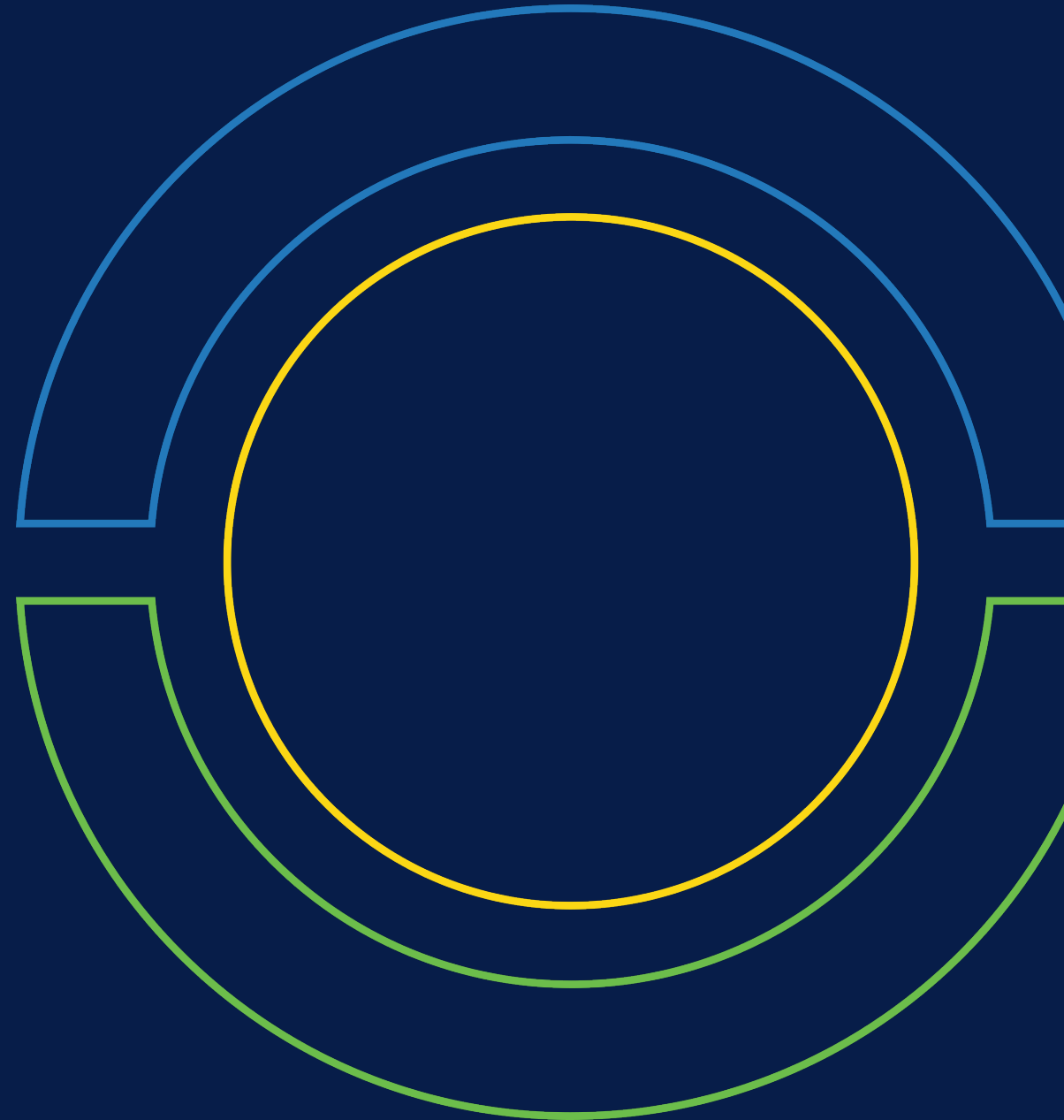


BENSON  HILL®

INVESTOR UPDATE

OCTOBER 31, 2023



Disclaimers

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this presentation may be considered “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements generally relate to future events or the future financial or operating performance of Benson Hill Inc. (the “Company” or “Benson Hill”) and may be identified by words such as “may,” “should,” “expect,” “intend,” “will,” “estimate,” “anticipate,” “believe,” “predict,” or similar words. These forward-looking statements are based upon assumptions made by the Company as of the date hereof and are subject to risks, uncertainties, and other factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements include, among other things, statements regarding the Company’s current business model and go-to-market strategy and plans to transition that business model and go-to-market strategy, and the anticipated benefits, challenges, and potential timeline associated with such transition; statements regarding management’s strategy and plans for growth; statements regarding the Company’s plans to improve the Company’s capital structure and liquidity position, including by divesting its processing assets, reducing operating and capital expenses, and paying off its debt, and the anticipated timeline to achieve such objectives; projections of market opportunity and statements regarding potential market capture; statements regarding planned sources and uses of cash; statements regarding projected CAPEX, OPEX, and working capital; statements regarding the Company’s liquidity improvement plans and other cost-saving measures, actions to implement such plans, and the anticipated benefits of such plans; the Company’s ability to identify and evaluate its strategic alternatives and effect potential strategic opportunities in ways that maximize shareholder value; expectations regarding the Company’s ability to continue as a going concern; statements regarding the Company’s current expectations and assumptions regarding the industries and markets in which it currently and may operate, and macro-economic trends; statements regarding the traits and benefits of the Company’s current product pipeline and anticipated product portfolio; statements regarding anticipated acreage needs, and the benefits from and costs of acreage growth; anticipated benefits of the Company’s existing and potential future strategic partnerships and licensing strategies; the Company’s plans to achieve profitability and potential timeline therefor; expectations regarding sources of consolidated revenue and gross profit, and expectations for gross margin growth, including with respect to current and new product categories, such as animal feed; the Company’s positioning, resources, capabilities, and expectations for future performance; the projected environmental impact and sustainability of the Company’s operations; and projections of consumer preferences, industry trends and market opportunity, including with respect to the animal feed market. Factors that may cause actual results to differ materially from current expectations include, but are not limited to, risks associated with the Company’s transition of its business model and go-to-market strategy, its liquidity improvement plans and other cost saving measures; the risk that the Company’s may be unable to successfully implement its plans relating to its business model and go-to-market transition, and liquidity improvement plans and other cost saving measures, or that, even if such transition and plans are successfully implemented, such plans may be insufficient to achieve the objectives of such plans, or that there may be adverse impacts on the Company’s business and prospects from such plans; liquidity and other risks relating to the Company’s ability to continue as a going concern; risks associated with the Company’s ability to grow and achieve growth profitably, including continued access to the capital resources necessary for growth and to implement its transition and other plans in a timely manner; the risk that the Company will be unable to service, renegotiate or retire any of its existing debt, or to maintain compliance with applicable debt covenants; the risk that the Company’s actions intended to achieve profitability are insufficient; risks associated with the successfully developing new products and commercializing the Company’s product pipeline, entry into new markets and expansion of current markets; risks relating to potential dilution; the risk that the Company will not complete, or realize the anticipated benefits of, the divestiture of its processing assets; risks associated with managing capital resources; risks associated with financial forecasts; risks associated with maintaining relationships with customers and suppliers and developing and maintaining partnership and licensing relationships; risks associated with changing industry and market conditions and consumer preferences; risks associated with the Company’s ability to generally execute on its business strategy; risks associated with the effects of global and regional economic, agricultural, financial and commodities markets; the effectiveness of the Company’s risk management strategies; and other risks and uncertainties set forth in the sections entitled “Risk Factors” and “Cautionary Note Regarding Forward-Looking Statements” in our filings with the SEC, which are available on the SEC’s website at www.sec.gov. 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Strong foundation in place for the next phase of Benson Hill's evolution

BENSON HILL HAS A LOT TO BE PROUD OF...

BUT ACHIEVING THE VISION IS GOING TO REQUIRE MEANINGFUL CHANGE...



Highly talented and engaged team with decades of valuable industry experience



Proven **protein traits**... which other players value and want (seed partners)



A **multi-year moat** around those protein traits, underpinned by distinctive germplasm and CropOS® platform



A compelling sustainability story delivering more protein per acre with the same inputs



Early **proof of ability to successfully partner** with players across the value chain

Accelerated expansion into animal feed presents significant opportunity for value creation

Partners / new routes to markets are needed to reach new end markets, achieve scale, and manage parts of the process where Benson Hill is disadvantaged

With the current innovation pipeline already in place, it will take time to achieve the acre ramp-up necessary to supply these massive new markets

Key messages today:

Good progress made toward strengthening our balance sheet

Giving us the time and space needed for business model transition

Resulting in an extended but sustainable path to profitability

Key messages today:

- **Good progress made toward strengthening our balance sheet**
 - *Reductions in OPEX/CAPEX achieved*
 - *Sale of assets in process*
 - *Enabling elimination of debt*

Giving us the time and space needed for business model transition

Resulting in an extended but sustainable path to profitability

Liquidity Improvement Actions

1

SHAPE THE BUSINESS - FIT FOR PURPOSE

- Delivering \$33M run rate Opex savings for 2024, versus \$20M target announced in March
- Identifying additional Opex run rate savings (\$5-10M) and aligning Capex (savings of \$10-15M) to new asset-light model

Liquidity Improvement Actions

2

DIVEST ASSETS TO BUILD LIQUIDITY

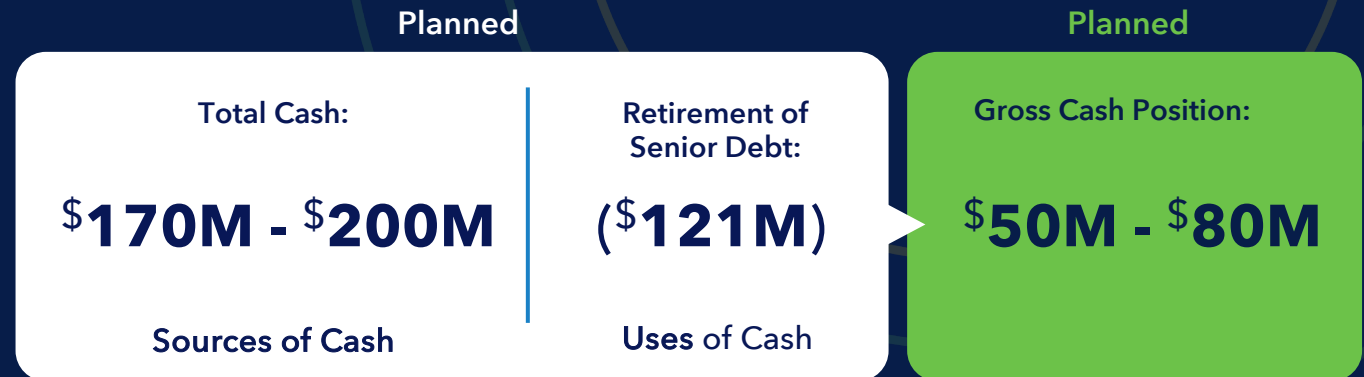
- Signed agreement to close the sale of the Seymour, Indiana, soy crush facility for approximately \$36M in gross proceeds, subject to working capital and other adjustments
- Exploring options to divest the remaining manufacturing assets
- Divestitures expected to significantly lower working capital requirements to help extend liquidity

Liquidity Improvement Actions

3

**RETIRE DEBT
AND FUND
THE
BUSINESS**

- Targeting early retirement of current senior term loan
- Evaluating other alternative non-dilutive and equity sources of capital
- Providing 12 months+ of liquidity runway



Key messages today:

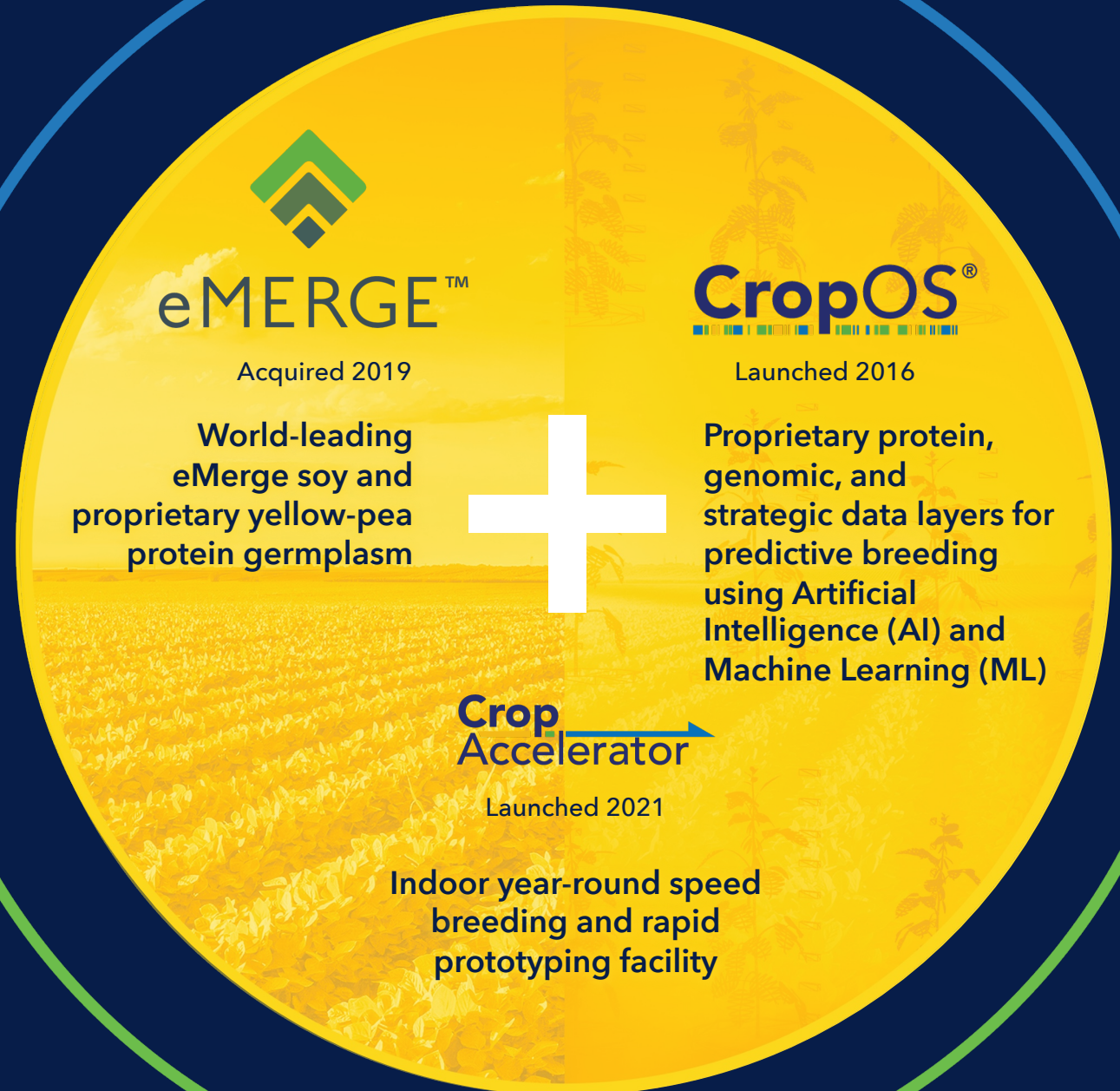
Good progress made toward strengthening our balance sheet

- **Giving us the time and space needed for business model transition**
 - *Focusing on our core technology assets*
 - *Accelerating focus on animal feed*
 - *Building a less capital-intensive business*

Resulting in an extended but sustainable path to profitability

At its core,
Benson Hill is a
leader in **AI driven
seed innovation
utilizing proprietary
genetics**

...resulting in a complete
and market leading
toolbox to deliver seed
innovations of the future.

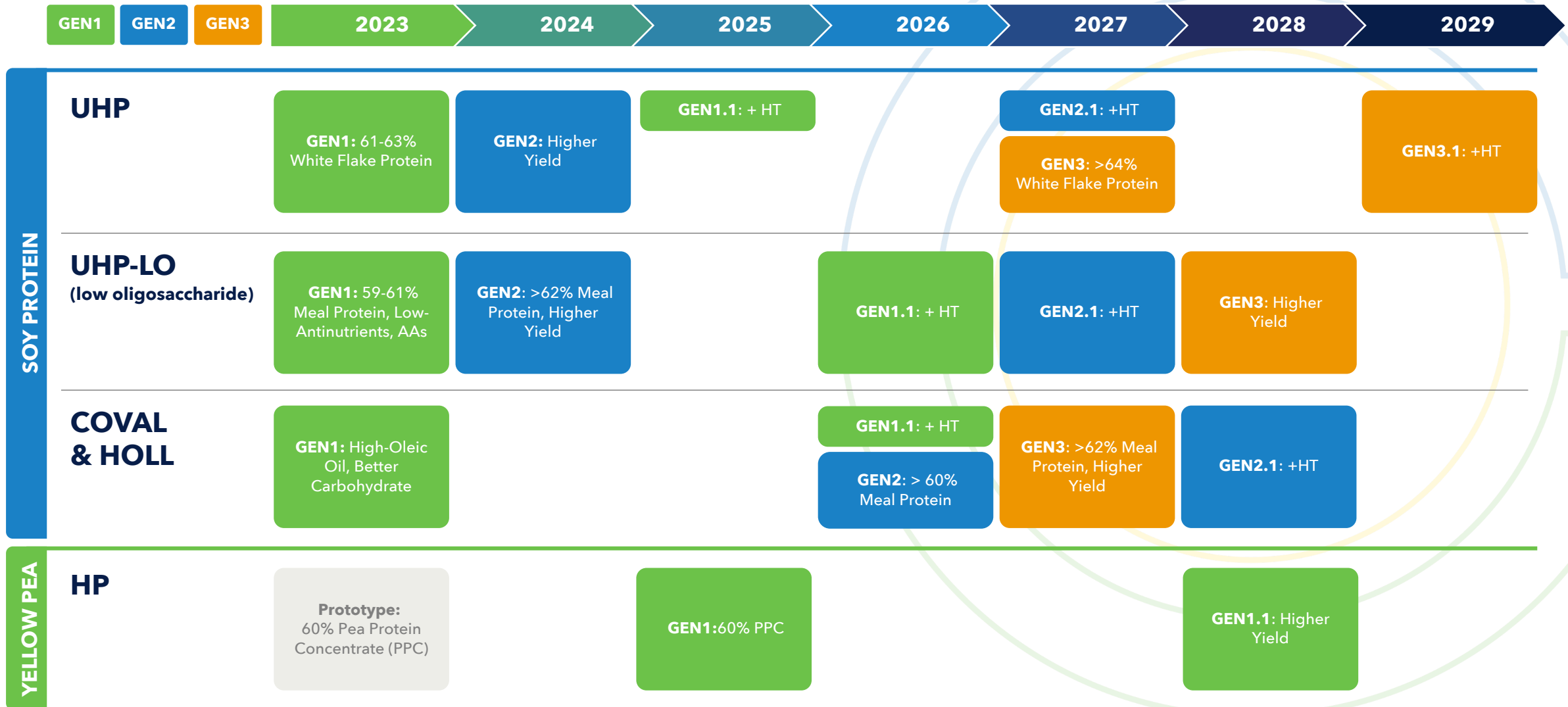


5 innovation platforms expected to drive growth across all market segments

	Product Category	Characteristics	End markets	Customer Value Proposition
SOY PROTEIN	UHP	Ultra-high Protein	Consumer Package Goods	Improved nutrition Cleaner Label Reduced Cost (Processing Yield Improvement)
	UHP-LO (low oligosaccharide)	Increased Protein Lower Anti-nutrients Improved Amino Acids	Animal Feed Consumer Package Goods	Improved digestibility, higher energy diet, more complete amino acid profile Same as UHP
	HOLL	High Oleic Low Linoleic Low Linolenic	Consumer Package Goods Food Services	Heart healthy oil and functional benefits (oil stability)
	COVAL	Lower Anti-nutrients High Oleic Low Linoleic Low Linolenic	Consumer Package Goods Food Services Animal Feed	Heart healthy oil, improved digestibility
YELLOW PEA	HP	Increased Protein	Pet Food Consumer Packaged Goods	Improved nutrition Cleaner Label Reduced Cost (Processing Yield Improvement)

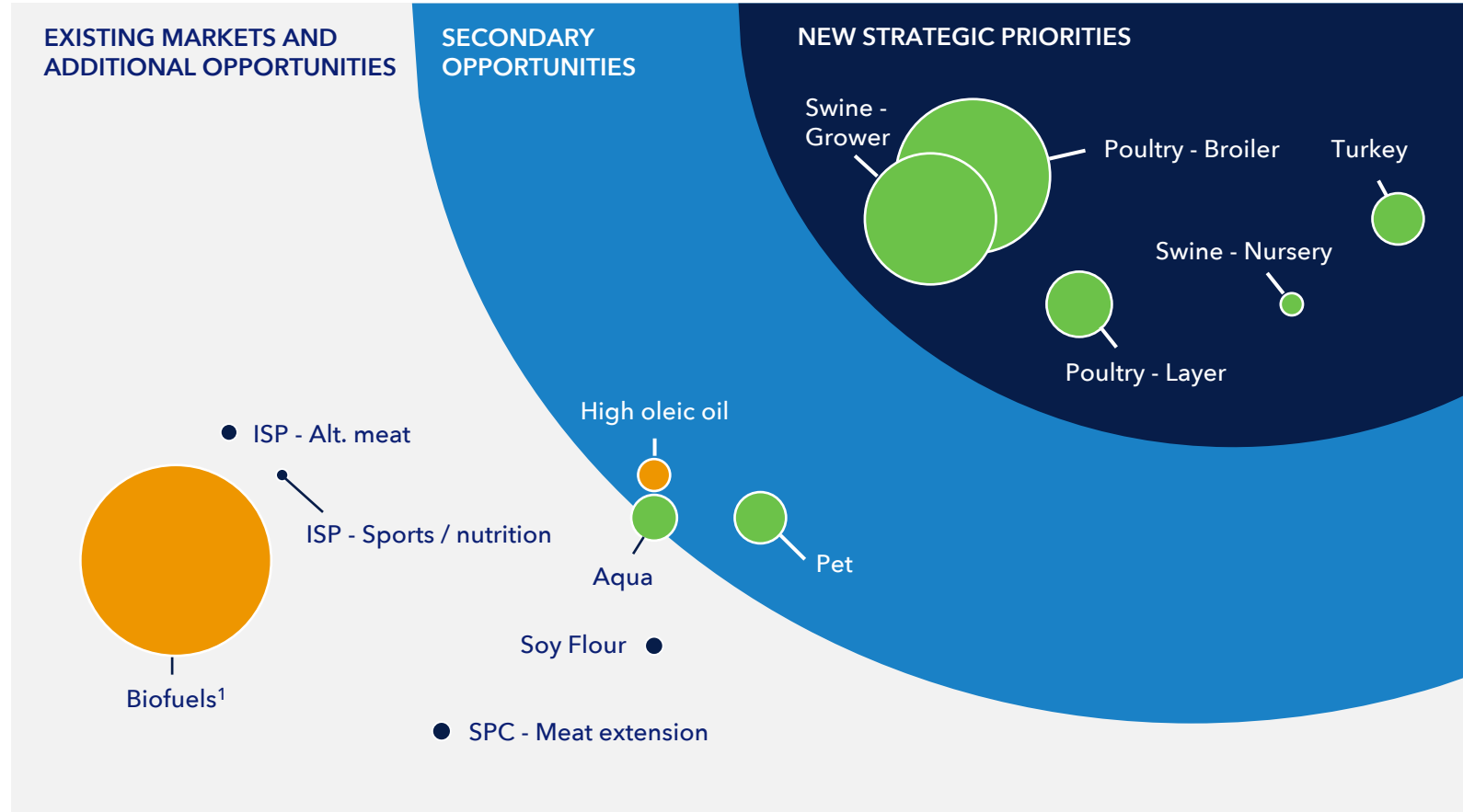
And our pipeline is designed to stay ahead of the competition

BENSON HILL'S TECHNOLOGY PIPELINE



Our innovation portfolio provides a compelling value proposition to expand our footprint into the largest soy protein markets

Market attractiveness



1. Scaled down for illustration purpose

Product-market fit / value proposition

ISP=Isolate Soy Protein; SPC=Soy Protein Concentrate
 Source: USDA, FAOSTAT, Industry reports, Expert interviews, Press search



1 UHP-LO is a game-changer for animal producers and ready today

~ 20% higher protein content	Reduced cost of feed - less soybean meal required to meet nutritional requirements
Low oligosaccharide content* (Oligosaccharides are sugars that are hard to break down during digestion)	Improved energy density of soybean meal by replacing undigestible sugars with sucrose Improved digestibility of feed - especially for development of young animals
Improved amino acid profile (Part of trait pipeline)	Higher relative share of critical amino acids for growth - reducing dependence on synthetic additives

28M ACRES TAM - U.S. Soybean acres in poultry and swine



Reduces animal producer total formula costs - **Demand is real, and UHP-LO is uniquely advantaged**

2 Current UHP-LO output traits exceed nearest competitor targets

Trait	2023 UHP-LO	2027 UHP-LO Projected
Increased Protein Content	~20% ●	20-25% ●
Enhanced Amino Acids	✓ ●	✓ ●
Reduced Anti-Nutritionals (Low Oligosaccharides - Raffinose, Stachyose)	<0.5% ●	<0.5% ●
Yield (% commodity)	93% ●	~97% ●
Herbicide Tolerance (HT)	Non-GMO ○	HT ●

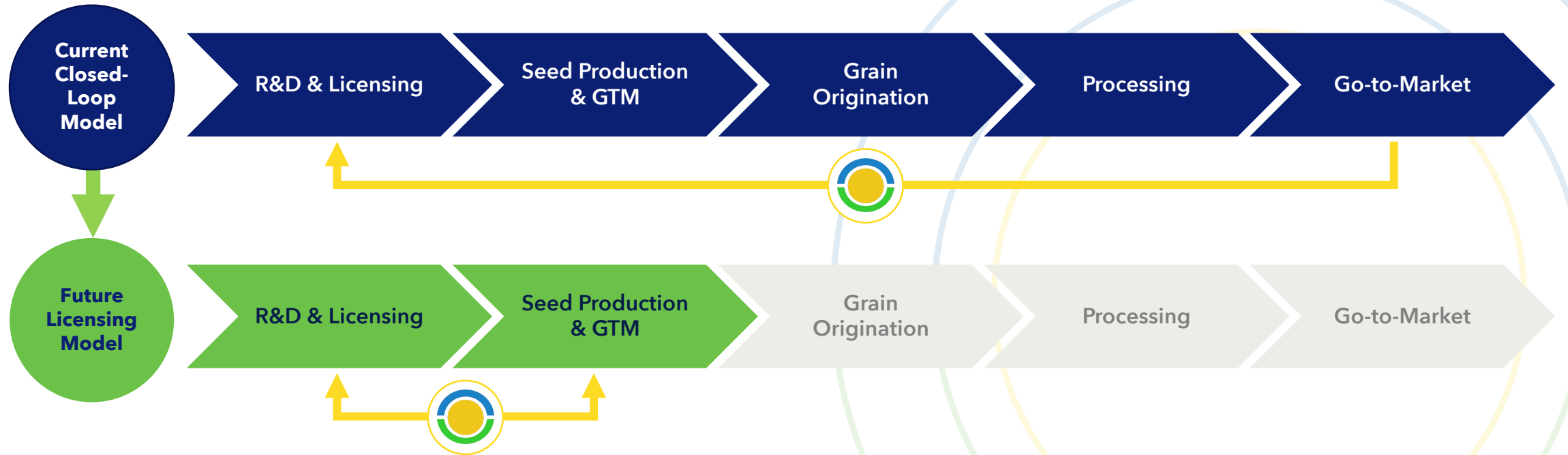
Specialty protein with enhanced amino acids target
Achieving greater than 10% **increase protein content**.
Increased **Methionine**, reduced **anti-nutritionals**.
- Corteva Agriscience R&D Innovation update - May 9, 2023

The companies expect to commercialize these soybean varieties by late this decade.
- Corteva Agriscience and Bunge - March 9, 2022

* UHP-LO's value proposition is particularly pronounced for mono-gastric animals (not ruminants) including turkey, chicken, and swine
Source: Expert Interviews, UHP-LO trials with animal producers

Business model transition necessary

Closed-loop model catalyzed demand for innovation, but is not sustainable going forward



Why Closed-loop is unsustainable for Benson Hill

- Alt meat growth trajectory flattened, and grower acquisition costs increased
- Existing assets require investment to deliver value-add food ingredient streams
- High working capital requirements with underwhelming returns

Rationale for move to a Licensing model

- Partner grower networks are necessary to efficiently scale acreage
- Investments need to be focused on core R&D
- Capital efficiency

Opportunities to monetize our technology within the future licensing model

VALUE CHAIN:



1. Licensing Royalties

License germplasm to seed companies to enable broadacre adoption

2. Direct Seed Sales

Grow direct seed sales through Benson Hill and eMerge brands

3. Technology Access Fees

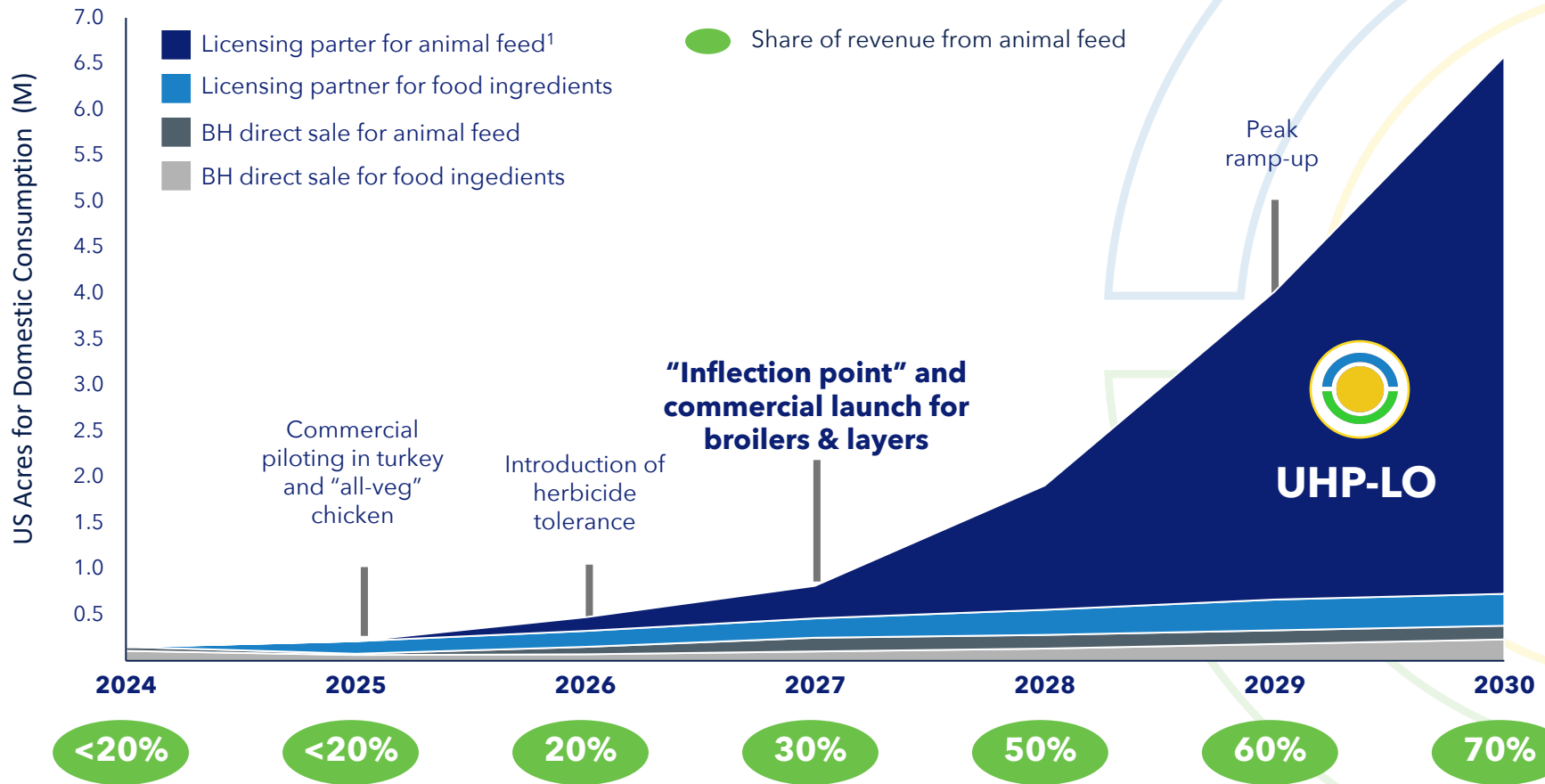
Earn technology access fees from seed companies, processors and end-users

End market value creation: **\$100-230** per acre¹

1. Value creation varies by end market; In animal feed in particular, value creation varies by species (e.g., Turkey vs. Broiler) and type of feed/diet (e.g., Grower vs. Nursery)
Source: USDA, FAOSTAT, Industry reports, Expert interviews, Press search

Acre adoption outlook for Benson Hill genetics to enter animal feed

US Acres (M) for Domestic Consumption Accessed by Benson Hill Technology



New licensing model expected to unlock growth through broadacre access

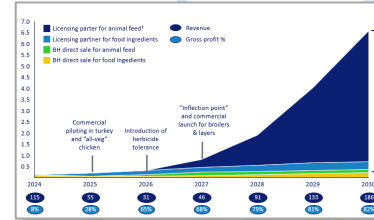


1. Includes aquaculture and pet food

Value of Benson Hill genetics in the US soy market for domestic consumption

Accessing only a share of serviceable acres could create total long-term value

Benson Hill's obtainable acres long term



6.5M acres



End market value creation per acre

Species	Feed Type	Est. value creation per ton of SBM (2028 LHP-LO species)	US market size (M soybean equiv. acres)
Turkey	All Veg ¹	~\$100	~0.15
	Regular	~\$100	~1.5
Layer	All Veg ¹	~\$100	~0.25
	Regular	~\$100	~2
Broiler	All Veg ¹	~\$100	~1.5
	Regular	~\$100	~12
	Nursery	~\$100	~0.03
Grower	All Veg ¹	~\$100	~10
	Regular	~\$100	~10

\$100-230 per acre³



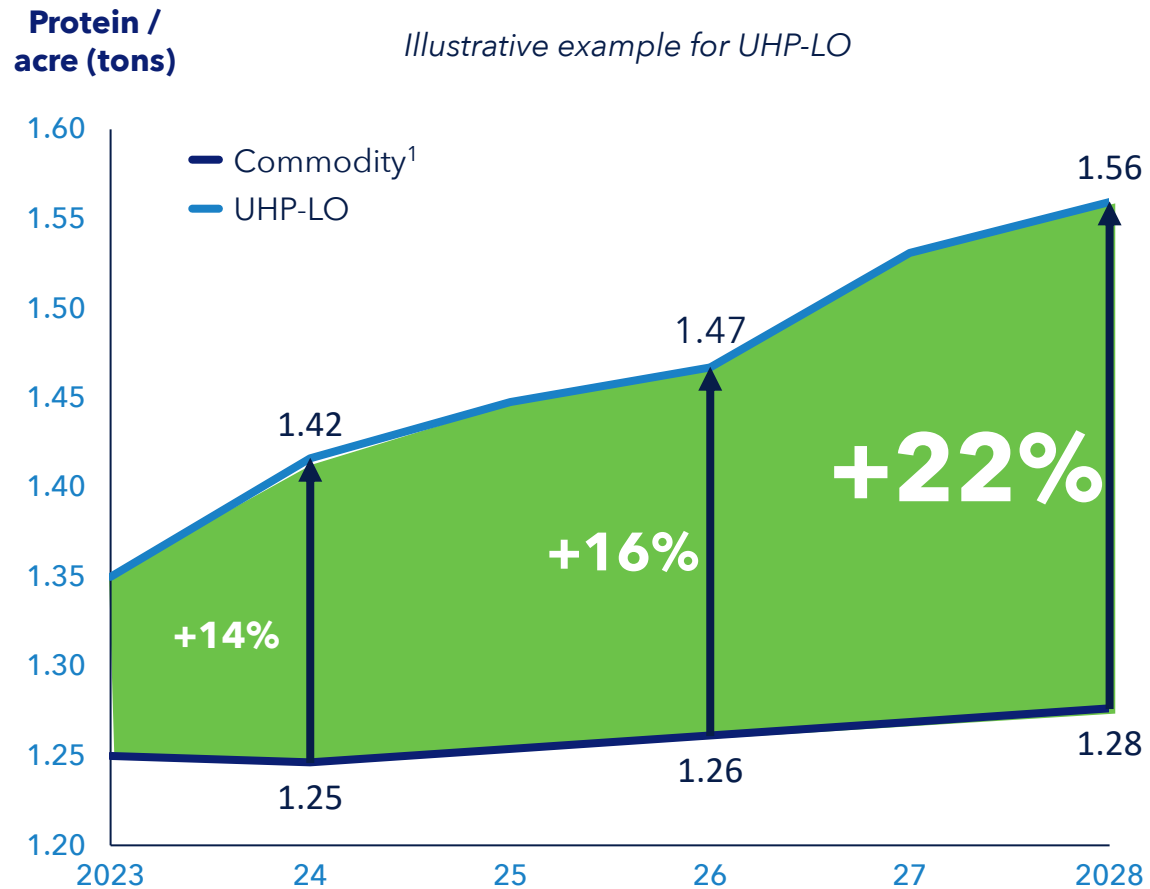
Potential total market value created long-term

\$0.7-1.5 billion

1. Includes US end markets for broilers, layers, turkey, swine, salmon, pet food, human ingredients, and high-oleic oil
 2. E.g., based on share of production under consolidated, commercial-scale processing and animal systems
 3. Value creation varies by end market; In animal feed in particular, value creation varies by species (e.g., Turkey vs. Broiler) and type of feed/diet (e.g., Grower vs. Nursery)
- Source: USDA, FAOSTAT, Industry reports, Expert interviews, Press search

Our sustainability impact is even more compelling within animal feed

Benson Hill soybeans deliver impressive protein efficiency through nutrition density



¹ Assumes 0.6% yield improvement per annum

Source: Product performance and pipeline forecast data 2022-2028 accounting for both protein content and agronomic yield

MORE PROTEIN PER ACRE

UHP-LO



Lower carbon intensity per unit of protein

Less pressure on land per unit of protein

Less pressure on water and inputs per unit of protein

On Farm:

More protein per acre with equivalent inputs, land use and carbon emissions

Processing:

Higher protein content with the same manufacturing capabilities

Customers

Increased nutrition density

Key messages today:

Good progress made toward strengthening our balance sheet

Giving us the time and space needed for business model transition

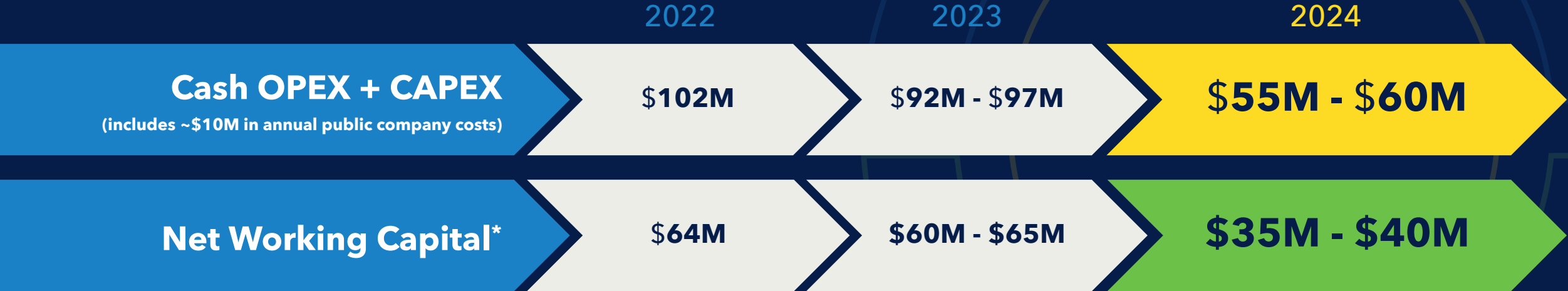
› Resulting in an extended but sustainable path to profitability

Transformation roadmap to shift to a licensing model

PRELIMINARY

		2021-23	2024	2025-28	2029+
		Phase 1: Vertically integrated food protein ingredients company	Phase 2: Execute implementation of liquidity plan and launch go-to-market transition	Phase 3: License seed technology & partner across value chain	Phase 4: Expand Trait development and licensing
Expected Gross Margin		<10%	<10%	30-80%	>80%
R&D		Focus on high-value specialty traits (protein, high-oleic oil, LO, etc.)	Focus on holistic value proposition (balance of protein, yield, oil, etc.)	Herbicide tolerance and yield convergence	Next-gen seed traits
Seed production & distribution		Seed produced and sold directly	Seed produced and sold directly Licensing partnerships established	Co-development and commercialization of Next-gen Varieties	Co-development and commercialization of Next-gen Varieties
Grain trading & processing		Processing assets owned and operated Production contracted directly	Processing assets sold and downstream processor partnerships established Production contracted directly	Downstream processor partners responsible for contracting, processing, and ingredient sales	Downstream processor partners responsible for contracting, processing, and ingredient sales
End markets	Food ingredients	✓	✓	✓	✓
	Aqua	✓	✓	✓	✓
	Turkey		✓	✓	✓
	Poultry		✓	✓	✓
	Swine				✓
	Pet food				✓
	High oleic oil	✓	✓	✓	✓
	Biofuel				✓

Liquidity Improvement actions enable efficient cash utilization

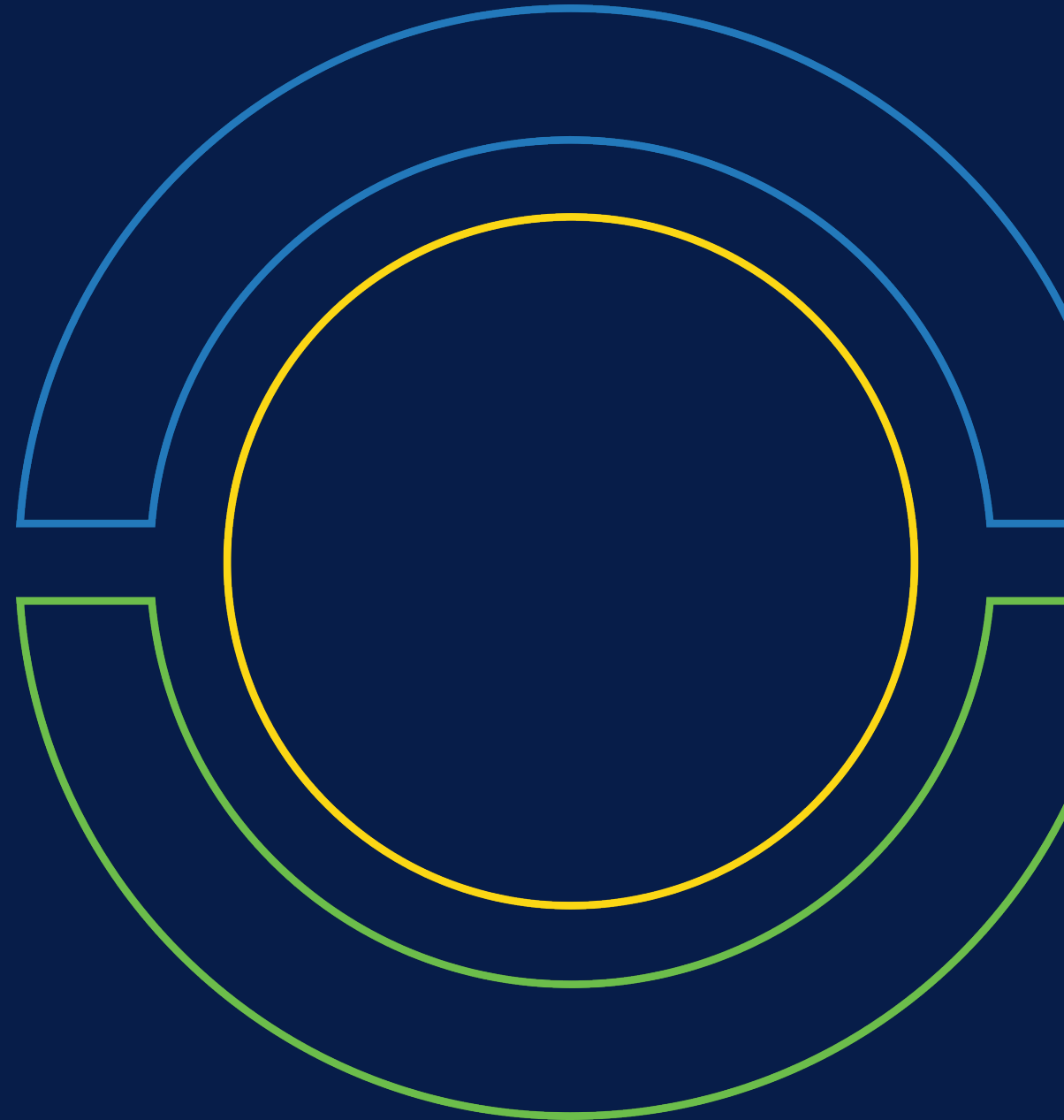


* Subject to the timing of facility sales and excludes one-time costs in 2023

Closing comments:

- We have strengthened our balance sheet and are creating the liquidity runway to transition our business
- We have accelerated our evolution to serve the animal feed market and will continue to draw on our core differentiators – our people and our technology
- We are engaged in discussions to identify the right partners to take our business to the next level

APPENDIX



Expanding to animal feed is an immediate strategic priority

Overview of market assessment of shortlisted end markets

Category	End market	① Market attractiveness (current)				② Product-market fit		
		2030 TAM, M acres	Growth / tailwinds	Competition / substitution	Relative complexity	Opportunity for differentiation	Fit with customer needs Today 2028	
Animal feed	① Poultry - Broiler	~13.5	●	●	●	●	●	●
	② Poultry - Layer	~2.5	●	●	●	●	●	●
	③ Poultry - Turkey	~1.5	●	●	●	●	●	●
	④ Swine	~10.2	●	●	●	●	●	●
	⑤ Aquaculture	~1.2	●	●	●	●	●	●
	⑥ Pet	~1.7	●	●	●	●	●	●
Human ingredients	⑦ SPC - Alt meat/meat extension	~0.3	●	●	●	●	●	●
	⑧ Soy flour (textured/untextured)	~0.2	●	●	●	●	●	●
	⑨ ISP - Alternative meat	~0.15	●	●	●	●	●	●
	⑩ ISP - Sports/nutrition	~0.1	●	●	●	●	●	●
Oil	⑪ High-oleic cooking oil	~2	●	●	●	●	●	●
	⑫ Biofuel	>50	●	●	●	●	●	●

Overall assessment of market

 More attractive Less attractive

Source: USDA, FAOSTAT, Industry reports, Expert interviews, Press search

Value add assumptions are based on academic studies, industry feed trials, and consultant driven pricing models

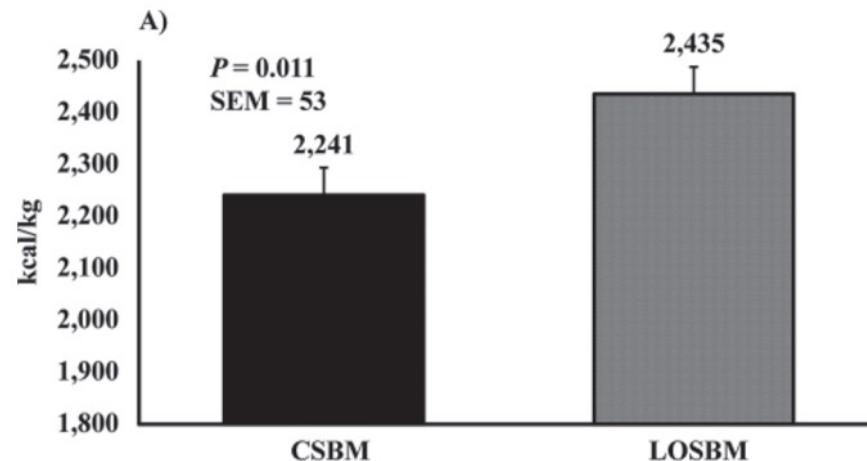
- **2012** | Schillinger genetics partnered academic studies to determine energy value add for low oligosaccharide traits
- **2020** | Feed trials with [REDACTED] using Benson Hill High Protein and Quality Protein varieties to demonstrate reduced feed costs while maintaining animal health
- **2023** | Shadow pricing studies with consultant [REDACTED] to determine the value add of Benson Hill varieties for animal feed applications (broilers, layers, swine)

Academic study with Schillinger genetics germplasm shows an increase in energy density for low oligosaccharide varieties

Apparent metabolizable energy and apparent ileal amino acid digestibility of low and ultra-low oligosaccharide soybean meals fed to broiler chickens¹

K. R. Perryman and W. A. Dozier III²

Department of Poultry Science, Auburn University, Auburn, AL 38649



In conclusion, these data indicated that LOSBM and ULSBM have a better nutrient profile compared with CSBM. Low oligosaccharide SBM had on average (experiments 1 and 2) 168 more kcal of AME_n/kg compared with CSBM. In experiment 3, LOSBM had

Benson Hill performed a feeding study with poultry producer in 2020 that demonstrated lower feed costs and equivalent animal outcomes

EXPERIMENT NUMBER: W-10-20
TITLE: Benson-Hill Soybean Meal Varieties on Broiler Performance
LOCATION: [REDACTED]
BREED: RSYRS
NUMBER PENS: 56
NUMBER TREATMENTS: 4
NUMBER BIRDS/PEN: 46
DURATION: 06/11 – 07/23/20
SUMMARIZED BY: [REDACTED]

OBJECTIVE:

Benson Hill has several varieties of Non-GMO soybeans with added value traits. The objective of this trial is manufacture soybean meal via traditional hexane extraction from 3 added value varieties and a commercial available conventional variety. A nutritional matrix will be determined based on the analysis of each meal. Each soybean meal will be fed to broilers over a 6 weeks period to determine the effect on bird performance. An economic evaluation will be conducted based on bird performance and feed cost of each variety.

EXPERIMENTAL TREATMENTS:

- Tmt 1 Commodity Soybean Meal
- Tmt 2 High Protein – E3776
- Tmt 3 Navita N3553
- Tmt 4 Commodity SBM formulated to same Energy as Navita

