COMAND®

ADVANCED NATURAL TOPDRESSING & SOIL BUILDER

IMPROVED TURF PERFORMANCE
HOLDS NUTRIENTS
SUPPLIES MICROBES
SAVES WATER

LIFESOILS.NET · TAKECOMAND.COM · 352-554-4224

COMAND®

COMAND® provides a **natural**, **cost effective** way of maintaining quality playing surfaces, while creating wear **tolerant** and **attractive** turfgrass.

WHAT IS COMAND?

COMAND is a one-of-a-kind specialty soil amendment produced with precise proprietary blends of enzyme-producing microbes, some unique composting methodology, and inventive techniques of maximizing beneficial microorganisms in the finished product. COMAND is truly a bio-engineered, yet completely natural product.

COMAND can be utilized straight, to amend and improve existing soils, or alternatively, can be custom blended with varying amounts of high quality sand to create **topdressings** and **rootzone mixes**.

WHAT MAKES COMAND SO UNIQUE?

Through many years of research, Harvest Quest developed an inoculum, which accelerates and uniquely enhances the natural biological process of composting.

The use of the inoculum reverses the physics of composting, with initial temperatures being generated on the outside of the piles and the heat front moving inwards. This unique phenomenon allows microbes to increase optimally and results in the creation of very mature and biologically diverse compost.

COMAND is screened to a very fine consistency, which removes woody particles, making it suitable for applying to even the most closely mown turf.

BENEFITS OF USING COMAND

COMAND possesses excellent soil building attributes, greatly improving the soil physically (structurally), chemically (nutritionally), and biologically. It adds high quality organic matter to the rootzone, maximizing turf health and performance, increasing its quality and long-term success.

- Supplies stabilized organic matter
- Improves soil structure and porosity, thus creating a better plant root environment
- Increased root density and length
- Increases moisture infiltration and permeability, thus helping to maintain percolation rates and relieve compaction
- Improved water holding in light soils, providing greater drought resistance and more efficient water utilization
- Increased soil cation-exchange capacity (CEC), thus improving the soils ability to hold nutrients
- Supplies beneficial microorganisms
- Aids the proliferation of soil microbes, which assist in Thatch reduction
- Contains humus, assisting in soil aggregation and making nutrients more available to plants
- Improved wear tolerance, promotes faster turf establishment and recovery rates
- More even turf density and color, green-up without excessive top growth
- Complimentary to other management programs, provides for more efficient utilization of fertilizers

COMAND can be incorporated into your turf establishment and maintenance programs all season long and will typically show results within a few days; exhibiting green-up and new lateral growth.

IMPROVED SOIL STRUCTURE

Organic matter plays a key role in the structural stability of the rootzone. Many experiments have shown that compost improves the aggregate strength of soils. A rootzone without organic matter compacts very easily and suffers from poor aggregation. Conversely, healthy soil maintains pore spaces and has much improved oxygen transfer and water infiltration rates. The addition of Comand® improves friability, porosity, and water permeability meaning roots can penetrate more easily and find nutrients and water. Reduced compaction and surface hardness, coupled with the benefit of a smooth and level surface from topdressing, can lead to reduced injury risks on sports fields.

BETTER WATER MANAGEMENT

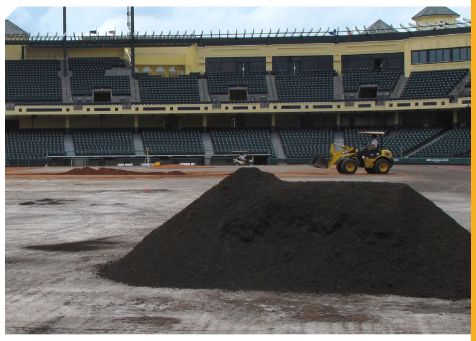
COMAND has the ability to improve the water holding capacity of sandy soils, while at the same time increasing infiltration and permeability. As a result, percolation rates are maintained, making COMAND an important water conservation tool for turfgrass management. The addition of COMAND can provide greater drought resistance and more efficient water utilization, allowing the frequency and intensity of irrigation to be reduced.

INCREASED CATION EXCHANGE CAPACITY

Coarse-textured sandy soils possess a low cation exchange capacity (CEC) and adding COMAND greatly improves the CEC of these soils. Cations are positively charged ions such as calcium (Ca2+), potassium (K+), magnesium (Mg2+) and iron (Fe2+). The organic matter in COMAND is comprised of negatively charged particles, which attract and hold, through electrostatic forces, the positively changed ions. This enables the soil to better absorb and retain nutrients in the root zone while reducing nutrient losses through leaching.

PROVIDES SLOW-RELEASE NUTRIENTS

COMAND contains a considerable variety of macro and important micronutrients. Since COMAND contains stable sources of organic matter, these nutrients are supplied in a slow-release form. When compared to commercial fertilizers, on a pound-by-pound basis, COMAND has far less nutrients and is not characterized as a fertilizer. However, COMAND can have a significant cumulative effect on nutrient availability and existing fertilizer program inputs can typically be much more effective.



LIFESOILS.NET · TAKECOMAND.COM · 352-258-9330

PROVIDES SOIL BIOTA / THATCH REDUCTION

COMAND provides Actinomycetes (enzyme-producing bacteria) and fungi. These groups of living organisms are essential in productive soils and serve a critical function metabolizing nutrients. They also play an important role in the decomposition of organic material (debris), inducing the breakdown of the turf's thatch layer.

Thatch forms a layer in the upper root zone and restricts the percolation of water and movement of air. This coupled with compaction, can result in anaerobic conditions, leading to very shallow root systems, drought stresses, and disease pressures.

The microbial colonists in COMAND can consume thatch, converting it to humus and plant food. Strictly speaking, Thatch is 'organic material' (largely undecomposed), whereas COMAND is 'organic matter' (decomposed, stabilized and partially mineralized). In practical terms, the degradation of thatch (organic material) and its conversion to humus (organic matter) and humic compounds provides the turf manager with a host of practical benefits, potentially saving work time and costs whilst improving the playing surface.

BENEFICIAL MICROBES

It is now widely accepted that disease incidence in turfgrass can potentially be influenced by the level and type of organic matter and microorganisms present in the rootzone. Through our various production phases, every eff ort is made to optimize the populations of beneficial microbes in COMAND.

HARVEST QUEST

COMAND®

Life Soils
107 SW 140th Terrace, Suite 2
Newberry, FL 32669
Tel: 352-554-4224
www.LifeSoils.net

PRODUCT APPLICATIONS

NEW CONSTRUCTION

COMAND can be utilized as the organic component of a sand-based rootzone media for golf course and sports field construction. The product can also be incorporated into existing soils to greatly improve characteristics and accelerate turf establishment for parks and home lawns.

MAINTENANCE

COMAND can be utilized for topdressing fairways, tees, greens, sports fields, lawns, and as a component of divot mixes. It will encourage consistent growth and regeneration of damaged turf, boost performance in weak areas, improve strength and rate of germination when overseeding, can accelerate transition from winter dormancy, and will hold moisture in potentially problematic dry areas, such as mound tops and bunker faces.

Turfgrasses beautify our landscapes, improve our physical and mental health, and truly touch each and every one of us in some way every day!

Take COMAND of Your Soil Health and pamper your turf.

COMAND®

ADVANCED PROPRIETARY
ORGANIC AMENDMENT

PRODUCT DESCRIPTION

COMAND is truly a one-of-a-kind, bio-engineered, yet completely natural organic amendment, which can be utilized to replace peat in sand-based rootzone mixes for golf course and sports field construction.

With its stabilized organic matter, excellent water holding capabilities, slow release nutrients, and vitally important microbiology, COMAND will accelerate turf establishment and encourage consistent healthy growth.

SPECIFICATIONS

EXCLUSIVE PRODUCTION PROCESS	COMAND is produced through the utilization of a **precise proprietary inoculum**, an exclusive composting process known as the **Modified Static Aerobic Pile (MSAP®)** method, and **enhanced curing and reinoculation techniques**.
PROPRIETARY INOCULUM	Contains a broad array of enzyme producing bacteria, brings about a **unique phenomenon**, which reverses the physics of the temperature generation within a compost pile. The microbes first populate the outside edges of the windrows and progress towards the center. Windrow decomposes from the outside in. Speeds up decomposition rates by a minimum 30% and coupled with significantly less turning, results in a **dramatic proliferation of microbes** and provides an end product with populations of **beneficial microbes** often times a 1000x high than traditional composts.
STRICTLY CONTROLLED PROCESS	COMAND is manufactured through the **controlled aerobic**, biological decomposition of biodegradable materials. The product undergoes mesophilic and thermophilic temperatures, which **eliminate pathogens and weed seeds**, and **stabilizes** the carbon such that it is beneficial to plant growth. Temperatures and moisture levels are monitored daily.
PRECISION SCREENING	COMAND is screened into its various grades utilizing **Doppstadt SM 726 trommel** units. These machines have completely **horizontal drums**, using an **auger** instead of gravity to move product through the drum. Because material isn't lifted and dropped, **spearing is practically eliminated**. Another important feature is a **patented load-sensing control** device, which makes sure that a consistent flow enters the rotating drum again preventing spearing. Doppstadt's have **four separate hydraulic drives**, allowing the speeds of conveyors and the drum to be changed independently. Consistent particle size provides **exact uniformity** in organic matter percentage, infiltration rates, and both water-filled and air-filled porosity in a rootzone mix.
CERTIFIED QUALITY	Analytical testing is carried out monthly and is conducted by a US Composting Council (USCC) Seal of Testing Assurance (STA) certified laboratory. Parameters include: pH, soluble salts, nutrient content (total N, P2O5, K2O, Ca, Mg) trace minerals, moisture content, organic matter content, bioassay (maturity), stability (respirometry), particle size, pathogens and trace metals.



QUALITY STANDARDS FOR COMAND

Parameter	Range	Testing Method
pH	6.0 – 7.5	TMECC 4.11-A
Moisture Content	35% to 50% (wet weight basis)	SMEWW 254DB
Organic Matter	30% to 50% (dry weight basis)	TMECC 5.07A
Soluble Salt Concentration	<5 ds/m (mmhos/cm)	TMECC 4.10-A
Maturity	Meet or exceed the minimum standard for mature or very mature compost	
C:N Ratio	<14.1	TMECC 05.02-A
Seedling Emergence (Germination)	100%	TMECC 05.05-A
Seedling Vigor (Growth Rate)	100%	TMECC 05.05-A
Maturity is the degree or level of completeness of composting. Maturity is in part, affected by the relative stability of the material but also describes the impact of other chemical properties on plant development. Some immature composts may contain high amounts of free ammonia, certain organic acids or other water-soluble compounds which can limit seed germination and root development. All uses of compost require a mature product free of these potentially phytotoxic components.		
Stability	Meet or exceed the minimum standard for stable or very stable compost	
CO_2 OM Evolution	<2.5 ($mgCO_2$-C/g OM/day)	TMECC 05.08B
CO_2 Solids Evolution	<1.0 ($mgCO_2$-C/g TS/day)	TMECC 05.08B
The stability of a compost is important in determining the potential impact of the material on nitrogen availability in soil or growth media. Most uses require a stable to very stable product that will prevent nutrient tie up and enhance oxygen availability in the rootzone.		
Nutrient Index (AgIndex)	>10	N/A
The nutrient index is obtained by dividing the total nutrients (NPK) by the amount of salts (Sodium and Chloride). If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils.		

COMAND is a mature product that is carefully prepared to be highly beneficial to both plant growth and soil biology. With an extensive range of skills, our team of executives and specialists at Life Soils, offers the very best in technical assistance, as well as, a vast practical expertise spanning the fields of composting, microbiology, agronomy, horticulture and agriculture.

BENEFITS OF USING COMAND

- Supplies stabilized organic matter
- Improves soil structure and porosity, thus creating a better plant root environment
- Increased root density and length
- Increases moisture infiltration and permeability, thus helping to maintain percolation rates and relieve compaction
- Improved water holding in light soils, providing greater drought resistance and more efficient water utilization
- Unlike peat, COMAND will rehydrate fully, should it temporarily dry out
- Increases cation-exchange capacity (CEC), thus improving the soils ability to hold nutrients
- Supplies beneficial microorganisms
- Aids the proliferation of soil microbes, which assist in Thatch reduction
- Contains humus, assisting in soil aggregation and making nutrients more available to plants
- Buffers soil pH
- Improved wear tolerance, promotes faster turf establishment and recovery rates
- More even turf density and color, green-up without excessive top growth
- Complimentary to other management programs, provides for more efficient utilization of fertilizers and other inputs

APPLICATIONS

New Construction: COMAND can be utilized to replace peat as the organic component of a sand-based rootzone media for golf course and sports field construction. COMAND provides saturated hydraulic conductivity and total porosity that meets USGA recommendations. can also be incorporated into existing soils to greatly improve characteristics and accelerate turf establishment.

Maintenance: COMAND can be utilized for topdressing fairways, tees, greens, sports fields, lawns, and as a component of divot mixes. It will encourage consistent growth and regeneration of damaged turf, boost performance in weak areas, improve strength and rate of germination when overseeding, can accelerate transition from winter dormancy, and will hold moisture in potentially problematic dry areas, such as mound tops and bunker faces.

LIFE SOILS
RESTORING THE BALANCE

Life Soils Florida, LLC
107 SW 140th Terrace, Suite 2, Newberry, FL 32669
Tel: 352-554-4224 www.takecomand.com

BENEFITS
OF USING COMAND®

- Improves soil structure and porosity to create a better root environment
- Improves water holding to provide greater drought resistance and smarter water utilization
- Increases infiltration and permeability, allowing nutrients to better percolate into the soil
- Supplies an array of slow-release macro and micro nutrients to steadily feed your lawn
- Promotes a more consistent turf color without excessive top growth
- Increases cation-exchange capacity (CEC), improving your soil's ability to hold nutrients
- Improves wear tolerance, allowing your grass to easily handle heavy traffic and use
- Replenishes and restores the activity of beneficial soil microbes

SUSTAINABLE
STEWARDSHIP

IMPROVED
TURF PERFORMANCE

- SUPERIOR QUALITY
- LAB TESTED
- CONSISTENT
- 100% NATURAL
- CHEMICAL FREE
- WEED FREE
- DIVERSE BIOLOGY
- FULLY SANITIZED

Learn more! Visit us online

LIFESOILS.NET

COMAND®

- BARE SPOTS IN YOUR LAWN?
- GRASS BROWN AND DRY?
- WATERING FREQUENTLY BUT SEEING NO BENEFIT?

TAKE COMAND OF YOUR LAWN!

COMAND®

WHAT IS COMAND®?

COMAND is a specialty top dressing for your lawn. It is created from a very unique compost product produced through a proprietary process developed by Harvest Quest. There is nothing else like it at all.

WHY IS COMAND SO UNIQUE?

After curing, COMAND is reinnoculated with colonies of beneficial microbes specifically tailored to your local environment. This helps restore the natural biological ecosystem in your soil which allows grass and plants to thrive and grow.

HOW DOES COMAND WORK?

Turf treated with COMAND quickly becomes thicker and stronger, and experiences more rigorous root growth in as quickly as two weeks. Because COMAND helps maximize turf health, your lawn will perform much better under stress and will be able to resist disease, drought and heavy wear more effectively. The difference is stunning.

IS COMAND SAFE?

Yes! COMAND is a completely natural product that is always people and pet safe. There are no waiting periods after application. We encourage you to Keep On the Grass!

WILL COMAND SAVE WATER?

By increasing organic matter in your soil, COMAND can dramatically improve water retention. You still need to water your lawn, but frequency and duration may be reduced as more water is held in the soil and made available for your grass.

CAN I APPLY COMAND?

Definitely. For weak areas and bare spots, we recommend 2-3 treatments per year in the first year to build up organic matter and soil health. After that, 1-2 treatments per year will maintain your soil indefinitely. Just spread COMAND across your lawn as a topdressing and water in after application.

RESTORE THE NATURAL MICROBIAL ECOSYSTEM IN YOUR SOIL AND WATCH YOUR TURF BECOME GREENER, THICKER AND STRONGER IN AS LITTLE AS TWO WEEKS!

BENEFITS
OF USING COMANDSCAPE®

- Professional grade with the unique biological power of COMAND
- Formulated to provide plants with the ideal physical environment
- Excellent water-holding capacity to provide drought resistance and smarter water utilization
- Ideal structure to promote porosity and adequate draining, creating the ultimate rooting environment
- Supplies high-quality stabilized organic matter which is the foundation of a productive soil
- Encourages the proliferation of beneficial soil microbes
- Provides ideal pH and conductivity

SUSTAINABLE
STEWARDSHIP

IMPROVED
PLANT PERFORMANCE

- FORMULATED BY EXPERTS
- SUPERIOR QUALITY
- CONSISTENT
- 100% NATURAL
- FULLY SANITIZED
- WEED FREE
- LAB TESTED
- DIVERSE BIOLOGY

Learn more! Visit us online

LIFESOILS.NET

COMAND® SCAPE

PROFESSIONAL GRADE
PLANTING SOIL
WITH THE BIOLOGICAL POWER OF COMAND

- For planting beds, raised gardens and large containers
- Suitable for flowers, vegetables, trees and shrubs

TAKE COMAND OF YOUR LANDSCAPE!

COMANDSCAPE®

WHAT IS COMANDSCAPE®?

COMANDscape is an extremely versatile product that promotes strong and healthy plant growth. It contains aged pine bark and high-quality COMAND compost that creates an ideal physical environment for plants and their roots.

WHY IS COMAND SUCH AN IMPORTANT COMPONENT?

COMAND compost is produced through a proprietary composting process developed by Harvest Quest that results in a highly stabilized product with excellent properties and a unique population of beneficial microbes.

WHY ARE MICROBES SO IMPORTANT TO SOIL?

Healthy soil is the single most important thing you can provide your garden. Soil is your plant's foundation, and by providing proper organic matter and beneficial microorganisms, you create a living ecosystem that will supply your plants with all they need to thrive.

HOW DO I USE COMANDSCAPE?

Use COMANDscape as a direct growing media in planting beds and large planters, or add to existing soil during planting.

For new beds, raised gardens and large containers: Add COMANDscape to desired depth, place plants at recommended spacing, fill with COMANDscape.

For new plantings and transplants: Dig holes twice as large as root ball and integrate COMANDscape into planting hole and excavated soil; optimal blend 50/50.

WHAT ARE THE BENEFITS OF HEALTHY SOIL?

At LifeSoils our philosophy is simple — help Mother Nature and she will help you by establishing a long-term healthy and productive soil. Having proper and healthy soil means:

- More attractive landscaping
- Less water use
- Less need for chemical fertilizers and pesticides
- Better habitat for wildlife and people
- Higher property values

ALL-PURPOSE PLANTING AND TRANSPLANTING SOIL

THE DIFFERENCE MAY BE MICROSCOPIC, BUT THE RESULTS ARE EASY TO SEE:

- BIGGER TOMATOES
- BETTER BLOOMS
- HEALTHIER PLANTS