

## BOCC PUBLIC HEARING

Time/Date of Meeting: 2 p.m., Tuesday, May 7, 2019

Location: BOCC Hearing Room, 1325 Pearl Street, 3<sup>rd</sup> Floor, Boulder, CO

<b>TO:</b>	Board of County Commissioners
<b>FROM:</b>	Eric Lane, Director, Parks & Open Space Blake Cooper, Agricultural Resources Manager, Parks & Open Space
<b>RE:</b>	Updating the Transition Plan for Genetically-Engineered Crops on Boulder County Parks & Open Space Properties
<b>DATE:</b>	May 2, 2019

In April 2017, the Board of County Commissioners (BOCC) approved changes to the Boulder County Parks & Open Space (BCPOS) Cropland Policy, originally adopted on December 20, 2011. These changes ended the approved use of genetically engineered (GE) corn and sugar beets on agricultural lands leased from Boulder County and adopted a structured phase out of these crops over five years.

Since then, BCPOS has undertaken a number of projects in order to facilitate the transition from GE corn and sugar beets to non-GE crops, and help maintain or improve agricultural sustainability (including environmental, economic, and cultural facets) on broad acre farms. For example, POS has implemented the following activities:

### Environmental Monitoring

Staff increased environmental monitoring in several important areas:

- Water – water quality monitoring
- Soil – soil health assessments, Dynamic Soil Properties Colorado Soil Carbon Project, soil pesticide monitoring
- Pollinators – volunteer pollinator monitoring, local research by Drs. Kearns and Oliveras, pollen analysis for pesticides

### Initiatives

- Sustainable Agriculture Research and Innovation Initiative (SARII) – In 2017, Boulder County proposed the development of a research farm to investigate questions related to local agriculture production (including GE crops) that balanced environmental sensitivity with farm economics. This effort was unsuccessful and not implemented.

### On-Farm Research Projects

- Winter cereals demonstration plots 2017/2018 – Staff seeded winter cereals on the Swanson property. The plots consisted of twelve new and promising winter wheat varieties and two high yielding European two-row winter malt barley varieties. Each variety was drilled both with and without the addition of biochar. Unfortunately, the hailstorm on June 19, 2018, resulted in severe crop damage and the subsequent cancellation of the plot harvest and a public field day.
- Spring barley demonstration plots 2018 – Tenants drilled spring barley on the Quicksilver property. Four high yielding European two-row spring malting barley varieties were

planted in large one-quarter acre strip plots. Again, staff canceled the public field day and plot harvest due to the crop damage caused by the hail storm.

- Winter cereals demonstration plots 2018/2019 – Staff and tenants planted twelve hard winter wheats and three two-row winter malt barleys on the LUH property.
- Spring cereals trials 2019 – Tenant and staff planted one-acre strips of new spring wheat and barley varieties.
- Lentil/pea demonstration plot 2019 – Tenant and staff planted 2.5 acres of pulses on the Vicklund property which will be included in a summer field tour.

### **Alternative Crops**

Tenants and staff have researched and grown many crop alternatives: small grains, organic corn for animal feed, comparisons of GE and organic hybrid corn, edible dry beans, rye, oats, heritage grains, high fiber barley, hemp, organic alfalfa, and herbs with the potential to make essential oils.

### **Grant Applications**

BCPOS applied for two USDA grants related to soil health and carbon sequestration. Although neither proposals were successful, staff will continue to pursue such opportunities in the future.

- Targeted Conservation Proposal – BCPOS partnered with the Boulder Valley and Longmont Conservation Districts, the City of Boulder OSMP, Mad Agriculture, and the NRCS. The goal was to encourage adoption of soil health practices such as composting, crop rotation, no till, cover crops, mulching, reduced tillage, filter strips, prescribed grazing, nutrient management, forage and biomass planting, and Integrated Pest Management. These practices could have been included in the targeted conservation program cost-shared by the NRCS with participating local farmers.
- Conservation Innovation Grant – BCPOS applied for a Conservation Innovation Grant to supplement the Carbon Sequestration Phase 2 Study. The CIG proposal requested \$164,772 for staff time and overhead in addition to \$793,724 for contractual costs of compost and compost application for a total of \$958,496.

### **Carbon Sequestration Project**

The Boulder County Sustainability Office, in conjunction with BCPOS and the City of Boulder, contracted with Colorado State University to complete a Boulder County Carbon Sequestration Pilot Feasibility Study. One section of the study focused on agricultural greenhouse gas mitigation systems. Included in these systems are several practices on cropland including: application of compost, converting from conventional/intensive tillage to no-tillage and strip tillage, planting appropriate cover crops, using nitrification inhibitors, and planting combined pollinator strips/windbreaks on windward sides of irrigated fields and adjacent to perennial/ephemeral streams with little or no vegetative cover. Phase 2 is currently underway including compost application this spring.

### **Conferences and Workshops**

- Soil Revolution – March 2017
- Colorado Pollinator Conservation Short Course, Xerces Society for Invertebrate Conservation – August 2017
- Soil Revolution – December 2017
- Soil Revolution – December 2018

However, despite these efforts, our progress in creating compelling pathways to transition for all producers affected by the GE transition is falling short of our expectations while the structured phase-out timeline moves closer. To remedy this, last fall we contracted with Dr. Phil Taylor of Mad Agriculture to meet one-on-one with each of the GE-affected producers to learn more about their needs, opportunities, desires, and concerns. Unsurprisingly, each farm and farmer is unique. The impact of transitioning off GE sugar beets is not equal, in large part due to the variable access each producer has to private farmland acres (necessary to grow sugar beets in a typical four year crop rotation) and fulfill their co-op contracts. Furthermore, the directions in which different producers wish to take their businesses also vary. Success transitioning to new crops and farming practices will likely require unique solutions for many, if not all, of the producers. Consequently, BCPOS believes that the most viable path to success in implementing an effective and timely transition off GE crops will require additional investment that:

- Delivers customized support to each producer, taking into account their unique situation including financial considerations;
- Sets a revised timeline for transition that reflects the varied realities of our tenant-producers; and
- Facilitates the continued adoption and implementation of practices that build soil health.

As a part of this contract, Dr. Taylor developed a proposal that we believe can achieve these objectives and improve our opportunity for a successful transition from GE crops in a timely manner. Given his work this past fall and winter with each producer, we believe he is uniquely qualified and positioned to help us co-create with our tenants numerous, individualized pathways to successful transition that will benefit the tenants and county land. This will be a process of discovery for the county and tenants – an exploration of profitable and sustainable non-GM cropping systems as well as a process that we believe can best deliver on the vision of sustainable agriculture outlined in the Cropland Policy.

### **BOCC Action Requested**

Approval of the revised GE Transition Plan and Timeline along with expenditures of funds to implement the attached proposal, approval of a Cropland Policy amendment necessary to implement the revised plan, and request to staff to return to a business meeting with final documents.

### **Attachments**

1. Proposal from Mad Agriculture on a Revised Transition Program for Phasing Out Genetically-Engineered Crops and Neonicotinoids on Boulder County Parks & Open Space Properties.