

Thank you Mr./Ms. Chair and members of the committee.

My name is Chad Pfitzer. I am here today in support of SB13-241

I am currently the owner of a small business in Broomfield, Redtail Cartography. Redtail is focused on providing on-line virtual mapping services of high-accuracy GPS correction networks to the precision agriculture industry. I am a veteran of the U.S. Navy Reserves and the U.S. Peace Corps. I have actively studied, worked or volunteered across various agricultural enterprises for over 20 years. I received a Bachelor Science degree in Agricultural Economics from the University of Nebraska - Lincoln in 1997, and a Masters of Agriculture degree from Colorado State University in 2004.

I would like to highlight 3 points in this testimonial.

1. Hemp has Natural Agronomic Synergies with Existing Colorado Commercial Farming Practices

- As a short-season annual crop, hemp fits well into existing planting and harvesting windows.
- Hemp requires relatively less water, fertilizer and substantially fewer chemical inputs than other commercial crops.
- Hemp integration, as either a commercial or cover crop, in existing rotations, promotes moisture and nutrient retention; improved soil tilth and detoxification; and decreased pest and weed pressure.
- Hemp works well with conservation tillage practices; decreasing erosion potential and promoting environmental sustainability.
- Hemp could give growers new options in the face of mounting environmental pressures.
- Both hemp seed and fiber production can utilize existing grower-owned field equipment.
- Specifically, hemp fiber production can utilize existing center-pivot irrigation equipment, common in Colorado, for optimal growth and wet-retting of fibers.
- Hemp could be marketed effectively using existing storage, drying and transportation infrastructure.
- Hemp could provide an alternative feedstock for animal agriculture; containing essential fatty acids, a full range of amino acids, vitamins, minerals, soluble and insoluble dietary fiber and high protein content.
- Hemp can be grown by Colorado farmers with marginal alteration to their current production practices.

2. A Parallel Watershed Moment in the Precision Agriculture Industry is Taking Place that Could Greatly Assist in Development of the Industrial Hemp Industry

- GPS-based precision agriculture technologies exist that can assist to regulate and track hemp production, harvest, storage, sale and processing.
- Precision agriculture technologies greatly increase the quantity, quality and geographic scope of research; and can be used explicitly in the development of Colorado-specific seed-stock and production practices.

- Production data can be used to incentivizing Best Farming Practices or niche market certification, such as organics, animal feed or high-oil or fiber varieties.
- Production data can be used to derive economic indicators, balancing supply and demand, and providing regulators with information to further assist growers, processors and consumers alike.
- **GPS-based precision agriculture technologies can be used to develop and efficiently regulate the Colorado hemp industry.**

3. The Need for Institutional Support at CSU and the Cooperative Extension Service

- Initiation of hemp research, at CSU agriculture centers statewide, on-campus and on-farm, is crucial to developing a knowledge base specific to Colorado.
- Grower education and support sits at the very core of the Extension mission. Established under the Smith-Lever Act in 1914, the land-grant based Cooperative Extension Services were created to: 1. Develop practical applications of research knowledge; 2. Give instruction and practical demonstrations of existing or improved practices or technologies in agriculture.
- Hemp production fundamentally supports the basic Extension mission.
- George Washington Carver, the noted Tuskegee Institute scientist, botanist, educator, and inventor; earned his reputation on his research into and promotion of alternative crops to cotton; such as peanuts, soybeans and sweet potatoes. He developed and promoted products derived from peanuts that were useful for the house and farm, including cosmetics, dyes, paints, plastics, gasoline, and nitroglycerin. He could not have done this without the sanction and support of the Tuskegee Institute, a land grant institution funded by the State of Alabama.
- CSU's active participation to develop value added products and enterprises around hemp will derive a multiplicity of alternative food, fiber and fuel products. We need to create the institutional infrastructure to enable a new age of "George Washington Carvers" to emerge in assistance to the development of the Colorado hemp industry.
- **CSU and the Cooperative Extension Service must be part of developing the Colorado hemp industry.**

Benefits to Redtail Cartography

- Development of the hemp industry gives Redtail an increased opportunity for consulting services focused on GPS integration, data aggregation and virtual mapping services.
- **As a Colorado small business owner serving the commercial agriculture sector, I look to work with Colorado farmers, processors, consumers and regulators, to help build the Colorado hemp industry from the ground up.**

Thank you Mr. Chair.