbs/ac of N, residual or applied.

Planting: Plant 3-10 weeks prior to the first average killing frost. Green growth starts in less than a week in normal conditions; radish size depends on growth time, length of sunlight, plant competition and available nutrients to scavenge. ALPHA Radish™ is a broad leaf plant. Consider this when planning your herbicide program.

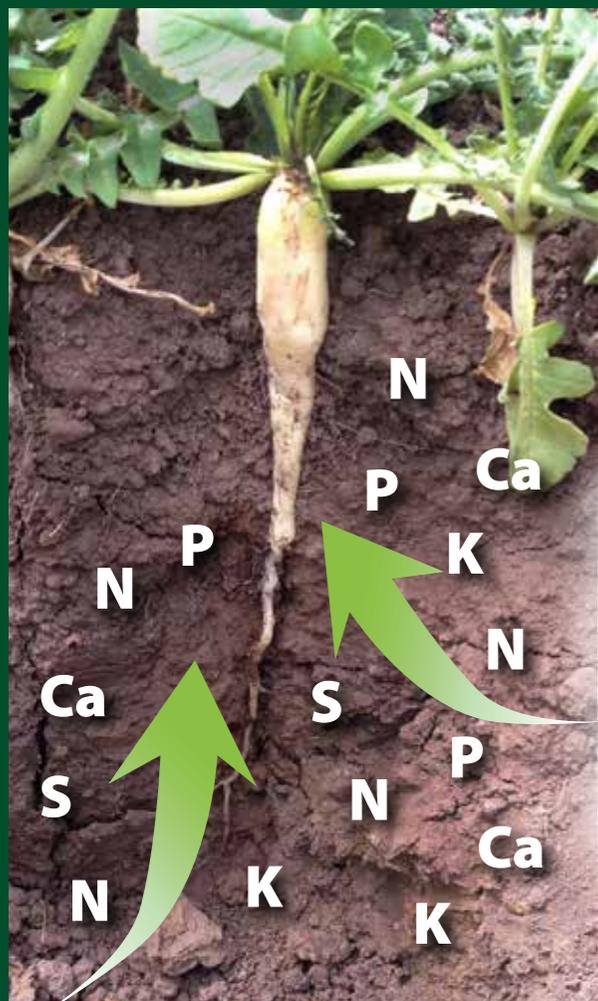
Planting Depth: 1/4 to 1/2 inch deep. Can be planted 1" in light soils if necessary to reach moisture.

Seeding Rate:

- Drilling: 6 lbs/acre (6 kg/ha)
- Broadcast / Aerial: 8-10 lbs/acre (8-10 kg/ha)
- Precision Planting (15" with 4" in-row): 4 lbs/acre

Control: ALPHA Radish™ winterkills with 3 consecutive nights in the mid-teens°F (-7° to -9°C.) If no winterkill, control with mowing, grazing or burndown of one quart of glyphosate with one pint of 2,4-D equivalent at flowering.

NATURE'S NUTRIENT HOLDING TANK



PRODUCED BY  **Sunn Global Biologics** LLC
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