

# Healthy and Enhanced Meat Research

## Industry Stakeholder Needs Assessment: Survey

### Abstract

The purpose of this survey is to better understand the meat processing industries interest, position and practice of developing healthy and enhanced meat products. The results help us to better understand what individual stakeholders, organizations, and its members are doing in the area of healthy and enhanced meat processing, and what they would like to do in the future.

Kenton Delisle

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## Background

The Healthy & Enhanced Meat Product Research Program (HEMR) is part of Alberta Agriculture and Forestry's (AF) Food & Bio-processing Division. Operating out of the Food Processing Development Centre (FPDC) in Leduc, Alberta, the Program is driven by meat scientists and technologists working to support the research, development, and production of enhanced, value-added and healthier meat products in the local and global marketplace.

The goal of the Healthy & Enhanced Meat Research Program is to help ensure that:

- Alberta businesses participate increasingly in the global market place for enhanced, value-added and healthy meat and food products
- Albertans benefit increasingly from producing and eating healthier meat and food products

## Needs Assessment

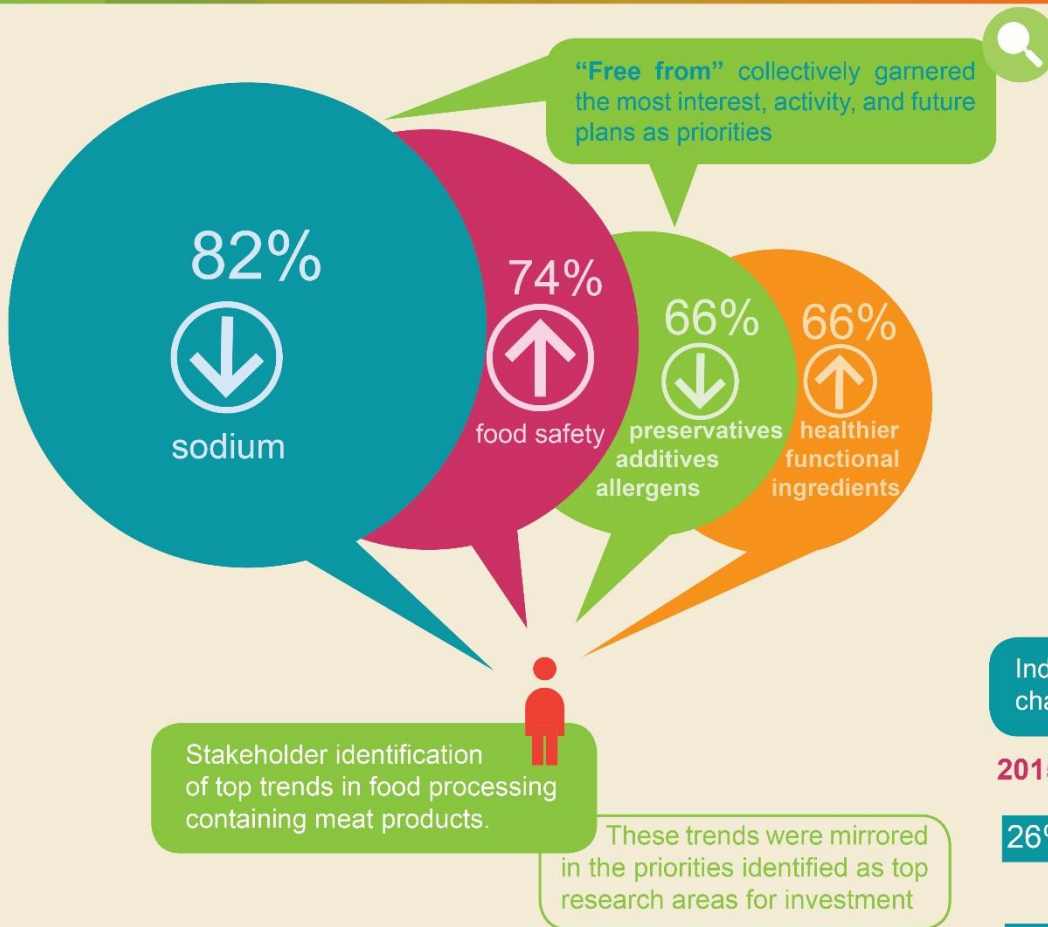
The purpose of this survey is to better understand the meat processing industry's interest, position and practice of developing healthy and enhanced meat products. The results help us to better understand what individual stakeholders, organizations, and its members are doing in the area of healthy and enhanced meat processing, and what they would *like* to do in the future. Valuable insight from stakeholders are gained through their views and perceptions about what trends and developments in healthy and enhanced meat products and processes are prominent or promising, and where they think future research and investments should be made to contribute to Alberta's food sector competitiveness and contributing to a healthy food supply for consumers.

The industry stakeholder survey was designed and executed by Kenton Delisle and was developed in collaboration with the HEMR steering committee, the Food Processing Development Centre (FPDC) Programs Branch management and FPDC meat scientists, and ALMA representatives; and was guided by AF Educational Design Consultant, Lois Hameister, AF Communications, and the GoA FOIP office.

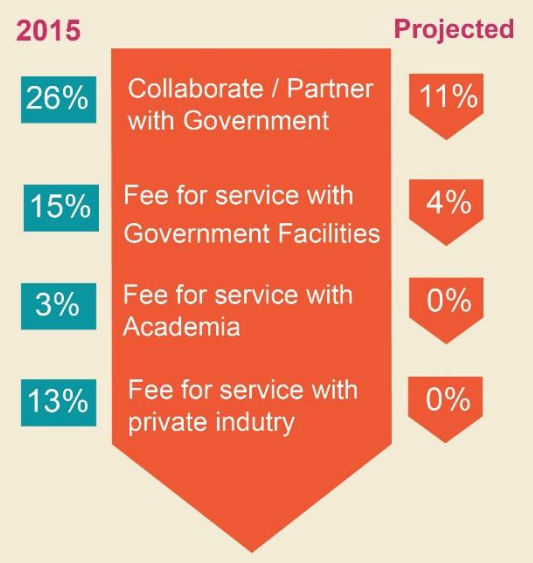
The survey was delivered electronically through the GoA approved online survey tool, Opinio. The industry stakeholder contact list was developed in collaboration with HEMR steering committee, the FPDC Programs Branch management and FPDC meat scientists. The survey was delivered to key contacts and those contacts were encouraged to share the survey with colleagues and peers. The survey was distributed to over 160 industry stakeholders from the AF team directly. The primary audience was Alberta meat and processors (primary and secondary ~40%). Also included were: Ingredient manufacturers and suppliers, equipment suppliers, government (provincial and federal – regulatory and service provision to industry), commodity groups/industry associations, research and development centers, and retailers.

# Healthy and Enhanced Meat Research Industry Stakeholder Needs Assessment: Survey

## At a Glance



### Industry ID of perceived promising channels for future food development



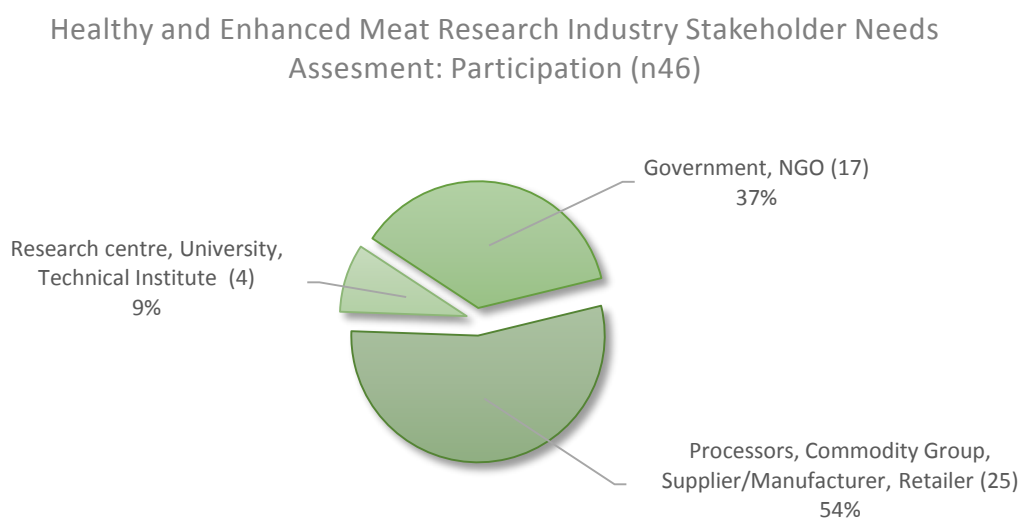
# Meat Processing Industry Needs Assessment Survey Results

## Respondents

55 respondents, 46 useable (completed required questions as minimum) = ~ 29% return on known contacts

Over half of the respondents were representing food processing/retailing, whereas just over a third is made up of Government (regulatory as well as business development and food production./processing extension) and Non-Government Organizations representatives. All targeted stakeholders have a professional role related to meat processing.

Fig 1. Participant sectors



## Trends

When asked “If your organization processes or produces food products, indicate any changes or innovations to meat products your organization has undertaken,” the responses were broad, but three areas stood out. 37%\* of respondents chose the top three activities identified as:

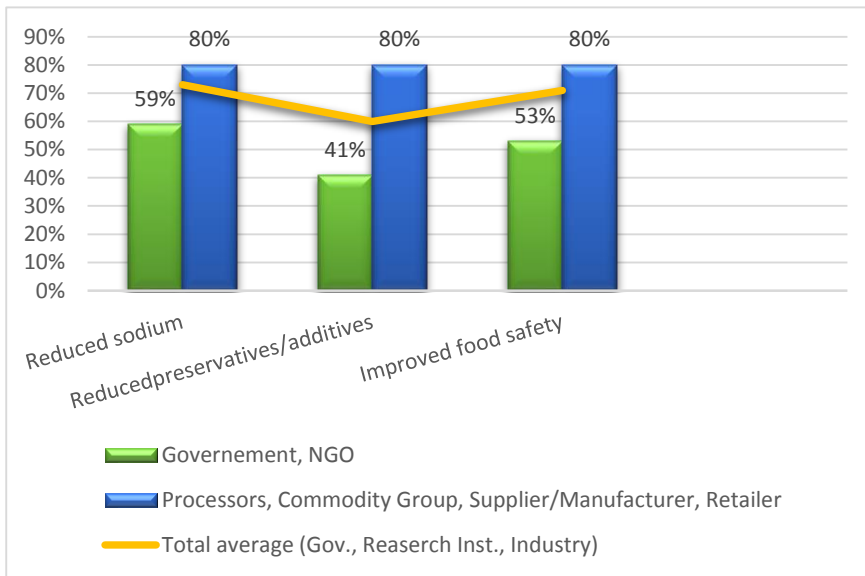
- Reduced Sodium
- Reduced preservatives/additives
- Improved Food Safety

\* Respondents were able to check all that apply (from nine areas), and add to the list if others were identified.

Stakeholders who are in organizations which processes or produce food products were asked to explain why they have focused on the areas of innovation identified (eg. reduced sodium, etc.). The single largest driver perceived is organizations response to consumer demand. Eg. “The selected ones are of greatest relevance to consumers and customer.” This gave some insight as to what stakeholders identified as areas of current practice and innovation, and identified trends related to healthier and enhanced meat products; again identifying *Reduced sodium (82%)*, *Reduced preservatives/additives (69%)* and *Improved safety (74%)* as

three of the top five areas trending, with the addition of *Healthier / Functional ingredients* (66%) and *Allergen ingredient management /alternatives* (63%) in the top five trends. However, it demonstrated that there was some discrepancy between *Government/NGO* responses and the *Processors, Commodity Group, Supplier/Manufacturer, Retailer* respondents for three of the areas identified.

Fig 2. Industry stakeholder’s comparative perceived trends.



It should be noted that the Government category of respondents was more evenly distributed across more trends, whereas the Processor category was more focused on the same three areas identified as in action, as well as areas trending. This raises the question – is industry (Processors and suppliers) looking beyond the low hanging fruit for trends and opportunities? Is there more to consider for future planning? Especially considering over 76% believe it will be status quo for the foreseeable future of actions towards healthy and enhance meat processing. However, given this question of foresight, it is encouraging that the vast majority (76%) consider the perception of research and development of healthier food products is important for sustainable growth and being competitive.

### Innovation Drivers

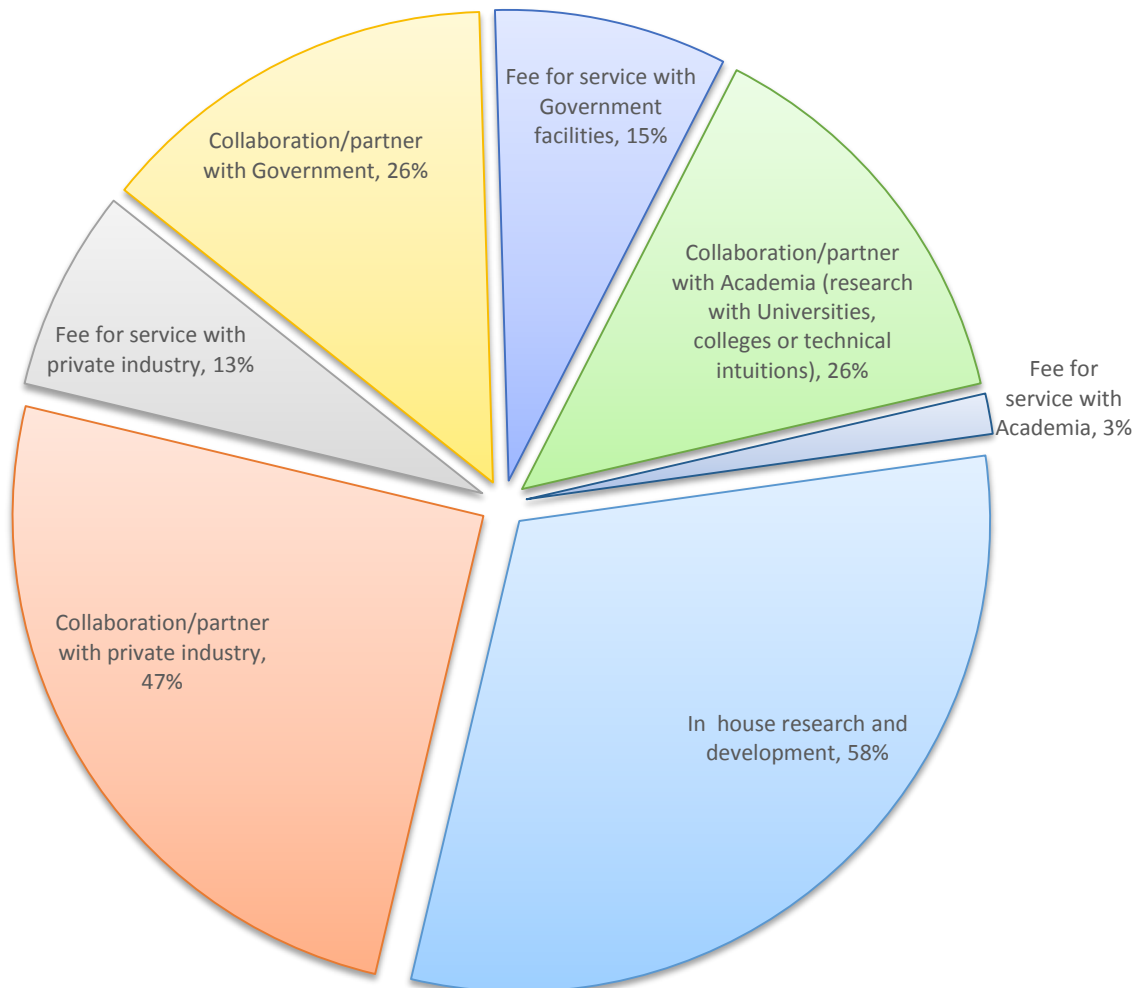
What is driving this innovation to healthier meat products? Again, the top response is the consumer (97%). However, *Retailers, Government guidelines* and *Industry innovation in the spirit of product differentiation* were also factors identified with ~45% for these areas. This may indicate opportunity to improve Governments role in extension and communication of current and future trends, and also influence through Government guidelines. Especially considering the apparent will to “innovate” through research and development with 100% of respondents indicating that food research and development of healthier food products is valued in their organization.

### Innovation parameters - current

Given the perceived will to innovate, it is important to understand how organizations approach research and development of healthier products.

When asked “Indicate how food research and development of healthier food products is conducted in your organization” it’s interesting how *internal* the R&D is in industry within the walls of private organizations, whether it be in house or a collaboration between private organizations (Fig. 3).

Fig 3. Industry Food Research and Development

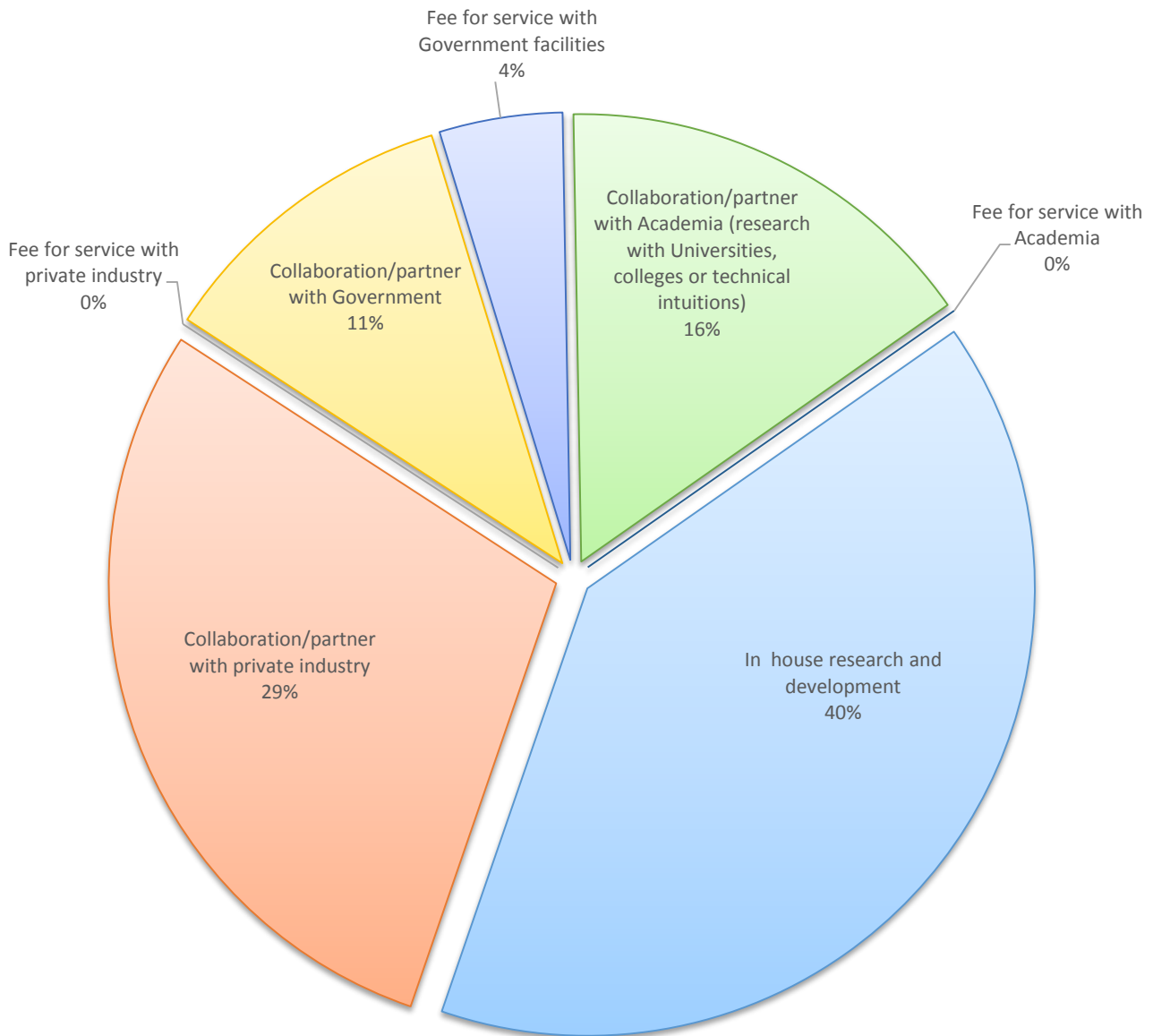


A surprising indicator in this data is the low current uptake of fee for service with Government (15%), collaboration with government (26%), and academic (3%) research as part of the research and development activity. It demonstrates there may be significant barriers to access, understanding, or valuing the applied research area of food production and suggests the industry may not be taking advantage of innovation opportunities available.

## Innovation parameters – Looking forward

The lack of industry engagement with innovation opportunities noted above are supported when asked to indicate ways of collaborating they feel to be most promising for food development in the future and a reduction in Government involvement (4% - fee for service with Government, 11% - collaboration with Government).

Fig 4. Promising collaboration for food development, in the future (Processors, Commodity Group, Supplier/Manufacturer, Retailer):





Some answers may lie in industries perceived barriers as indicated below.

Financial	65.79%
Staff skill	31.58%
Staff knowledge	44.74%
Equipment / facility capacity	50%
Available employee time	34.21%
Available capital/equipment	28.95%
Regulatory challenges	60.53%
Not applicable	7.89%
Other	5.26%

Expense and financial concerns is further highlighted with comments like: “every changes means cost plus changes to labels which is costly and time consuming. We cannot make very small batches of test products with any degree of consistency so we need to make batches large enough to sell. Selling test product comes with its own set of challenges.” This may be an opportunity for facilities like FPDC to improve extension and increase awareness and understanding of the value of the applied research available, and the ROI on time to engage and learn what is already available to processors in the province, let alone doing novel research.

Some of the extension may come in the form of demonstrating the value (beyond financial) in ways. This includes assisting companies and industry to meet nutrition recommendations, while maintaining or enhancing quality of products through food science innovation. This appears to be a valid concern as over 68% of respondents indicating the opportunity to meet nutrition recommendations (National and or Alberta Guidelines) is important to their businesses.

When asked “If industry, your organization, or the research community were to invest more time and resources into healthy and enhanced meat processing research and innovation, what would you identify as top priorities? Please rank the top three with 1st choice being the highest priority,” there is constancy in 2 areas of priorities, but discrepancy in a third and also in order of priorities. While *Addition of Healthier / Functional Ingredients* tops the list as a whole as a priority, it is only first priority for the Government, NGO sector, and third for Processors\*, while reduced sodium is top of their list.

Fig 5. Future research investment priorities:

	1st Choice	2nd Choice	3rd Choice
Government, NGO	Addition of Healthier / Functional ingredients	Improved food safety	Reduced preservatives / additives
Processors, Commodity Group, Supplier/Manufacturer, Retailer	Reduced sodium	Improved food safety	Addition of Healthier / Functional ingredients

Given the dearth of research already available in this area, including current innovations being explored with FPDC researchers, and upcoming trends showing the weight and complexity to come, the responses, perceptions and gaps show great opportunity for industry growth through forward vision, planning and action to embrace existing and coming trends (becoming the norm), rather than catching up to current “trends.”

## Industry awareness of provincial support

### Facilities

Looking at the concern of lack of will for collaboration with government, including facilities such as FPDC, it is important to note that industry is well aware of FPDC as an institution (95%) – and ~65% aware of the programs, incubator, pilot plant), it is not well understood what industry knows of FPDC’s research and development capabilities and value.

Fig 6. Awareness of Alberta Food and Bio Division facilities:

Food Processing Development Centre - Leduc Alberta	95.0%
Sensory Evaluation Program - and /or sensory lab in Leduc	68.0%
Consumer Product Testing Centre - and /or sensory lab in	63.0%
Agrivalue Processing Business Incubator	66.0%
Pilot plant	68.0%
CFIA certification available at FPDC	52.0%
Food Science and Technology Centre - Brooks Alberta	39.0%
None	5.0%

This is especially important to consider when all respondents (27) who have indicated they have worked with FPDC, also reported it as being a positive experience. This is discouraging as it is not translating into increased perception of future collaboration opportunities.

Especially when there are added responses such as this:

*“FPDC is a world class food development facility with excellent, knowledgeable staff. Alberta is lucky to have this resource. Positive experience working with the scientists and technical people.”*

*“Have had a very good experience working with the scientists on technology exchange and knowledge sharing in all aspects of food research and development; specifically worked with them successfully using their high pressure pasteurization system.”*

*“My experience goes back a long time ago and Leduc staff were very helpful and professional”*

*“great group of people to work with Knowledgeable, willing to help and professional”*

*“first class organization with great people...”*

Not surprising, 26 of those 27 indicate they would recommend FPDC to other organizations. It is worth noting that additional comments may reveal additional barriers.

*“Have noted to others that there is still governmental bullshit to deal with, but once past that, the facility and staff truly are WORLD class.”*

### FPDC future watch

Industry was asked “What would you like the Food Processing Development Centre to focus on in healthy meat product research and development? Please select up to three areas.”

Not surprising, Addition of healthier / functional ingredients (72%), and Reduced Sodium (45%) topped the list. Interestingly, Processors\*, here were a resounding 74% in favour of “healthier/functional ingredients” as a FPDC research priority. This may

shed light on the earlier reporting of it maybe not being a first priority, but still a valid and real concern overall, especially if they are not accountable to the cost of said research.

Improved Food Safety (42%), Reduced preservatives / (additives 39), and Allergen/Ingredient Management (including Gluten) (29%) rounded out the top five. This wider breadth and more evenly balanced perception may suggest the interest for this knowledge exists, but not at industry cost.

### Funding facilitation

However, with the strong financial support afforded to the processing industry through various granting bodies it is surprising that less than half of the Processors\* are aware of the available financial support through Growing Forward 2, Alberta Livestock and Meat Agency, and Alberta Innovates Bio Solutions. This suggests an opportunity for the organizations themselves, and industry stakeholders as a whole to improve the awareness and uptake of available funding opportunities, and address some of the “Financial” concerns indicated above.

Fig 7. Industry awareness of Alberta funding opportunities – (Processors, Commodity Group, Supplier/Manufacturer, Retailer)

Growing Forward 2	44%
ALMA - Alberta Livestock and Meat Agency	44%
AI Bio - Alberta Innovates Bio Solutions	24%

### Looking forward

Industry stakeholders have demonstrated there is a desire to innovate in healthy and enhanced meat processing, and have indicated future interests, current and future priorities, and related concerns. This insight shows real opportunity for AF to build on the momentum of desired change and generate collaborative projects with industry through improved awareness and understanding of the work that AF, and specifically FPDC has to offer through the full value chain. This data also suggests a multi-branch collaborative approach in including additional business supports (including Development Officers and Marketing staff) in the suite of services offered through AF and executed at FPDC. The Healthy and Enhance Meat Research program is just such an opportunity to leverage and engage industry and enable a relevant, timely, competitive, and sustainable meat processing industry in Alberta.