Grow Better Margins and Better Plants

HydraFiber®

ADVANCED SUBSTRATE

Consistent, Reliable, Domestic and Sustainable

"The HydraFiber process is unique, precise and has an endless abundance of material. The QC is high and the team supporting the product line is impressive."

Chuck Zala,
Retired Director of Global Sourcing, Costa Farms

Following 10 years of research, development and testing of engineered-fiber HydraFiber® Advanced Substrate by Profile Products, the most progressive growers trialed and switched to original **HYDRAFIBER ULTRA**. This innovative product assured them of proven stability in growing media cost, plant quality and material availability. The recent introduction of **HYDRAFIBER EZ BLEND** – material that can be used without specialized processing equipment – is now giving many more growers great relief from rising material, manpower and shipping costs while producing superior plants.

ENGINEERED FOR CONSISTENCY AND AVAILABILITY

HydraFiber is manufactured year-round in Profile's processing plant in Conover, North Carolina. All formulations are made from renewable and virgin loblolly pine wood and bark from reforested farms. Research shows that this Southern Yellow pine species (*Pinus taeda*) is one of the safest materials to combine and place into a substrate, without the toxins found in hardwoods and other species that can affect plant establishment and growth.

Our unique Thermally Refined® process combines the wood and bark, and refines them in a pressurized vessel to create singulated, small-diameter, long, thin strands with large surface area and superior water-holding capacity. (U.S. Patents 10,266,457; 10,519,373; 10,519,073 and patents pending)

- Only heat, steam and pressure are used during the refining process – never any chemicals
- Materials are sterile through the entire manufacturing process
- Quality control and quality assurance checks every 30 minutes during production assure that HydraFiber is the same 365/24/7
- Blends easily with other mix components
- Available when you want it

THERMALLY REFINED® WOOD FIBERS

INFERIOR ATMOSPHERICALLY REFINED WOOD FIBERS

(Magnified 45x by independent lab specializing in fiber analysis)

DELIVERS PROVEN PERFORMANCE

Leading growers are using HydraFiber as an amendment or alternative to coir, perlite, peat and other growing mix substrates in their production and seeing positive effects on their plants and their business.

- Growers report seamless transitions with minimal production changes
- Provides plants with more air space to improve root development
- Solves the operational headaches associated with media

IMPROVES PROFITABILITY BY LOWERING COSTS

All HydraFiber substrates are shipped very efficiently as compressed material. That's key to reducing freight bills, saving storage space and unloading fewer trucks.

- More efficient storage per cubic yard of material than coir, peat, bark, perlite or vermiculite
- Expedited shipping available for all standard HydraFiber formulations
- Locked-in contract pricing available
- Arrives on time, unfrozen and ready to use – no shortage worries

Watch HydraFiber being made in a behind-the-scenes virtual tour of our Conover plant: **bit.ly/ConoverStory**

Run your numbers in the **HydraFiber Cost Savings Calculator** *and see how HydraFiber will boost your bottom line:* **HydraFiber.com**

PROFILE® PRODUCTS: SOLUTIONS FOR YOUR ENVIRONMENT™

HydraFiber products are the latest innovation from Profile Products, a world leader that has proudly offered researched and proven soil / media solutions for over 50 years. Profile is unsurpassed in the development of cost-efficient, environmentally friendly products for soil modification, erosion control, turf and plant establishment, and most recently, horticultural production.

Committed to meeting the growing demand for sustainable and readily available raw materials, Profile recently opened a second, state-of-the-art processing plant at their Conover, North Carolina manufacturing and distribution center to double the effective production capability and immediately increase production by 50%. Located in close proximity to raw ingredients, trucking is kept to a minimum and the carbon footprint is reduced. In addition, Profile has already recycled more than 3.5 billion pounds of wood and paper, and will continue to divert those resources from the waste stream and reintroduce them into the environment as sustainable products.

Profile®
Solutions for your Environment™

Powerful Products. Proven Results.

"Our root quality with HydraFiber is way better than what it was before with perlite, and better roots equal better plants. Even with some of the harder varieties like calibrachoa and poinsettias, HydraFiber shines."

Nick Gapinski,
CEO, Heartland Growers

BETTER ROOT DEVELOPMENT

Growers using HydraFiber blends report equal or better root structure compared to other mixes on their bedding crops, succulents, tropicals, perennials, vegetables, hemp, woodies and more. HydraFiber delivers higher air space than other popular substrate ingredients, and creates a superior, air-rich root zone environment while providing more available water for plant uptake.

PEAT-LITE MIX VS. HYDRAFIBER MIX
CILANTRO PRODUCTION

CONTROL:
PEAT-LITE MIX

HYDRAFIBER ULTRA
065WB 40%
PEAT 60%

HYDRAFIBER ULTRA
065WB 30%
PEAT 70%

BARK MIX VS. HYDRAFIBER MIX
ECHEVERIA PRODUCTION

CONTROL:
BARK-BASED MIX

HYDRAFIBER ULTRA
160WB 35%
BARK 65%

PEAT-COIR MIX VS. HYDRAFIBER MIX
MUM PRODUCTION

CONTROL:
COIR 50%
PEAT 50%

HYDRAFIBER ULTRA 065WB 35%
COIR 65%

HYDRAFIBER MIX
GAURA PROPAGATION

HYDRAFIBER ULTRA 160WB 40%
PEAT 60%

PEAT-PERLITE MIX VS. HYDRAFIBER MIX
COLEUS PRODUCTION

CONTROL:
PEAT-PERLITE MIX

HYDRAFIBER EZ BLEND 50%
PEAT 50%

PEAT MIX VS. HYDRAFIBER MIX
HIBISCUS PRODUCTION

CONTROL:
PEAT MIX

HYDRAFIBER ULTRA 160WB 30%
PEAT 70%

HYDRAFIBER MIX
HEMP PRODUCTION

HYDRAFIBER ULTRA 160WB 40%
PEAT 60%

HYDRAFIBER MIX
TOMATO PRODUCTION

HYDRAFIBER ULTRA 160WB 30%
PEAT 70%

"When we switched to HydraFiber, we shaved 5 hours of labor off every zone each week due to plants needing less water. That's a 5 to 10% labor savings for us. And on some crops, we have been seeing faster rooting, with white roots all the way to the bottom in 9 days on crops that typically take longer."

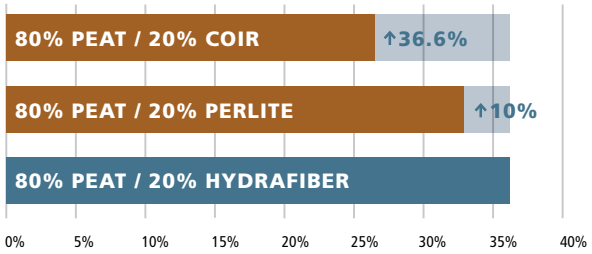
Billy Nolan,
Director of Growing,
Olson's Greenhouse
of Colorado

See how HydraFiber's unique structure promotes robust root development:
bit.ly/HydraFiberRoots

EASIER WATER UPTAKE

Water is stored on HydraFiber's surface and the tremendous surface area makes that water work more efficiently, sending 10% to up to 36.6% more water to every plant.

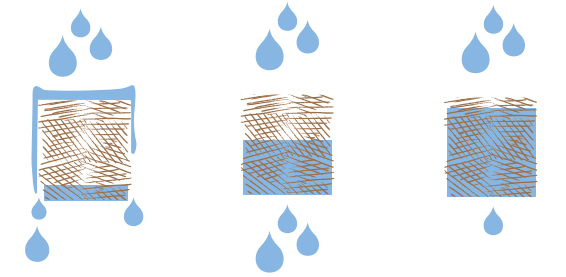
ADDING 20% HYDRAFIBER TO PEAT INCREASES AVAILABLE WATER COMPARED TO 20% PERLITE OR 20% COIR BLENDED WITH PEAT



AVAILABLE WATER

Source: Waypoint Analytical

HYDRAFIBER'S TREMENDOUS SURFACE AREA MAKES WATER WORK MORE EFFICIENTLY



PEAT

PEAT'S WAXY CUTICLE SHEDS WATER AND DOESN'T STORE IT FOR THE PLANT

HYDRAFIBER

HYDRAFIBER THERMALLY REFINED FIBERS STORE AND RELEASE WATER TO THE PLANT WHEN IT NEEDS IT

COIR

COIR FIBERS TRAP WATER NEEDED FOR THE PLANT

SAFE OUTDOOR STORAGE

HydraFiber pallets are wrapped in plastic, clearly labeled with the formulation name for easy identification by your crew. Each pallet receives a pallet cap and is shrink-wrapped. As long as the plastic is not pierced at off-loading, HydraFiber can be safely stored outdoors. We strongly recommend that all stored HydraFiber be opened and blended within one year, and that you rotate your HydraFiber and other raw materials and always use oldest inventory first.

In addition, with moisture levels standard at 20% for HydraFiber Ultra, this raw material does not freeze.

GET THE MOST FROM YOUR HYDRAFIBER BLENDS

Our technical team will help you get the highest yields from every bale and tower, mix correct blends and maximize the results you see with HydraFiber. We use proven research and trialing – from our labs and from independent sources – to recommend the best formulations, offer product advice and educate with the best cultural practices for your mixes. We offer many topics including:

- Optimizing pH
- Watering guidelines
- How to get good pot fill
- AgriNomix tech guides for HydraFiber processing units

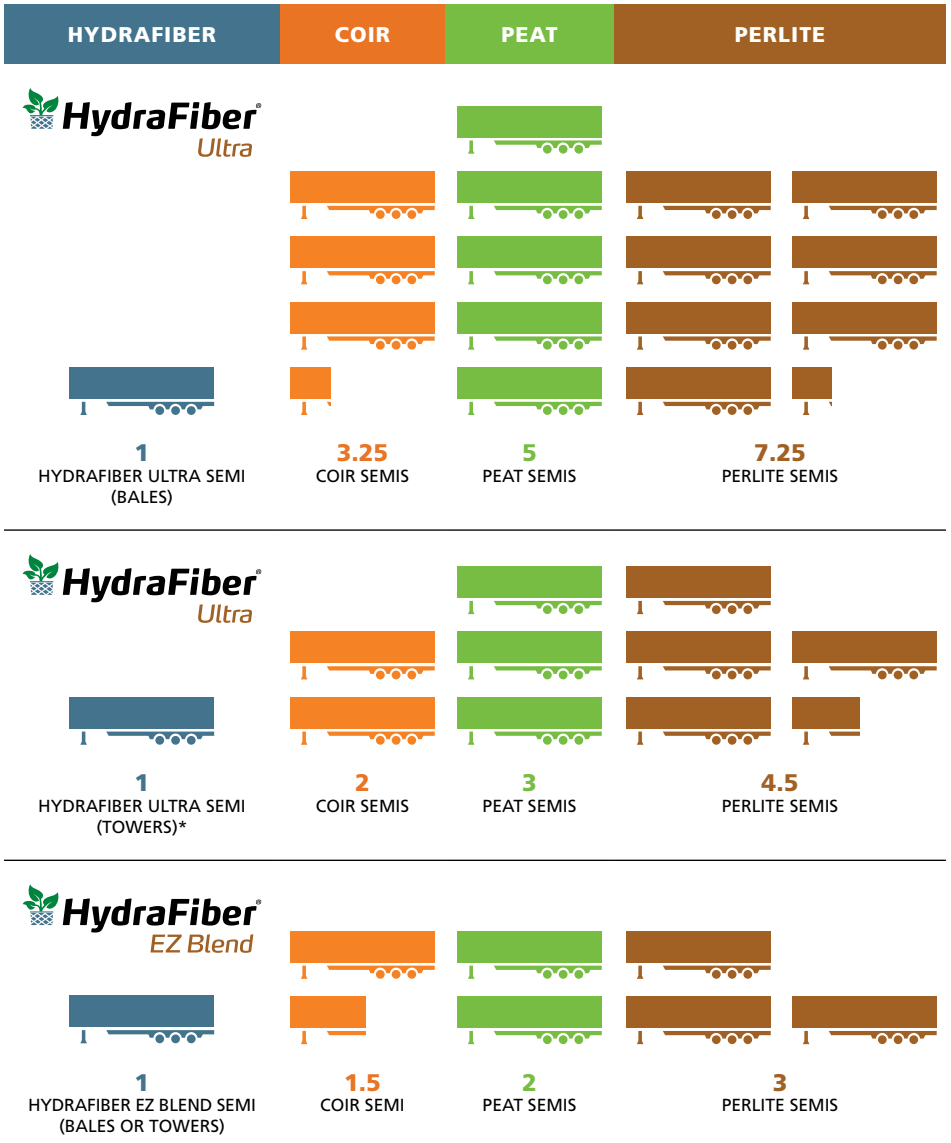
"The biggest efficiency is space savings. We're able to bring in 3 to 4 loads of compressed HydraFiber (Ultra) vs. 30 to 40 of perlite."

Ron Van Der Hengst,
President of Operations,
South Central Growers

Visit our revamped **HydraFiber.com** *for personalized, timely and pertinent info 24/7.*

IMPROVED BUSINESS EFFICIENCIES

Whichever type of HydraFiber you bring in, the number of truckloads needed is usually lower compared to other key materials. A little goes a long way!



** Numbers based on bale shaver processing; expected yield will be lower with less automated processing (i.e., bucket blending). Due to the large range of variability, Bark/Compost comparison numbers are available upon request.*

HydraFiber® Ultra

BEST FOR:

Growers who amend / blend their own soil and have one or more transplant lines. Bales require specialized equipment.

Original HydraFiber Ultra quickly became a game changer for professional greenhouse growers across the globe. Each is seeing better margins, whether it's from improved root development and overall plant quality, cost relief, inventory management, shelf life, operational efficiencies or environmental benefits.

HydraFiber Ultra is an approximately 98% porous fiber substrate amendment with extremely low bulk density (1.4 +/- 0.20 lbs. per opened cubic foot). Due to its highly compressed nature, HydraFiber Ultra is the most economical raw material of our product line, delivering the best cost savings to growers.

- Available in 50-lb. bales and NEW 95-cu. ft. towers

PROVEN AT HIGHER INCLUSION RATES

With shortages or complete unavailability of offshore raw materials, several North American growers have increased their HydraFiber rates to 50% with great success in finishing their crops and growing year-round without interruption.

- Recent lab tests conducted by RHP certified the suitability of using HydraFiber Ultra at rates of up to 50% in the growing mix, without needing to increase nitrogen rates. Located in the Netherlands, RHP is widely recognized around the world for more than 55 years of expertise in monitoring and certifying the quality of substrates.
- Several independent university trials have thoroughly vetted higher HydraFiber inclusion rate performance across a broad range of crops.
- Our internal trials also show that new HydraFiber EZ Blend can be used at 50% rates.

Comprehensive trial results are available; contact your HydraFiber Technical Account Manager for a presentation customized to your crop needs.

Find guidelines on how to take your HydraFiber mixes to the next level by increasing inclusion rates: **bit.ly/HigherInclusion**

"We began at 30% HydraFiber, but moved to 50% HydraFiber 160 / 50% peat on all crops in just months. Soil costs decreased, plants root faster and better, we water less and plants hold water better in the store."

Jeff Murphy,
Operations Manager of Production and Maintenance, Altman Plants

OMRI LISTED® For Organic Use

CONTROL: PEAT 70%
PERLITE 30%

HYDRAFIBER ULTRA 160WB 30%
PEAT 70%

HYDRAFIBER ULTRA 160WB 50%
PEAT 50%

HYDRAFIBER ULTRA 160WB 70%
PEAT 30%

HydraFiber® Ultra

OPTIONS TO MEET EVERY GROWING NEED

Let us recommend the best formulations for your crop types and timing. HydraFiber Ultra can also be custom manufactured to meet your specific needs.

HYDRAFIBER ULTRA TECH SPECS

065 & 090

USES: PROPAGATION, 4 IN., 6 IN. & GALLONS

160

USES: 4 IN., 6 IN., 1 GALLON & 2 GALLON

365 & 510

USES: 1 GALLON, 2 GALLON & LARGER

CHEMICAL CHARACTERISTICS	065 BALES	090 BALES	160 BALES & TOWERS	365 BALES & TOWERS	510 BALES
pH	4.5 +/- 0.4				
EC (mS/cm)	0.01 – 0.19				
MOISTURE CONTENT^	22% +/- 4%				
ORGANIC MATTER^^	99.7% +/- 0.2%				

PHYSICAL CHARACTERISTICS*	065 BALES	090 BALES	160 BALES & TOWERS	365 BALES & TOWERS	510 BALES
TOTAL POROSITY	93-97%	93-96%	96-99%	96-99%	95-99%
CONTAINER CAPACITY (WHC)**	49-55%	41-47%	42-49%	35-42%	27-35%
AIR PORE SPACE	39-47%	47-55%	48-55%	58-63%	60-69%
EXPECTED FIBER LIFE SPAN	1 year	1.5 years	2.5 years	3-5 years	3-5+ years
LOOSE BULK DENSITY***	1.4 lbs./ft.^{3} +/- 0.2 lbs./ft.^{3} (22 kg/m^3 +/- 3 kg/m^3)				

^ Measured on weight basis
^^ Loss on Ignition (ASTM D586-19)
** Derived from Porometer Test Method-NCSU Substrates Lab*
*** WHC = Water-Holding Capacity*
**** Profile Fiber Opener*

ULTRA 160 & 365 NOW AVAILABLE IN TOWER FORM!

Growers and blenders can now strengthen their supply and increase economies with Ultra 160 and 365 formulations in cost-effective 95-cu. ft. towers, ready for immediate shipping. No specialized equipment is needed for Ultra towers.

ULTRA BALES + AGRINOMIX PROCESSING UNITS = YOUR DEEPEST SAVINGS

With a 13:1 expansion rate, Ultra 50-lb. bales are the most compressed material in the HydraFiber product lineup. That's key to reducing shipping costs, saving storage space and unloading fewer trucks. Because of its highly compressed nature, an AgriNomix processing unit is needed to return the Ultra bales to their fibrous state and assure the greatest yield, with each bale producing 1.1 cubic yards of singulated fibrous material that's ready to blend with other components. All three models are designed to fit seamlessly into most existing mix lines and assure that you mix the best blends from HydraFiber Ultra bales.

HydraFiber Expander (HE) Unit:
Processes 25 cu. yds. per hour; best for growers with one to two planting lines

HydraFiber Processing Unit (HPU):
Processes 100 cu. yds. per hour; best for regional blenders and growers

Extra Wide HydraFiber Processing Unit:
Large-volume custom unit available on request; best for highest-capacity blenders and growers

All machines are Patent Pending.
NOTE: Machine photos are for illustrative purposes only. All HydraFiber bales must have plastic removed for processing.

AGRINOMIX MACHINE TOOLS FOR GROWERS®

AGRINOMIX HAS PROVIDED INNOVATIVE, COST-EFFICIENT GREENHOUSE AUTOMATION SOLUTIONS FOR OVER 25 YEARS.

AGRINOMIX.COM

Find complete details and machine specifications at **HydraFiber.com.**

HydraFiber® EZ Blend

BEST FOR:

Growers who pad mix, or use a bale buster or ribbon blender. No specialized equipment needed.

"Since incorporating EZ Blend into our mix, we've seen faster, more prolific root development in our annual and woody crops. It also saved us storage space and decreased our soil cost."

Jeff Watson,
Head Grower, Baucom's Nursery

Many growers asked us to create a HydraFiber raw material that performs just as well as our original Ultra substrate, but did not require them to add equipment to their existing line. HydraFiber EZ Blend does just that, allowing a seamless transition into operations already pad mixing, or using a bale buster or ribbon blender.

Engineered using our unique Thermally Refined process (details on page 3), EZ Blend offers an alternative to other raw materials and has an appearance similar to peat. Extensively trialed before introduction, EZ Blend delivers many of the same cost relief benefits as Ultra.

- Compressed material lowers shipping costs, saves on storage and means less unloading labor
- Extra air space in soil improves rooting and delivers exceptional finished plant quality
- Mixes easily with other media substrates; the HydraFiber experts will guide you on how much nitrogen to add for best results
- For optimum wettability, we recommend that a surfactant be added to EZ Blend at time of blending. Guidelines are available on request.
- Available in 40-lb. bales and NEW 95-cu. ft. towers

NEW EZ BLEND TOWERS MAXIMIZE VALUE

Cost-effective, 95-cu. ft. EZ Blend towers give growers and blenders a new option for mixing reliable blends without specialized equipment. Available for immediate shipping.

HYDRAFIBER EZ BLEND TECH SPECS

OMRI LISTED® For Organic Use

CHEMICAL CHARACTERISTICS	
pH	4.4 +/- 0.4
EC (mS/cm)	0.01 – 0.20
MOISTURE CONTENT^	26% +/- 4%
ORGANIC MATTER^^	97.5% +/- 0.2%

PHYSICAL CHARACTERISTICS*	
TOTAL POROSITY	97 – 99%
CONTAINER CAPACITY (WHC)**	47 – 48%
AIR PORE SPACE	48 – 51%
LOOSE BULK DENSITY	4 lbs./ft.^{3} +/- 0.15 lbs./ft.^{3} (64 kg/m^3 +/- 2.5 kg/m^3)
EXPECTED FIBER LIFE SPAN	1 year

^ Measured on weight basis
^^ Loss on Ignition (ASTM D586-19)
** Derived from Porometer Test Method-NCSU Substrates Lab*
*** WHC = Water-Holding Capacity*

THE ULTIMATE GROWING MEDIA SUBSTRATE

HydraFiber products offer solutions for every grower, large or small.

HydraFiber® Ultra — NEW

HydraFiber® EZ Blend — NEW

	ULTRA BALES	ULTRA TOWERS	EZ BLEND BALES	EZ BLEND TOWERS
	PAGES 7-9		PAGE 10	
EXPANSION RATE	13:1	6:1	4.4:1	4:1
SPECIALIZED HYDRAFIBER EQUIPMENT NEEDED	Yes	No	No	
RAW MATERIAL REPLACED	Directly replaces perlite, pumice, rice hulls, Styrofoam. Reduces grower consumption of peat, coir, bark.			
FORMULATIONS AVAILABLE	Five formulations: 065WB, 090WB, 160WB, 365WB, 510WB	Two formulations: T160, T365	One formulation	
MAXIMUM INCLUSION RATE	50%			
ESTIMATED BULK DENSITY	1.8 lbs./ft.^{3} (29 kg/m^3)	2 lbs./ft.^{3} (32 kg/m^3)	4 lbs./ft.^{3} (64 kg/m^3)	
UNIT WEIGHT	50 lbs. (23 kg)	1,200 lbs. (544 kg)	40 lbs. (18 kg)	1,600 lbs. (726 kg)
1 SEMITRAILER HYDRAFIBER EQUIVALENTS	3.25 coir semis 5 peat semis 7.25 perlite semis	2 coir semis[a] 3 peat semis[a] 4.5 perlite semis[a]	1.5 coir semis 2 peat semis 3 perlite semis	
BALE / TOWER YIELD (COMPRESSED)	2.7 ft.^{3} (76.5 L)	95 ft.^{3} (2.7 m^3)	2.3 ft.^{3} (65.1 L)	95 ft.^{3} (2.7 m^3)
BALE / TOWER YIELD (LOOSE)	27.8 ft.^{3} (787 L) +/- 10%[b]	600 ft.^{3} (17 m^3) +/- 4%[a,c]	10 ft.^{3} (283 L) +/- 4%	400 ft.^{3} (11.3 m^3) +/- 4%[a,c]
PACKAGE DIMENSIONS	26 x 18 x 10 in. (66 x 46 x 25 cm)	39 x 46 x 93 in. (99 x 117 x 236 cm)[d]	22 x 18 x 10 in. (56 x 46 x 25 cm)	39 x 46 x 93 in. (99 x 117 x 236 cm)[d]
SHIPPED	40 bales per pallet	1 tower per pallet	40 bales per pallet	1 tower per pallet
PALLET YIELD	1,111 ft.^{3} (32 m^3) +/- 10%[b]	600 ft.^{3} (17 m^3) +/- 4% [a,c]	400 ft.^{3} (11.3 m^3) +/- 4%	
PALLETS PER TRUCKLOAD (VAN)	22	26	26	
VOLUME PER TRUCKLOAD (VAN, LOOSE)	24,444 ft.^{3} (692 m^3)	15,600 ft.^{3} (442 m^3)	10,400 ft.^{3} (295 m^3)	
PALLETS PER CONTAINER (INTL.)	20		Not available	
VOLUME PER CONTAINER (INTL.)	22,222 ft.^{3} (629 m^3)	12,000 ft.^{3} (340 m^3)	Not available	
PALLET WEIGHT	2,000 lbs. (907 kg)	1,200 lbs. (544 kg)	1,600 lbs. (726 kg)	
VOLUME PER TON (LOOSE)	1,111 ft.^{3} (32 m^3)	1,000 ft.^{3} (28 m^3)	500 ft.^{3} (14 m^3)	

[a] *Numbers based on bale shaver processing; expected yield will be lower with less automated processing (i.e., bucket blending).*
[b] *Ultra yield will vary when processed through HydraFiber processing units based on raw material(s) being combined.*
[c] *Tower bulk density can vary 2 to 2.2 lbs./ft.^{3} for Ultra and 3.85 to 4.15 ft.^{3} for EZ Blend.*
[d] *Dimensions vary by tower.*

We're Here For You

GREAT SUPPLY. HydraFiber is factory-engineered in the U.S. to be consistent, reliable and readily available across all sizes and formulations.

PROVEN PERFORMANCE. HydraFiber is assuring success across a broad range of crops for many of the most progressive growers in North America.

COST RELIEF. HydraFiber's compressed material gives growers and blenders increased profitability by delivering savings in every order.

STRONG SUPPORT. With over 250 years of combined experience, you can count on the HydraFiber team to be at your side through every crop and help you *Grow Better Margins and Better Plants.*

PROUD RECIPIENT OF THE 2019
GREENHOUSE GROWER™ MEDAL OF EXCELLENCE
GAMECHANGER OF THE YEAR

HydraFiber®
ADVANCED SUBSTRATE

800-508-8681
hydrafiber@profileproducts.com

HYDRAFIBER COMES FROM PROFILE PRODUCTS, PROUDLY OFFERING RESEARCHED AND PROVEN SOIL / MEDIA SOLUTIONS FOR OVER 50 YEARS.

Profile®
Solutions for your Environment™

PROFILE Products LLC
750 W. Lake Cook Rd., Suite 440
Buffalo Grove, IL 60089

www.profileproducts.com

IECA Cornerstone Member

U.S. Patents 10,266,457; 10,519,373; 10,519,073
20025 07/20