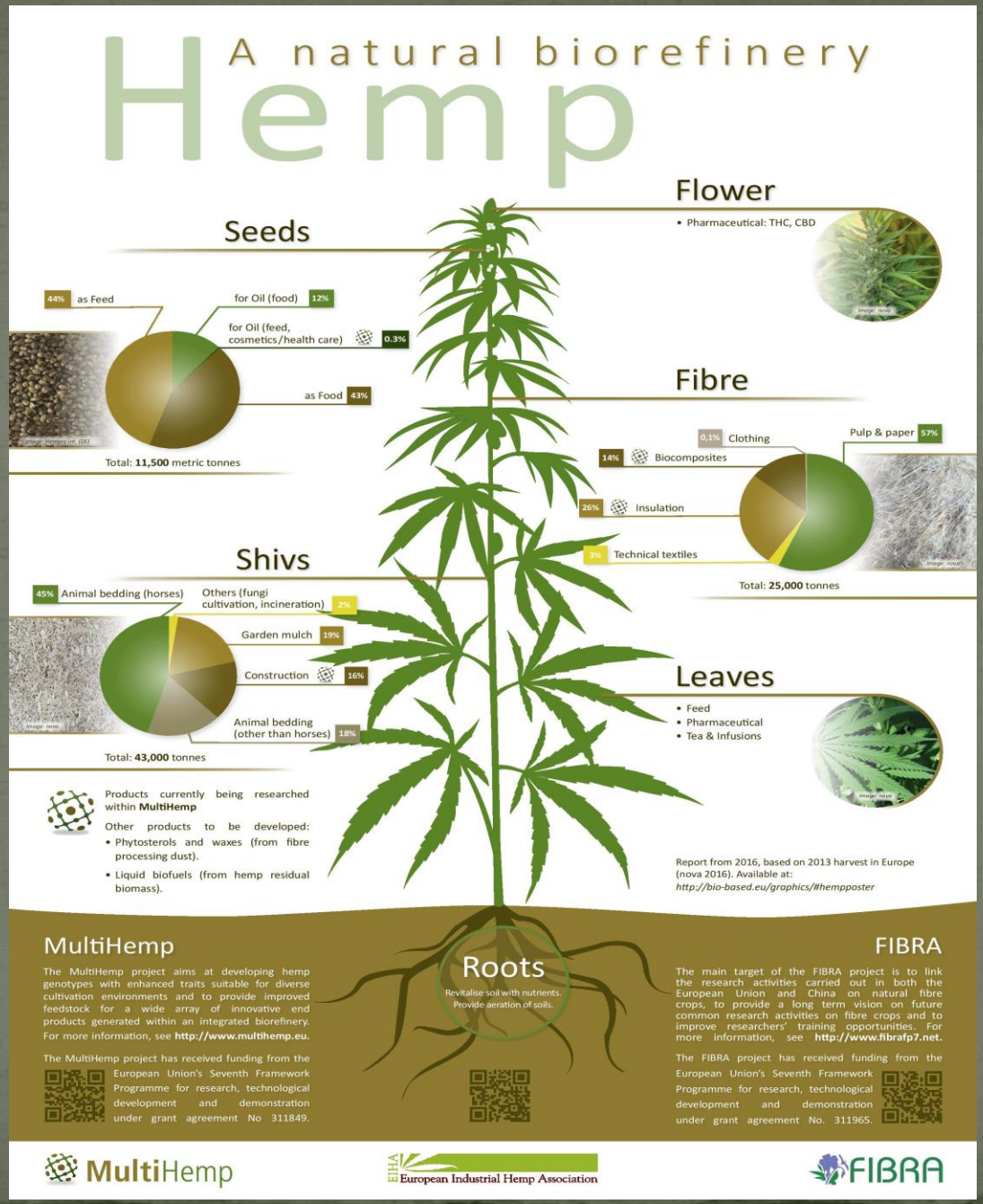
An Ancient Material to Solve Contemporary Problems.

Bob and Alex Escher.

Green Construction.



Source: https://img.purch.com/rc/816x500/aHR0cHM6Ly93d3cuYnVzaW5lc3NuZXdzZGFpbHkuY29tL2ltYWdlcy9pLzAwMC8wMTIvMzM3L29yaWdpbmFsL3NodXR0ZXJzdG9jazI85MTA2NTY1OS5qcG Credit- Credit: ponsulak/Shutterstock



Source: http://multihemp.eu/media/2015/11/15_11_Multihemp_Poster_med.jpg

Hemp Fiber

Jackets (Patagonia)

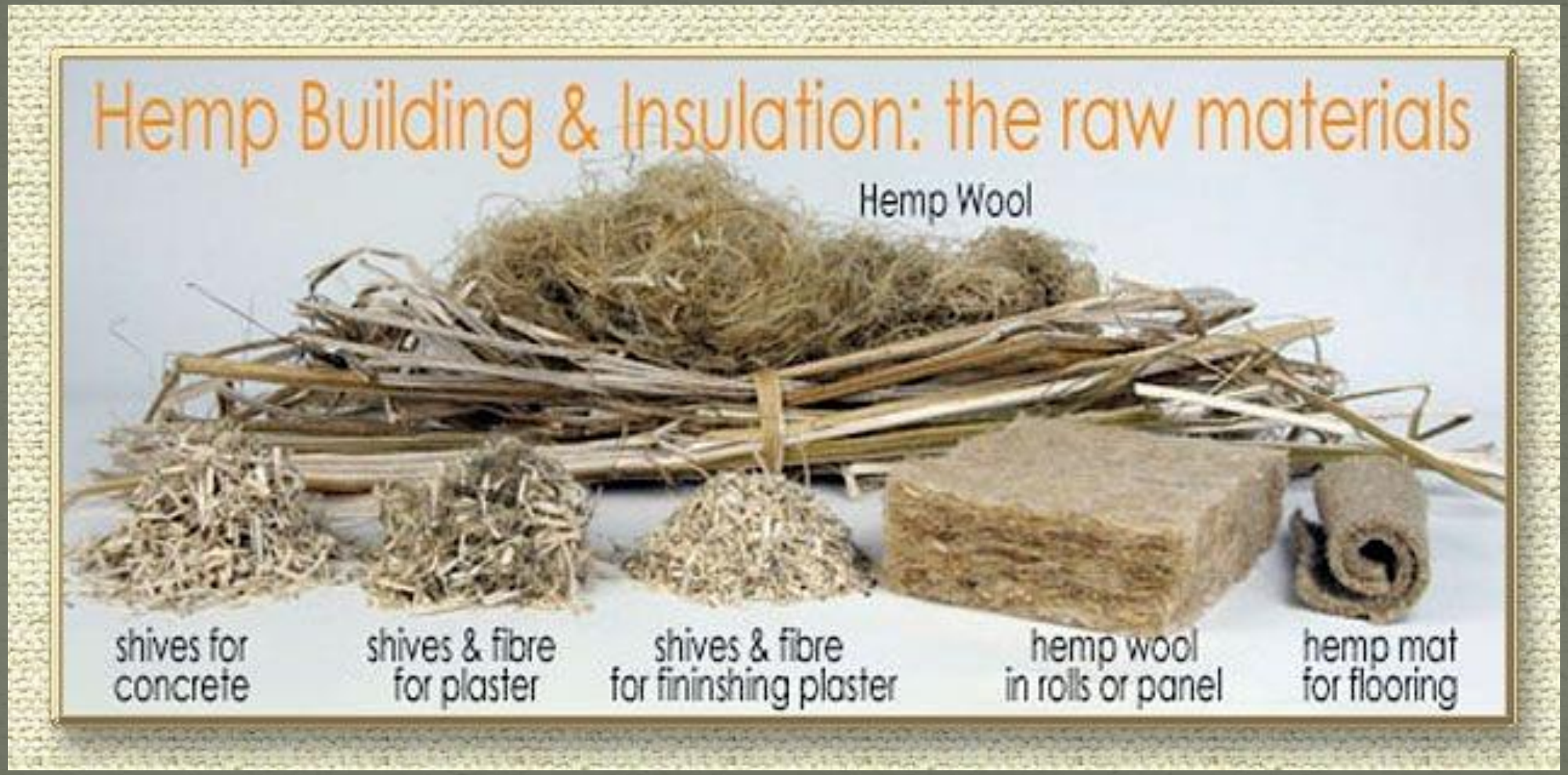


Olympic Luge (2022)



Source: 1. https://www.patagonia.com/product/mens-iron-forge-hemp-canvas-ranch-jacket/27805.html
2. https://www.innsbruck.info/emobilder/x/16429/Bobfahrer.jpg

Benefits of Hemp Construction Material.



Source :http://s5892.pcdn.co/wp-content/uploads/2011/05/hemp_raw_materials.jpg

the woolroom™

SICK BUILDING SYNDROME

VOCs are a large group of carbon based toxins that are invisible and often have no odour. They are found in a number of everyday household products and furnishings including synthetic carpets and cannot be eradicated by traditional cleaning methods. VOCs are responsible for sick building syndrome and have a number of negative effects on our health, causing skin allergies including eczema, respiratory problems and even cancer.

XYLENE
Nose/throat irritation
Loss of co-ordination
Liver damage

METHYLENE CHLORIDE
Memory loss
Headaches
Damage to nervous system

TOLUENE
Dry cracked skin
Nausea
Nervous system damage

ACETONE
Dizziness
Respiratory tract irritation
Eye irritation

FORMALDEHYDE
Burning sensation in eyes/skin
Nausea
Cancer

ETHYLENE GLYCOL
Depression
Vomiting
Respiratory failure

PERCHLOROETHYLENE
Mood/behavioural changes
Eye/throat irritation
Drowsiness

BENZENE
Headaches
Rapid/irregular heartbeat
Unconsciousness



Wool is the only fibre able to naturally absorb VOCs and reduce their presence in the home, eradicating the risks to health and boosting wellness. These effects are observed just through the presence of wool bedding or carpets in the home. Not only does wool neutralise contaminants more quickly and completely than synthetic fibres, wool does not re-emit them, even when heated. Wool beds, bedding, mattresses and 100% wool carpets can continue to purify the air for up to 30 years.

Source: https://www.thewoolroom.com/images/blog/Sick%20Building%20Syndrome%20VOC%20Infographic.jpg

The Road Ahead



Source: https://sensiseeds.com/en/blog/files/2015/10/jc-16.jpg

Multiscale Decortication

One Site (HempLogic)



Macro (HempFlax)



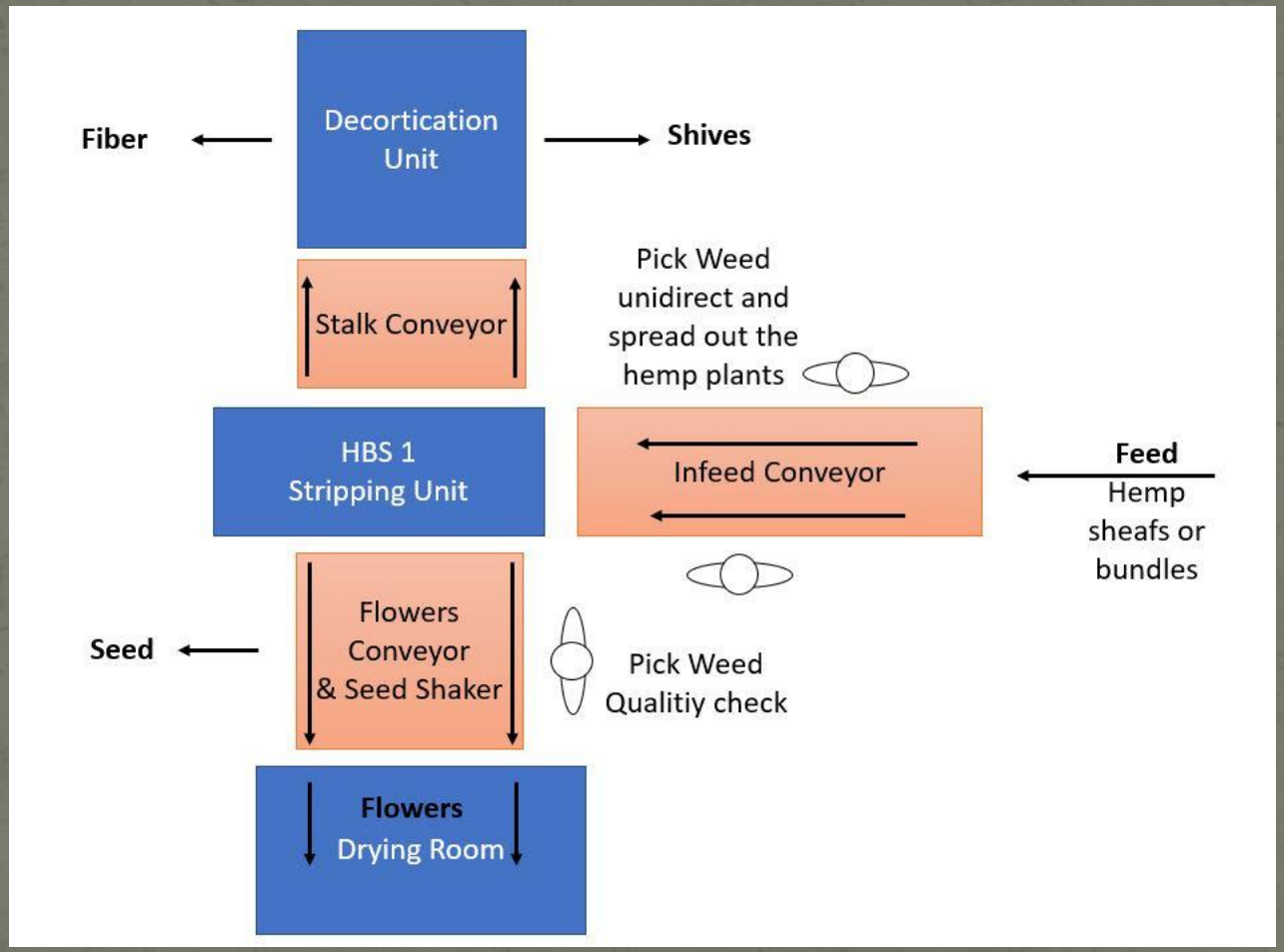
Source: 1. https://greyareanews.com/wp-content/uploads/2018/02/HempLogic_Decorticator-678x381.jpg
2. https://www.hempflax.com/en/equipment/

Dual Crop Harvesting



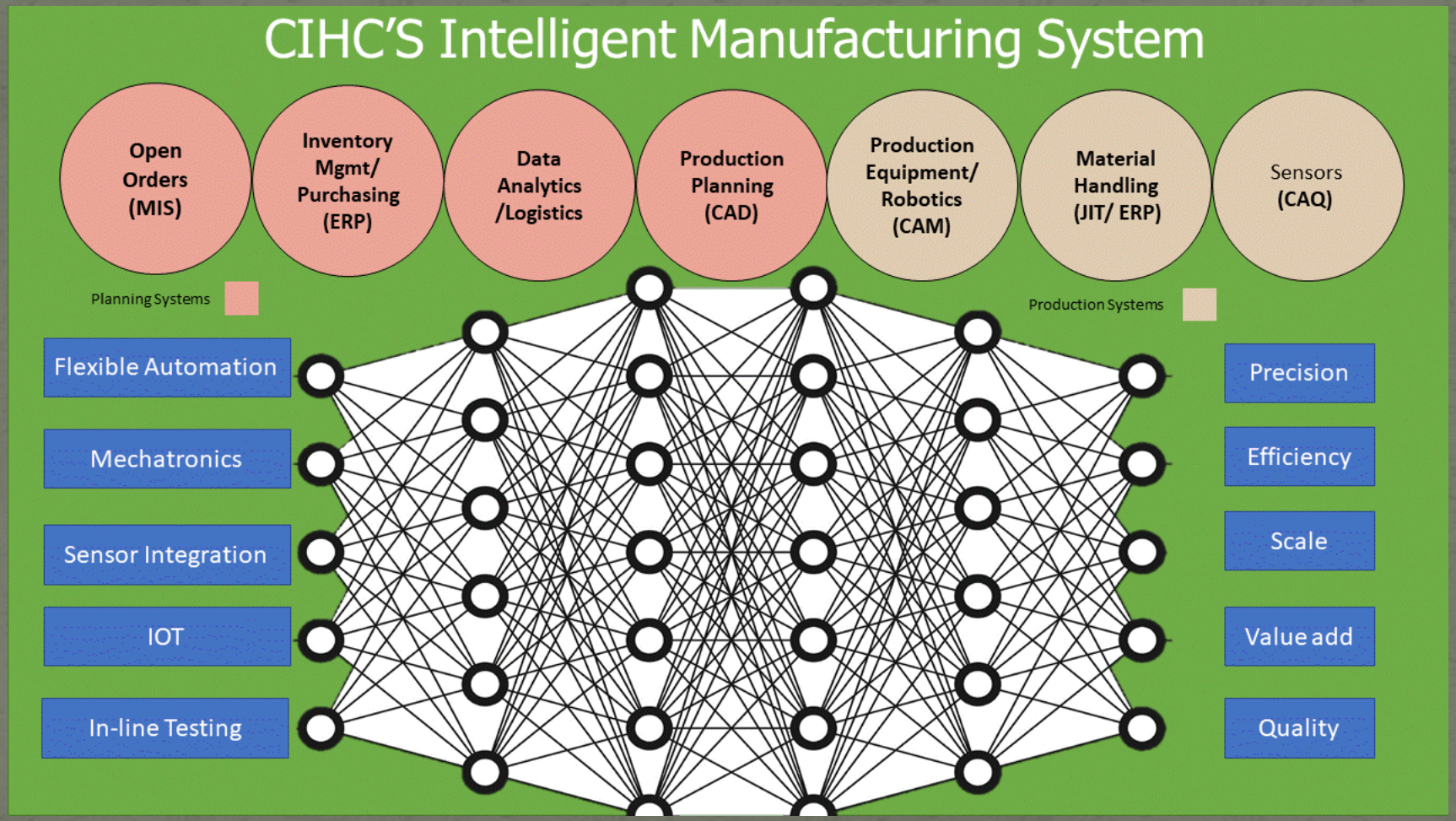
Source: https://i.ytimg.com/vi/yhtflus5jME/maxresdefault.jpg

Multi Use Processing Facilities



Source: http://henryshempharvester.de/images/Processing-line2.JPG

Increased Standardization of Fiber (SmartFiber)

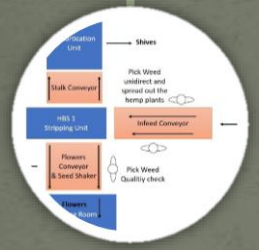


Source: https://static.wixstatic.com/media/b1205a_e37b6fdb48a846f890876df30ecd0abd~mv2.gif

The Big Picture.



Mainstream Fiber Market



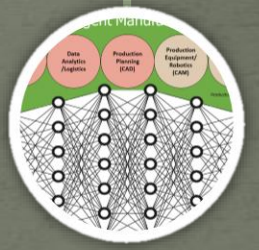
Integrated Hemp Market



Duel Crop Harvesting.

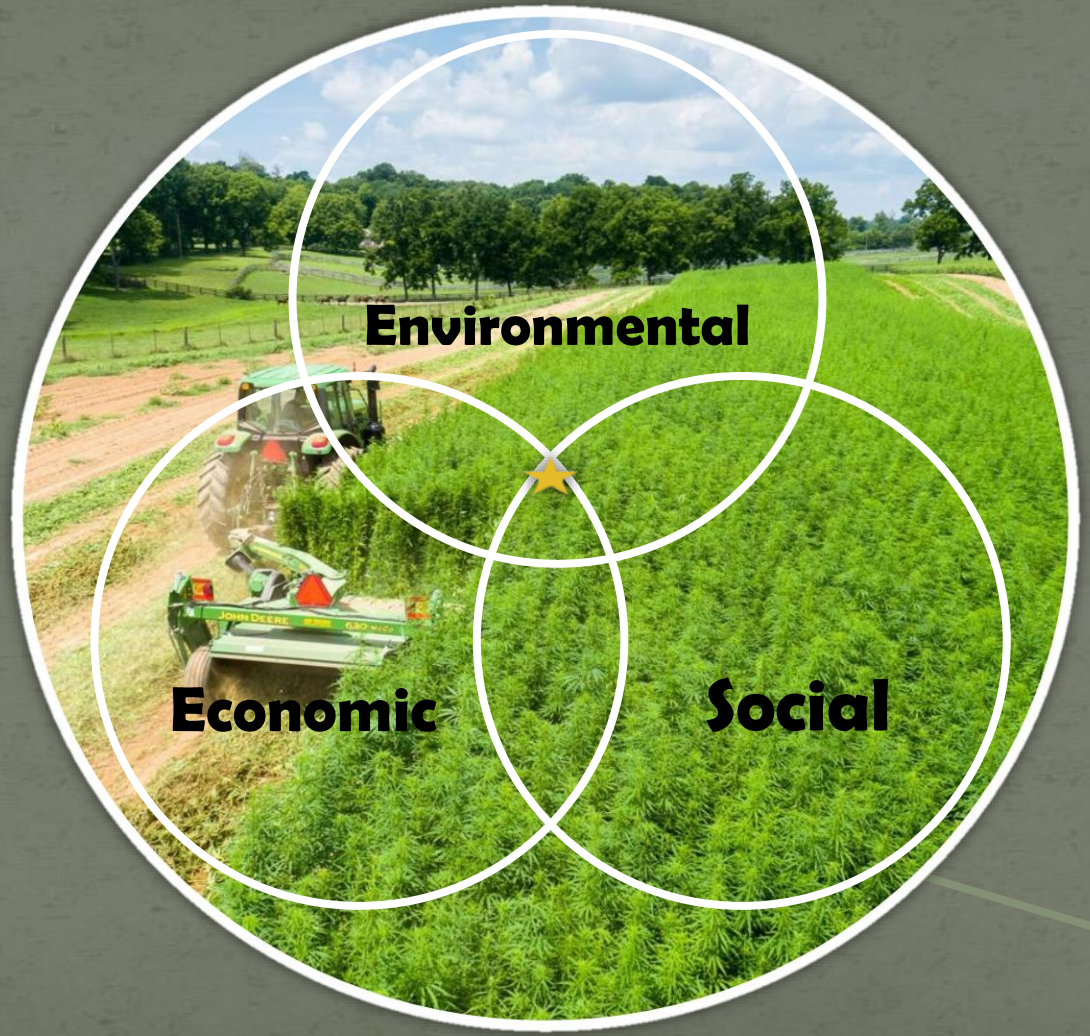


Regional Processing



Increased Standardization.

Contemporary Problems – Ancient Solution.



Meeting contemporary needs without compromising the future.

Hempcrete

How is Hempcrete made?

Hemp Hurd



Lime



- Attributes -

- Fire Resistant-



- Water Resistant -



- Pest Resistant



- Hygroscopic -

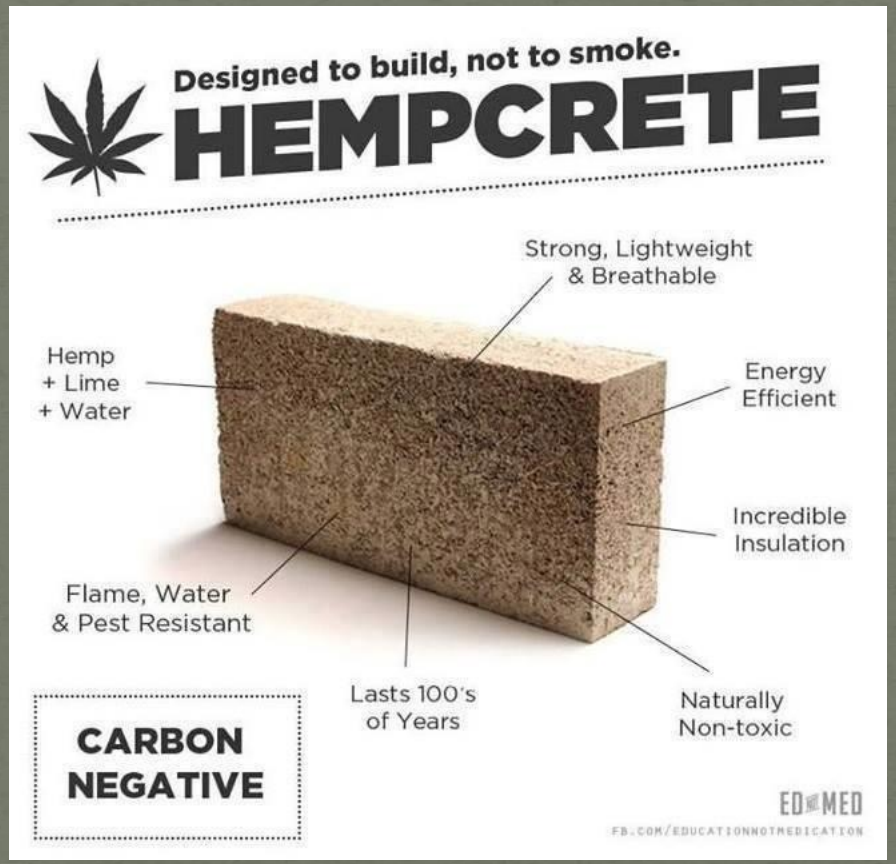


Healthy Living



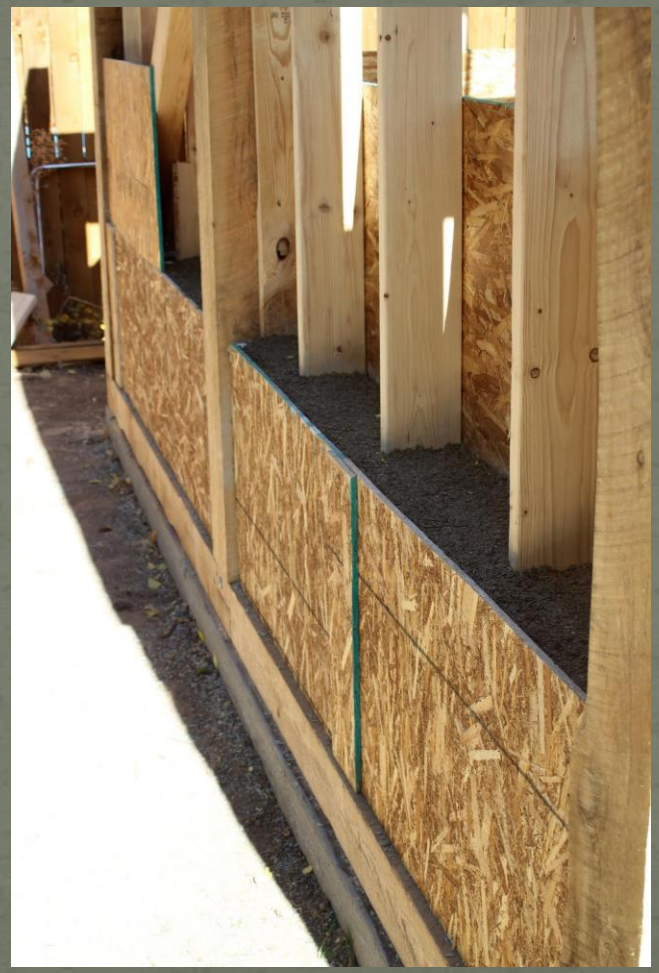
Source: https://rivervalleycivilizations.files.wordpress.com/2016/10/logo.jpg?w=768

What is Hempcrete?



https://nationalhempassociation.org/wp-content/uploads/benefits_of_hempcrete-300x300.png

Application: Walls

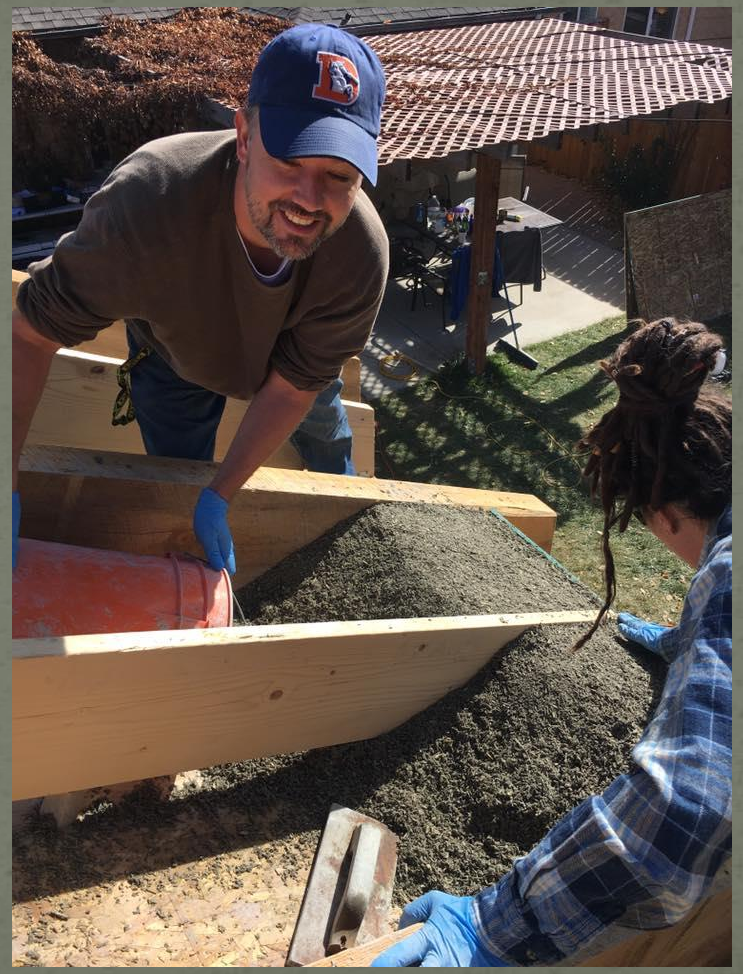


Application: Plasters



Source: http://www.hemphasis.net/Building/hempcrete/lakotahempproject/hempcretecamp_080527/4/DSC06177.jpg

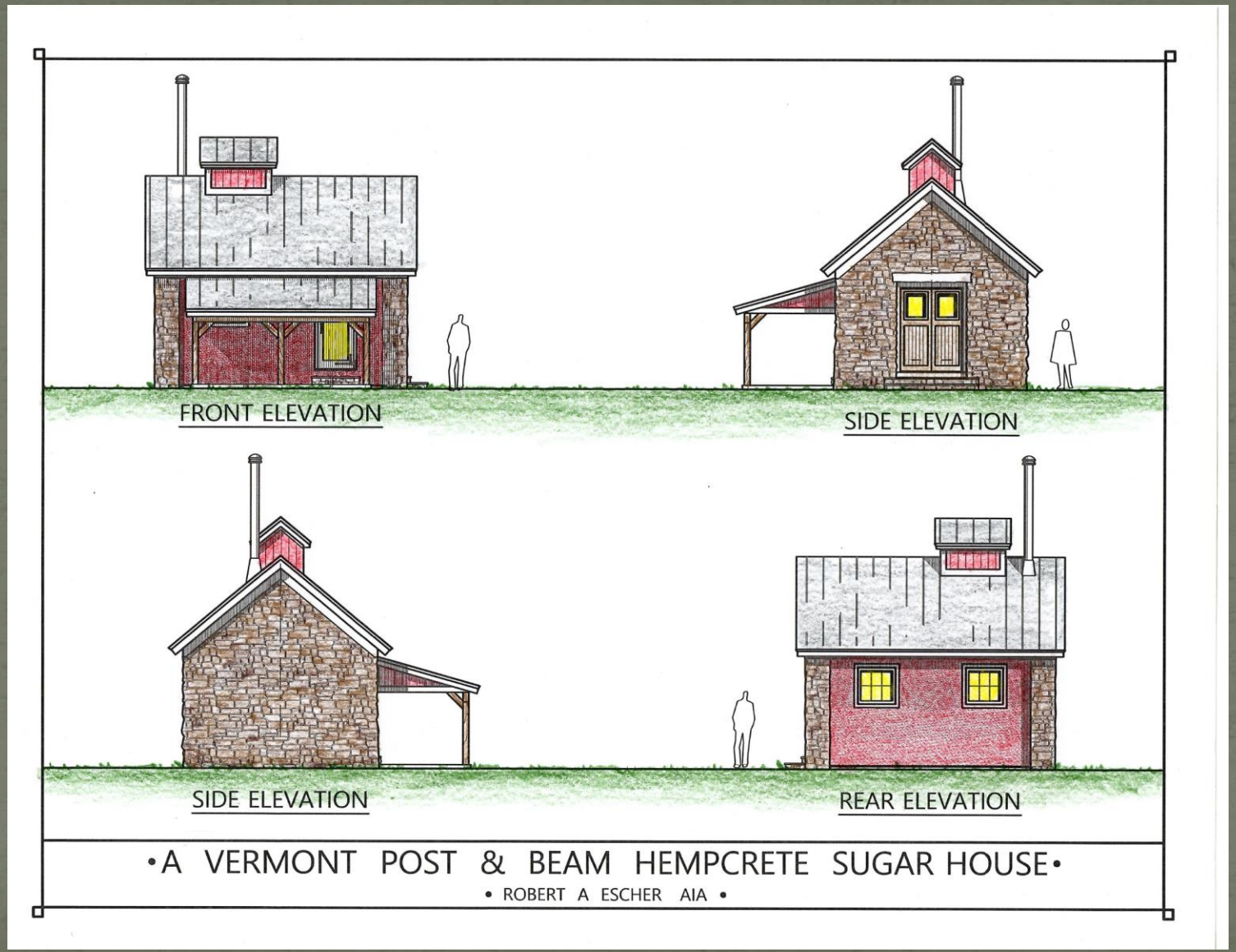
Application: Roof Insulation



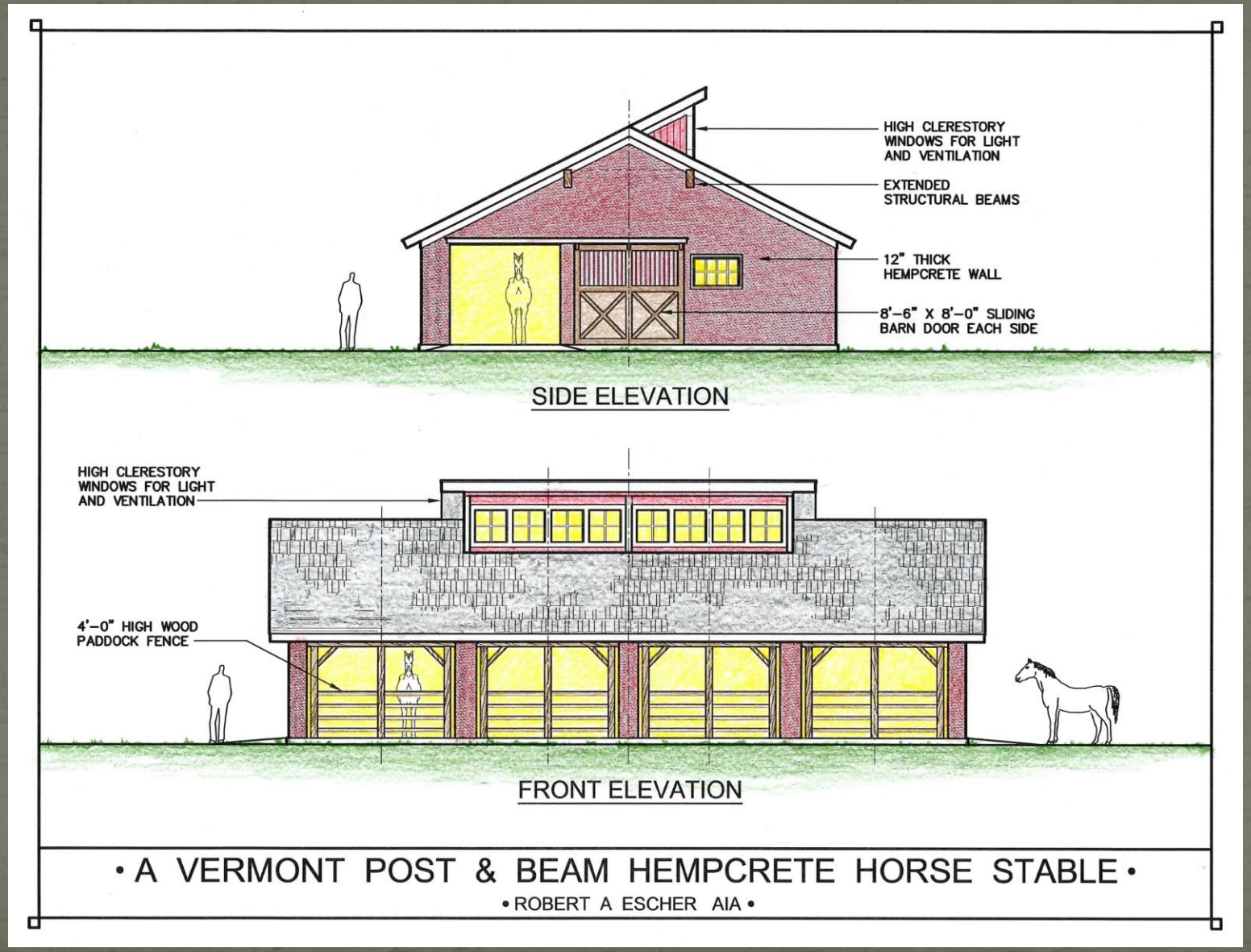
- The WNDER Workshop -



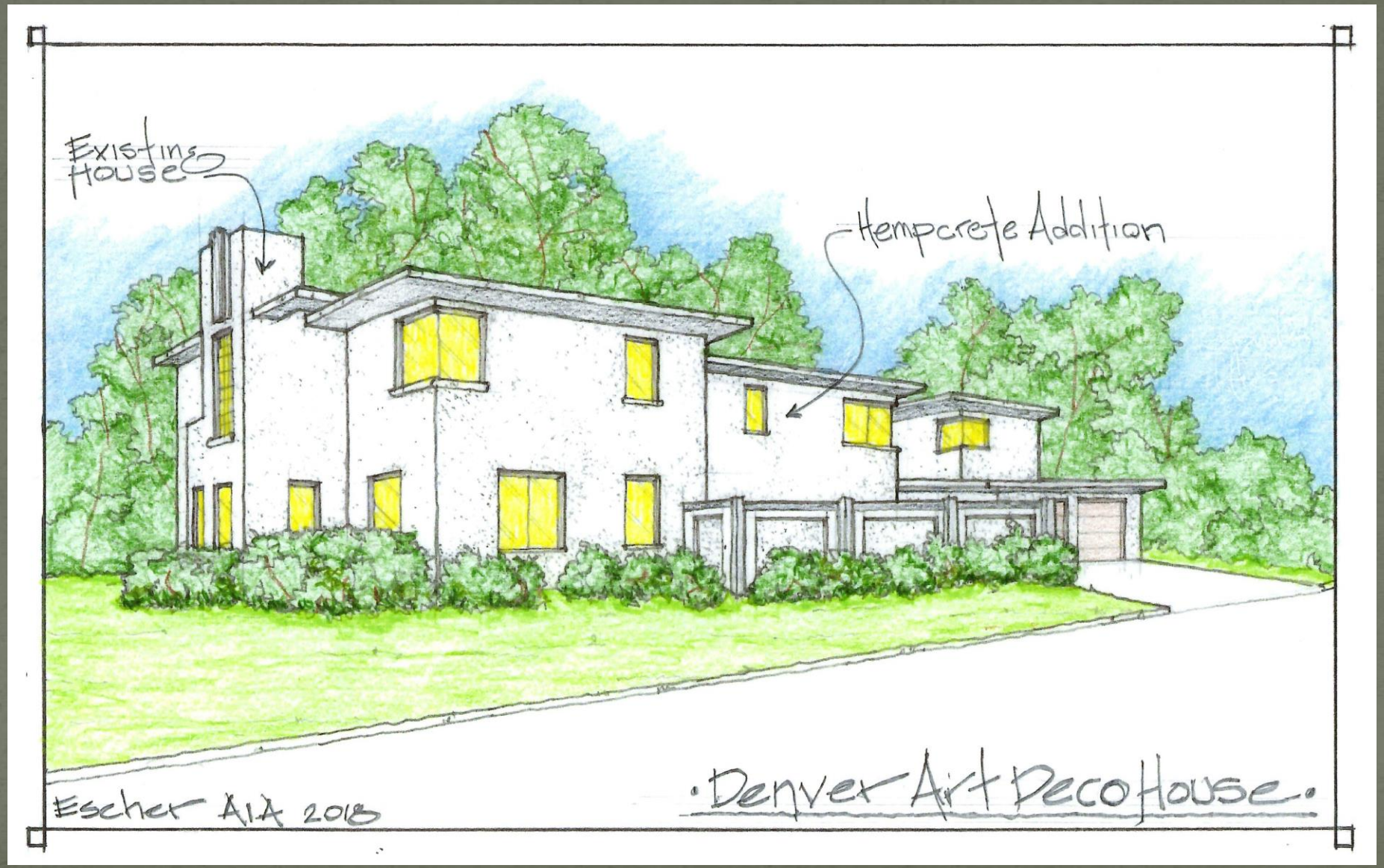
Sugarhouse


FRONT ELEVATION
SIDE ELEVATION
SIDE ELEVATION
REAR ELEVATION
•A VERMONT POST & BEAM HEMPCRETE SUGAR HOUSE•
• ROBERT A ESCHER AIA •

Stable


HIGH CLERESTORY WINDOWS FOR LIGHT AND VENTILATION
EXTENDED STRUCTURAL BEAMS
12" THICK HEMPCRETE WALL
8'-6" X 8'-0" SLIDING BARN DOOR EACH SIDE
SIDE ELEVATION
HIGH CLERESTORY WINDOWS FOR LIGHT AND VENTILATION
4'-0" HIGH WOOD PADDOCK FENCE
FRONT ELEVATION
• A VERMONT POST & BEAM HEMPCRETE HORSE STABLE •
• ROBERT A ESCHER AIA •

Denver Art Deco House



Exterior



Source: http://www.tavgroup.com/uploads/548xauto_f_1481041853f025d.jpg

Interior: Kitchen



Hemp Homes Abroad: Tel Aviv Israel



Source http://www.tavgroup.com/uploads/548xauto_f_1481041853f025d.jpg

Downstream Bottlenecks.



- Conclusion: Review -

The industry is evolving on a national and global level. The technology, investment interest, and sourcing of the raw material has progressed substantially in the past few months. This bodes well for the future of building with hemp.