Introduction
Our Mission: We believe healthy food should be convenient, affordable and sustainable.

Diet is #1 cause of poor health in America
- Up to half of cardiovascular, stroke and diabetes deaths are result of diet*
- Low-income and minority populations are especially impacted*


Junk Food US Salty Snacks = $24B industry
- Convenient
- Cheap
- Everywhere

Fresh produce US Produce Industry = $120B
- Usually requires prep
- Best items can be expensive
- Hard to find in food deserts
Our Founders

Proven leaders in technology and agriculture, experienced in bringing products to market

**Tom Adams, CEO**
30 years of scientific leadership at Monsanto and Millennium Pharmaceuticals

**Haven Baker, CBO**
Launched the Innate potato, one of the first ag biotech products in the US with both farmer and consumer benefits.

**Co-founders**

**Feng Zhang**
MIT, Broad Inst.
developed the CRISPR-Cas9 system for gene editing in eukaryotic cells

**David Liu**
pioneered base editing

**J. Keith Joung**
Mass General Hospital
invented and optimized important innovations in gene-editing technology
Our funding

$25M
Series A, Co-led by Bayer Growth Ventures and Deerfield Management

$100M
Exclusive 5 year research collaboration with Bayer in Corn, Soybean, Wheat, Canola and Cotton

First ever ag deal for Deerfield
North Carolina Strength in Agriculture and Biotechnology Creates an Outstanding Opportunity for Pairwise

Greenhouse & Growth Facility
- 24,000 sqft of greenhouse
- 16 Growth chambers
- 40,000 sqft of head house & accessory space

Downtown Durham Headquarters
- 36,000 sqft of cutting-edge office & lab space
- Historic textile mill building
- Expected move-in July 2019
CRISPR makes benefits possible that once took generations of breeding

Conventional crossing = 10-12 generations
CRISPR breeding = 1 generation
Consumers are willing to pay for convenience, availability, and sometimes taste

**Demonstration of Consumer Willingness to Pay**

- **Seedless**: 50% premium
- **Small “snack size”**: 200% - 500% premium
- **Sweeter**: Various premium
- **New colors**: Various premium
- **Off Season**: 50% - 300% premium

Seedless fruits on the market today are associated with avoiding “spitting out seeds.” They capture a 25-75% price premium. Seedless mango premiums should be higher as they provide even more convenience by enabling easier cutting and preparation.

The convenience of baby carrots contributed to a doubling of the U.S. carrot market within 10 years of their introduction.

Fresh cut produce (such as mangoes), which represent the extreme end of convenience, gather >500% price premium over fresh whole.
CRISPR can Deliver Healthy Consumer Choices

1) Drive Healthy Snacking through Convenience
2) Make new, healthy produce (superfoods) available

Available year around, with good quality

Current US Retail Market Sizes: Cherries - $1.5B; Blackberries - $1B; Raspberries - $1.4B
North Carolina is a Prominent Producer in the $13 Billion US Retail Berry Market

### Berry Market Breakdown

- **Strawberry**: $6.1B (46.6%)
  - Peak season: Feb-Sep
  - Production Regions: CA, FL, NC, Mexico

- **Blueberry**: $3.5B (27.2%)
  - Peak season: Dec-Aug
  - Production Regions: CA, FL, MI, NC, NJ, OR, WA, Canada, Chile

- **Raspberry**: $1.8B (14.0%)
  - Peak season: Jun-Sep
  - Production Regions: CA, OR, WA, Canada, Mexico, Chile

- **Blackberry**: $1.2B (9.2%)
  - Peak season: Jun-Aug
  - Production Regions: CA, GA, OR, NC, Chile, Mexico

- **All Others**: $0.4B (3.0%)

#### Retail Sales Values

- Strawberry: $2.56 +2.2% Feb-Sep CA, FL, NC, Mexico
- Blueberry: $4.74 +8.4% Dec-Aug CA, FL, MI, NC, NJ, OR, WA, Canada, Chile
- Raspberry: $7.47 -0.1% Jun-Sep CA, OR, WA, Canada, Mexico, Chile
- Blackberry: $6.03 +8.8% Jun-Aug CA, GA, OR, NC, Chile, Mexico

- All berries are essentially available year-round
- Table shows regions that sell to US
- Retail prices and growth rates from 2017 IRI scan data

#### Retail Sales Distribution

- Total US Retail Berry Market: $13 Billion
  - Strawberry: 46.6%
  - Blueberry: 27.2%
  - Raspberry: 14.0%
  - Blackberry: 9.2%
  - All Others: 3.0%
Vision: Regional Partnership and Infrastructure to Deliver Locally Farmed Fresh Produce

Example: New, differentiated berry products
- Partner with breeder
- Berries are already “closed loop”
- Improved margins

Pairwise partnership with leading berry breeder

Pairwise partners with or buys berry Packer/shipper/marketer

Berry Partner -> New varieties

3,500 crates/acre

Packer/shipper

Retail
What makes us unique

**Our technology**
- Exclusive license to base-editing IP & MGH enzymes
- Comprehensive CRISPR IP
- Partnership with Bayer gives us access to expertise in transformation techniques, data science and IP
- Access to the world’s leading CRISPR experts

**Our team**
- Track record of successfully bringing products to market
- One of the world’s largest gene editing groups
- Diverse range of expertise in food, marketing, & crop genetics

**Our mission & culture**
- Focus on creating differentiated consumer products
- Open to deep collaborations
- Courage to tackle non-commodity crops that have been underserved by other methods

We believe healthy food should be convenient, affordable and sustainable.
Thank You