

BLENDED PROTEIN USAGE

at C&U and K-12



this study

OBJECTIVES

- ✓ Measure awareness and penetration of blended protein at K-12 and C&U on-site operations
- ✓ Understand current usage and perceptions of blended protein
- ✓ Gauge openness among non-users and identify whitespace opportunities
- ✓ Compare the appeal of blended protein with that of plant-based proteins

METHOD

// fielded 8.2019

- ✓ Online survey of **306 operators** from Datassential's OPERA panel
 - ✓ **155** C&U operators
 - ✓ **151** K-12 operators
- ✓ Online survey of **9 current MCURC members**

- 4** | blended protein basics
- 14** | C&U: blended protein details
- 21** | C&U: blended protein attitudes
- 29** | blended protein at K-12
- 34** | mushrooms today
- 40** | plant-based protein
- 45** | appendix
- 50** | respondent profile

what we **learned**

1

Blended protein has considerable penetration in C&U, and it isn't going anywhere.

Just under half of C&Us menu blended protein today, and their outlook is positive: two-thirds expect to be using more in two years and none say purchasing will shrink. Nearly all C&Us who don't use blended protein today are open to offering it, while most K-12s cite budgetary restrictions and lack of student interest as hindering factors.

2

Burgers are the biggest but far from the only application.

Nearly all who menu blended protein use it in burgers, but half of them also use it in meatloaf, meatballs, and tacos. Continuing to show operators that blended protein has appeal outside the bun will be important for growing its menu penetration.

3

Blended protein users are mushroom enthusiasts.

Compared to others, operators who menu blended protein use a broader range of fresh mushroom varieties and are much more likely to say their mushroom usage has and will continue to increase.

4

More cost-effective pre-blended options would be a game changer.

Most C&U operators are blending at least some of the blended protein that they use, and the number one complaint mentioned is that it is labor-intensive to make. Developing infrastructure to make pre-blended protein consistently available at a cost-effective price would expand the pool of operators that are able to use it and the volume that they can use.

5

Grassroots marketing could help grow blended protein.

Non-users say that the biggest factor that would motivate them to try blended protein is student requests. Gen Z is the country's most flexitarian and environmentally conscious generation, so establishing a ground game in campuses around the country could help get the word out and drive requests.



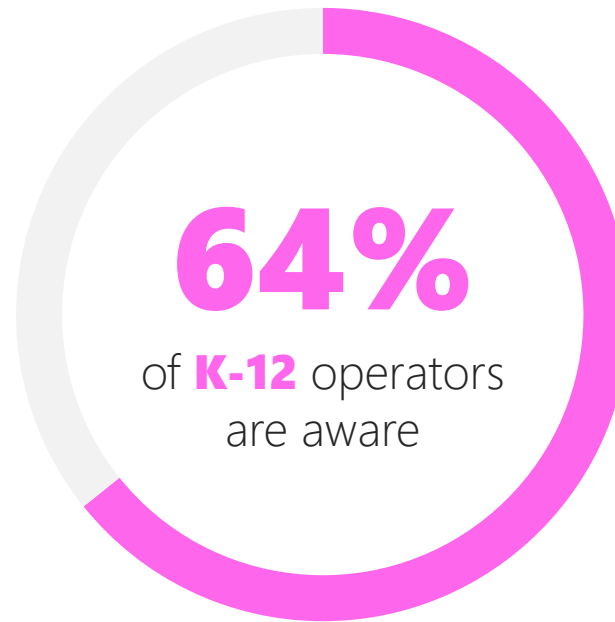


blended protein basics

Once the term is defined, most operators say they are familiar with blended protein.

« Nearly all C&U operators are familiar with blended protein, compared to just under two-thirds of K-12s.

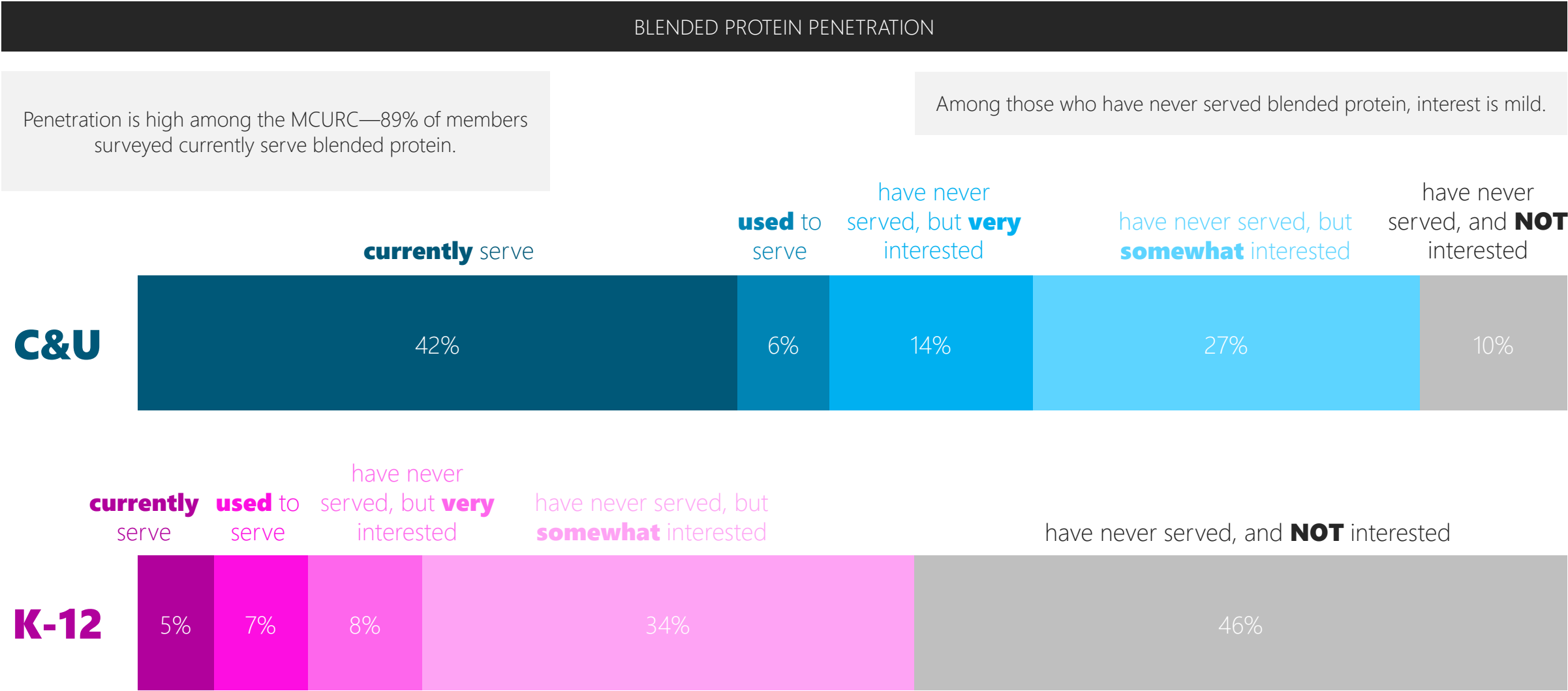
BLENDED PROTEIN AWARENESS



Operators in the South are significantly less likely than other operators to be familiar with blended protein.

Penetration is dramatically higher at C&U operations.

- « Nearly half of K-12s are closed off to the idea of serving blended protein.
- « More K-12s have quit using blended protein than are using it today, suggesting that today's blended products are not meeting the needs of K-12s.

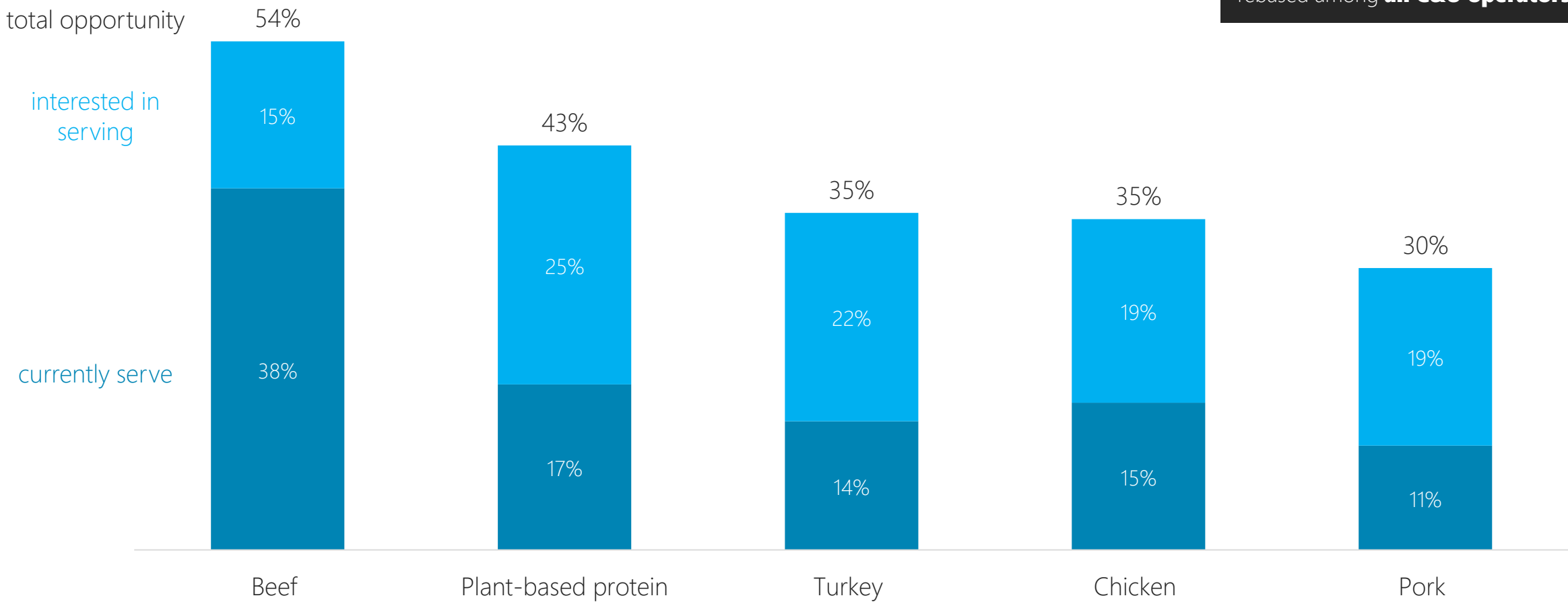


Beef is commonly blended at C&Us, and is the only protein where current usage exceeds interest.

« Plant-based protein is the next most common, though it is possible that operators are confusing plant-based and blended proteins.

C&U INTEREST & USAGE BY PROTEIN TYPE

rebased among all C&U operators

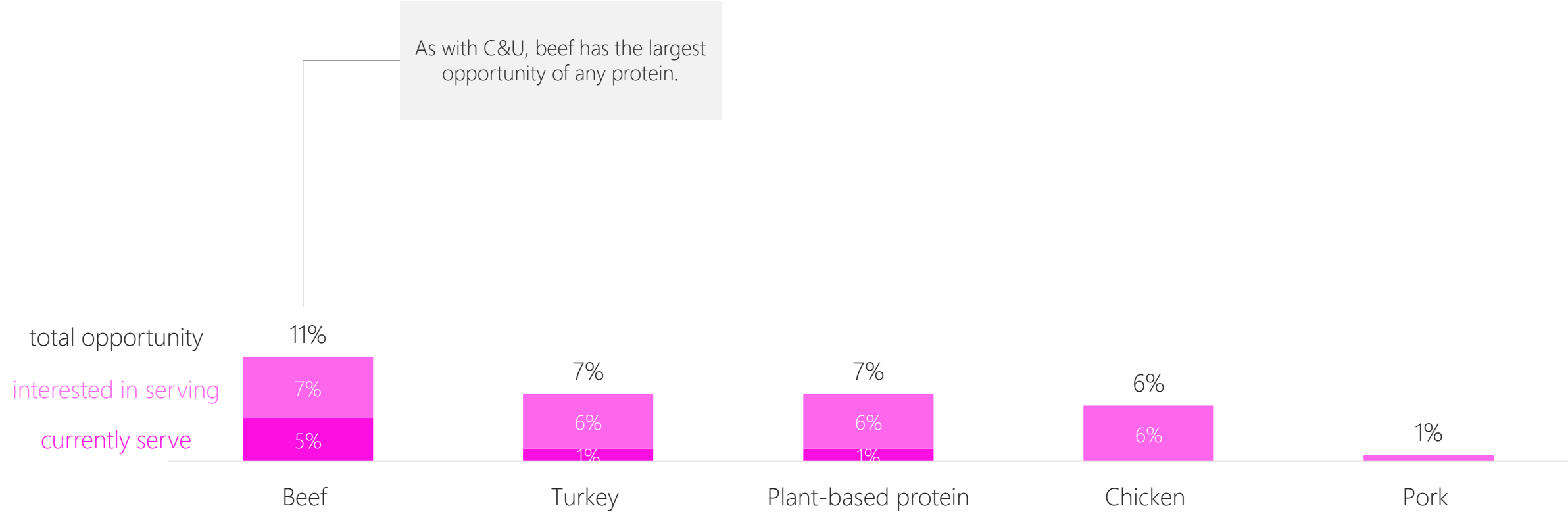


see appendix for protein usage among current blended protein users

Opportunity for blended protein is much more limited at K-12.

K-12 INTEREST & USAGE BY PROTEIN TYPE

rebased among **all K-12 operators**



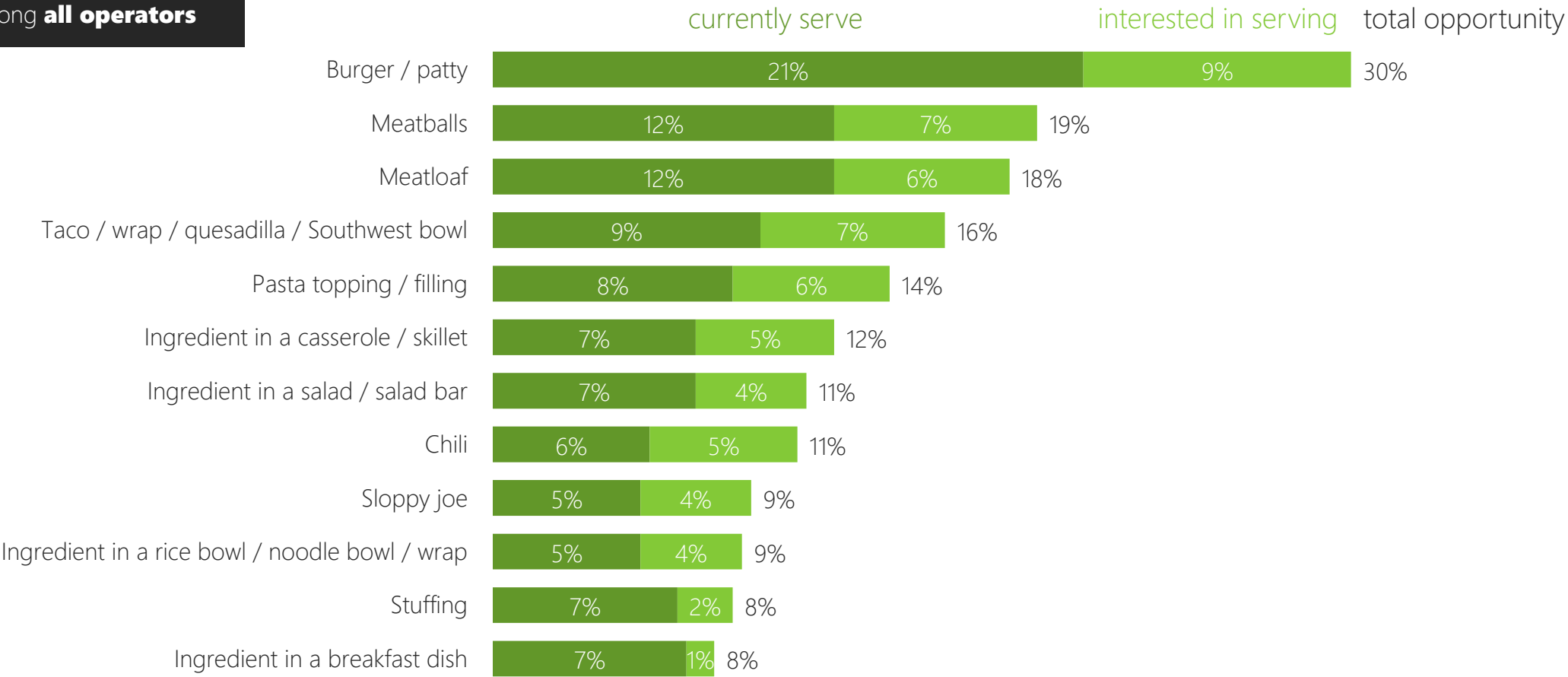
see appendix for protein usage among current blended protein users

Blended protein is mostly used to add a nutritious edge to indulgent crowd-pleasers like burgers and meatballs.

« Usage of chili, sloppy joes, or rice bowls is limited today, but the number of interested operators could double menuing for those dishes.

INTEREST & USAGE BY MENU APPLICATION

rebased among **all operators**



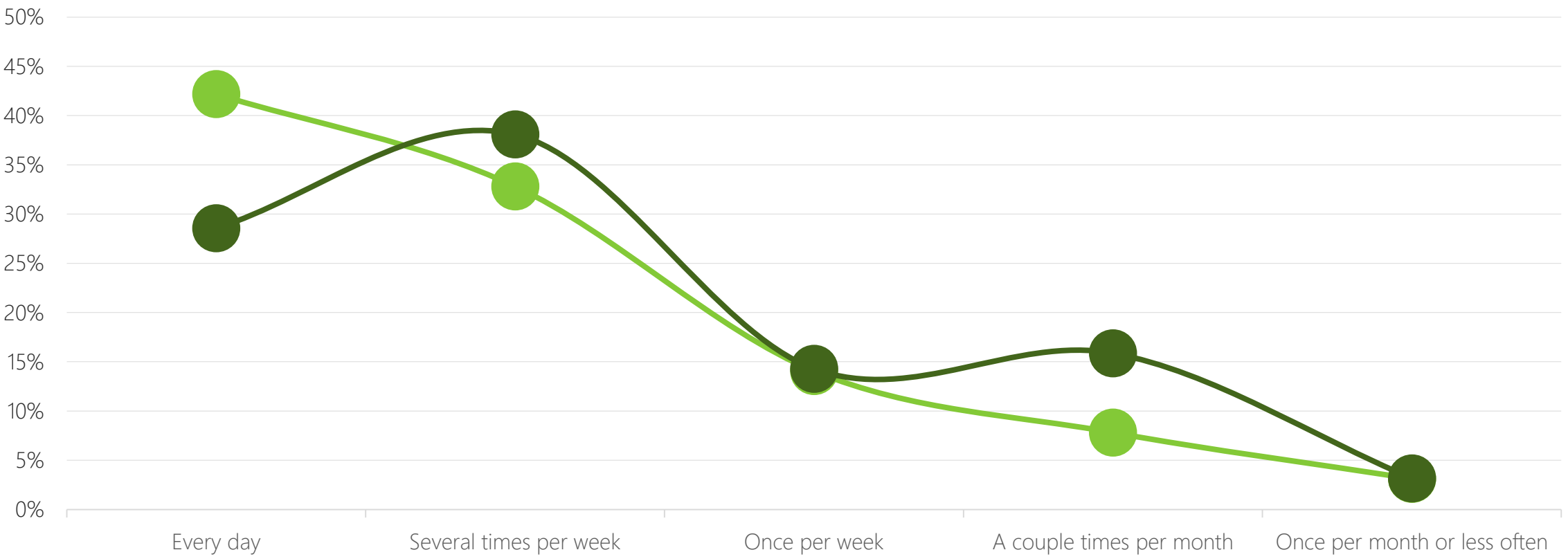
see appendix for dish menuing among current blended protein users

Most operators who serve blended protein offer it to students multiple times per week.

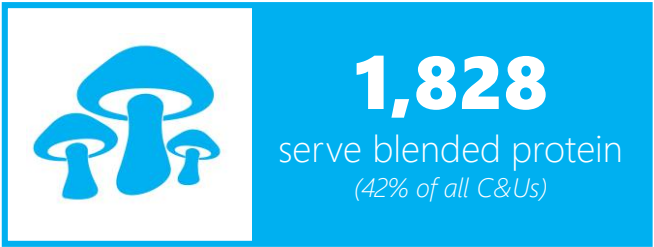
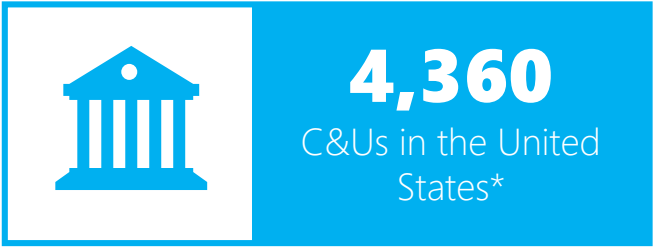
FREQUENCY OF SERVING BLENDED PROTEIN

among those who currently serve each type of blended dish

blended burgers other blended dishes



ESTIMATED **VOLUME** OF BLENDED BURGERS @ C&Us

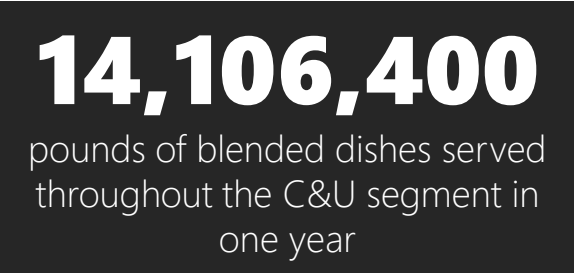
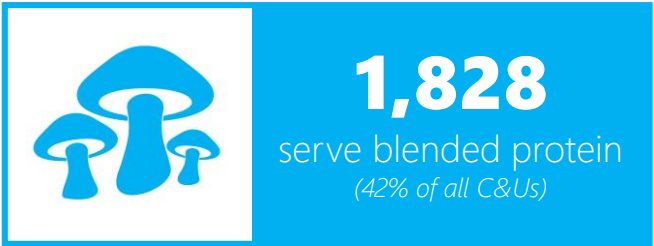
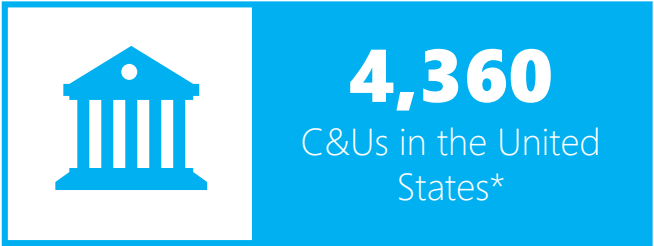


B13: Approximately how many blended burgers do you serve each week? (n=51; some outliers removed)

*Source: NCES

Note: Due to low base size, projection should be considered an estimate.

ESTIMATED **VOLUME** OF OTHER BLENDED DISHES @ C&Us



B15: Approximately how many blended dishes other than burgers do you serve each week? (n=38; some outliers removed) *Source: NCES

Note: Due to low base size, projection should be considered an estimate.

ESTIMATED **TOTAL VOLUME** OF BLENDED PROTEIN @ C&Us



Note: Due to low base sizes, projection should be considered an estimate.



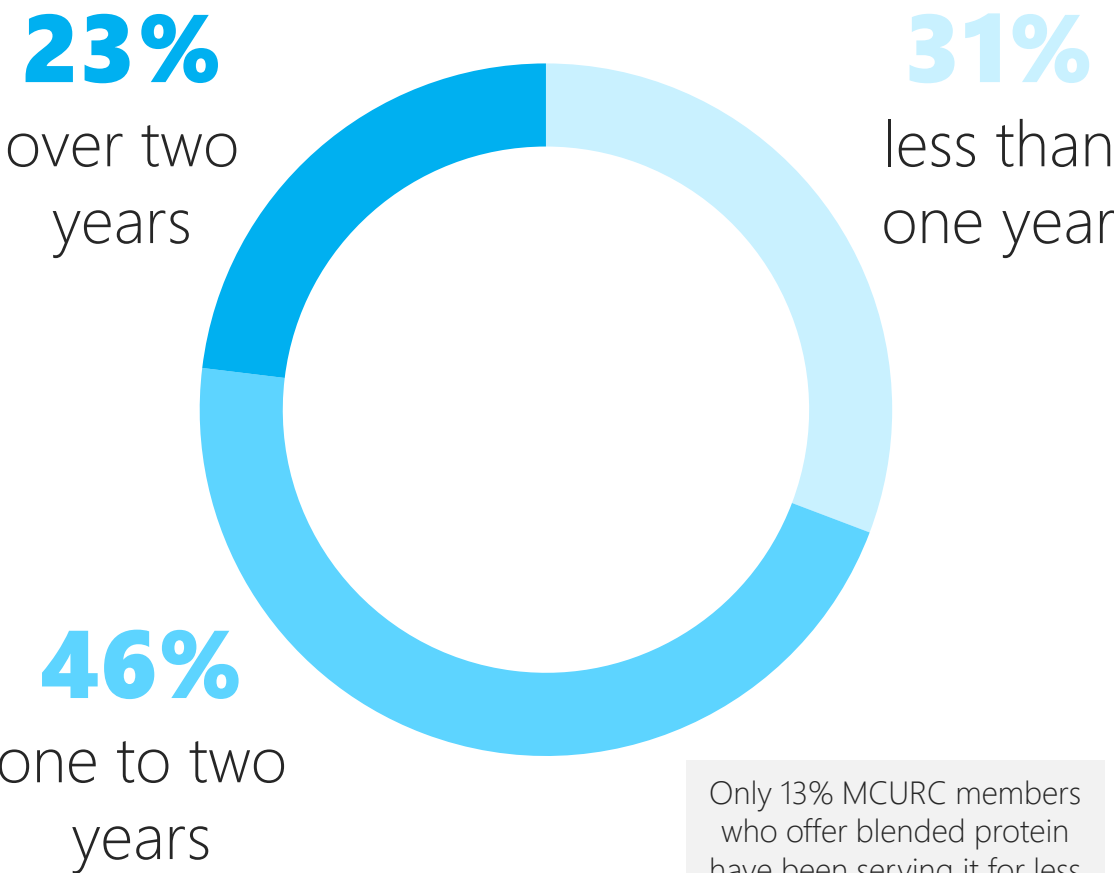
C&U: blended protein details

Blended protein is a relatively new ingredient at most C&Us and is predominantly used in dining halls.

« As blended protein becomes more well-known as an ingredient, experimentation in other parts of the campus could become more widespread.

TIME SERVING BLENDED PROTEIN

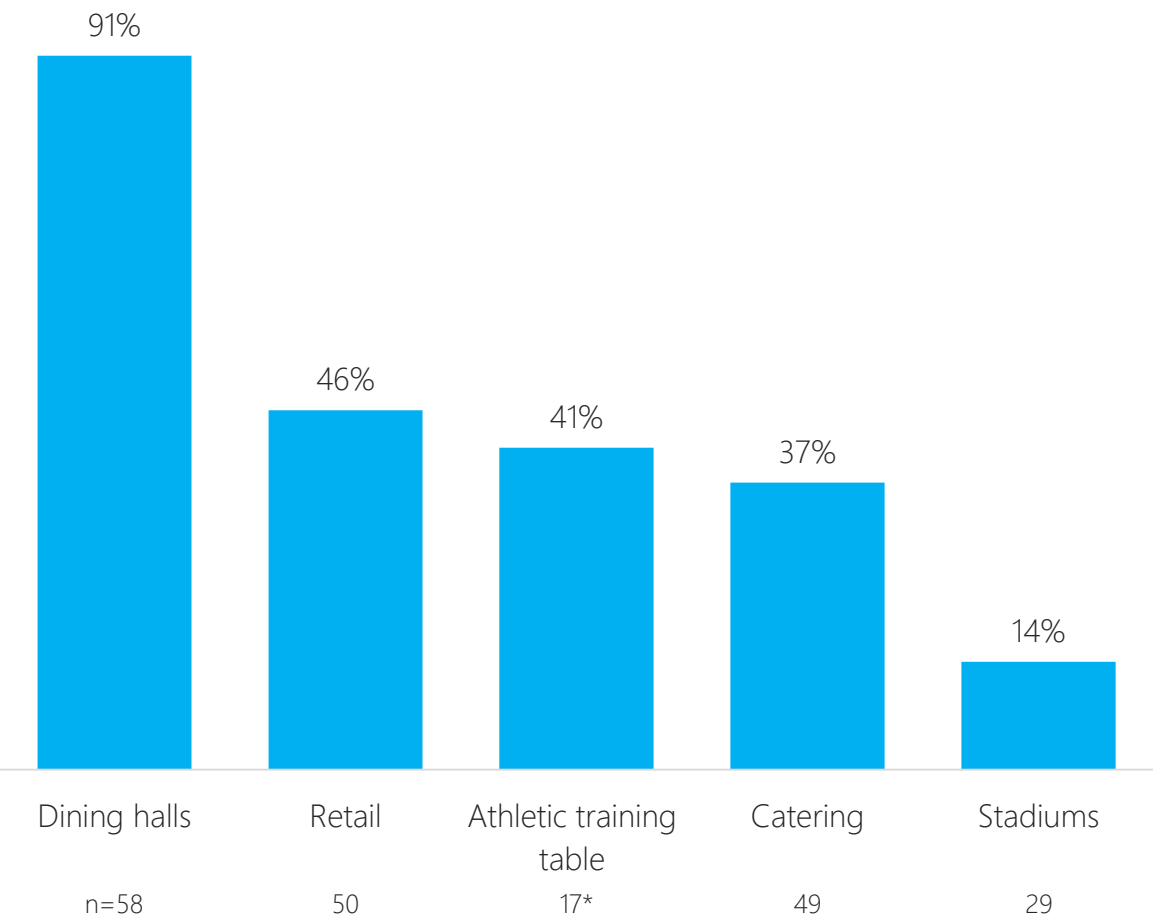
among C&U operators who serve blended protein



Only 13% MCURC members who offer blended protein have been serving it for less than one year.

PLACES WHERE BLENDED PROTEIN IS SERVED

among C&U operators who serve blended protein and whose campus features each type of facility

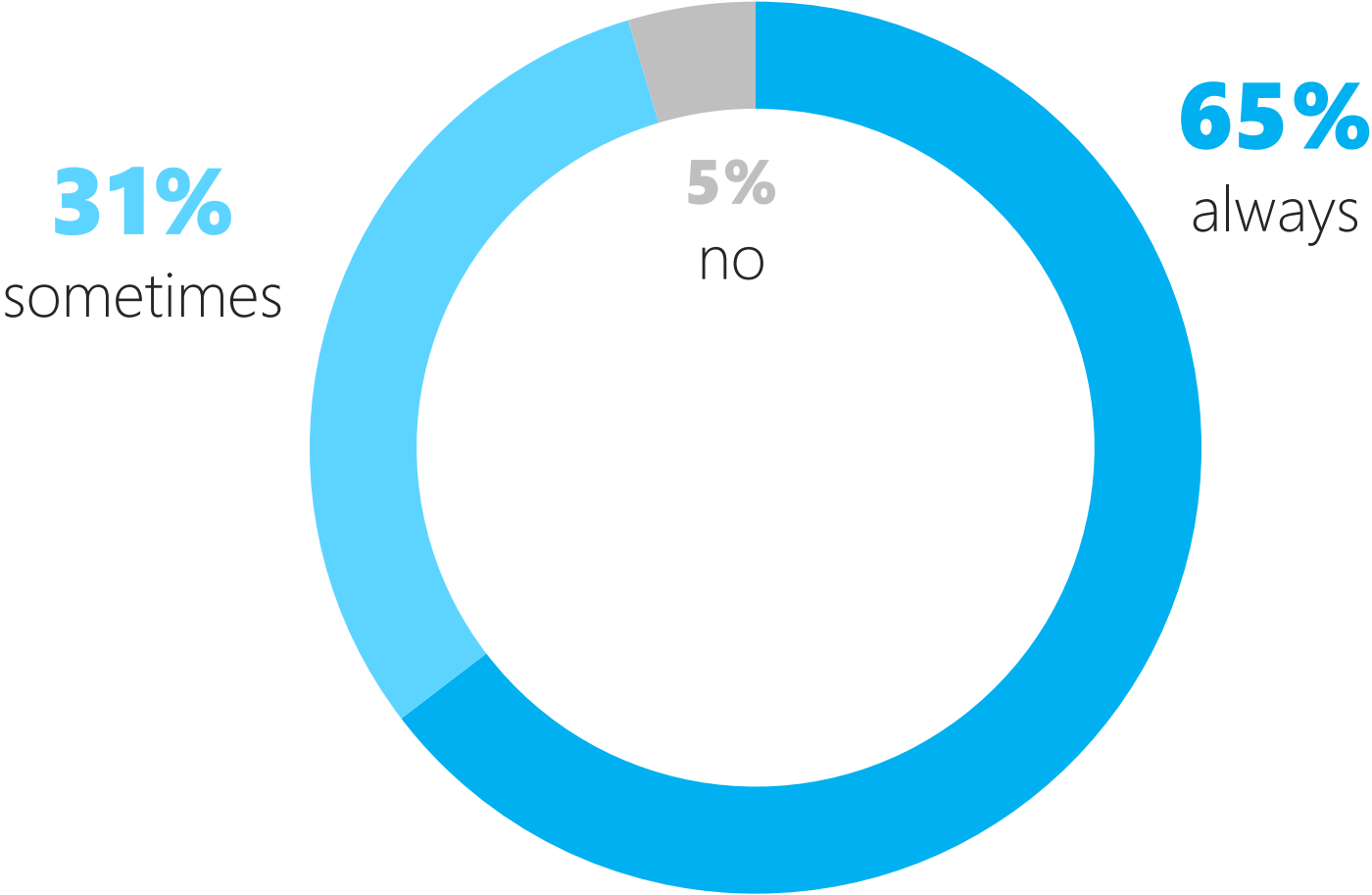


*due to low base size, data should be considered directional

Few C&U operators hide the fact that protein has been blended with mushrooms.

DO YOU MENTION THAT PROTEIN IS BLENDED WITH MUSHROOMS?

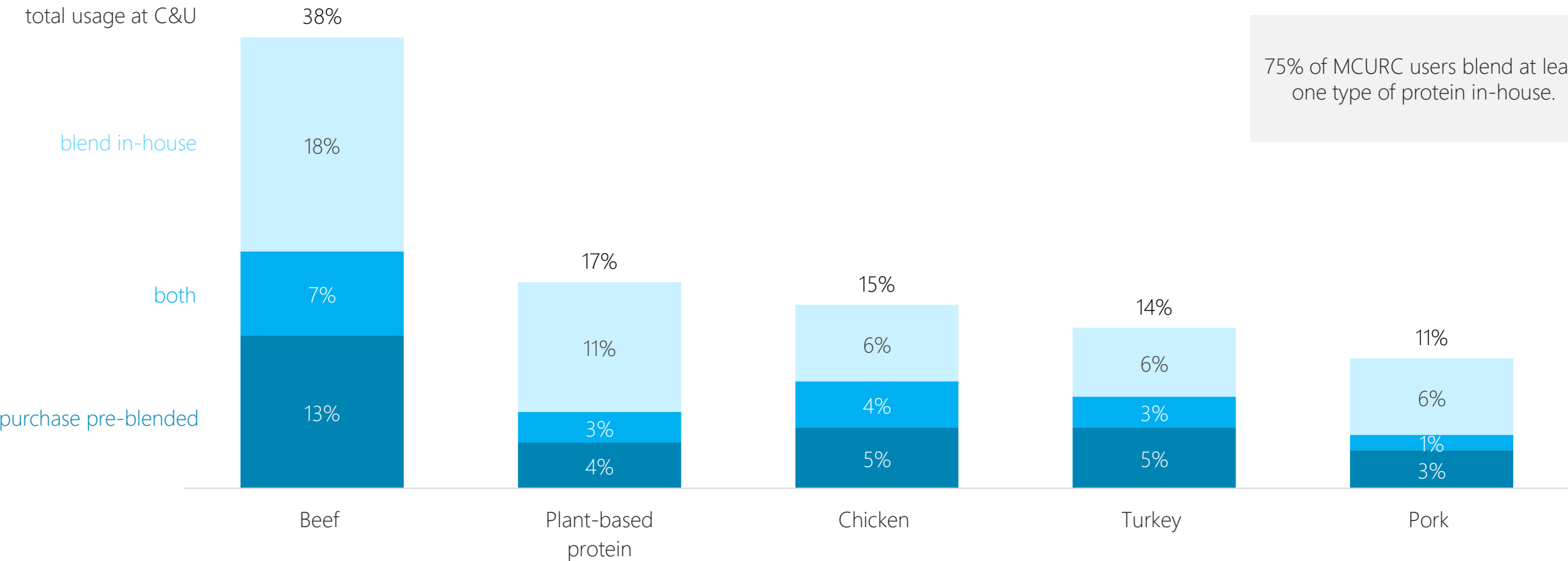
among C&U operators who serve blended protein



In-house blending is slightly more prevalent than purchasing pre-blended protein at C&Us.

« Some who purchase pre-blended protein also blend in-house, signaling that student demand may be exceeding ordering.

PURCHASING PRE-BLENDED VS. BLENDING IN-HOUSE



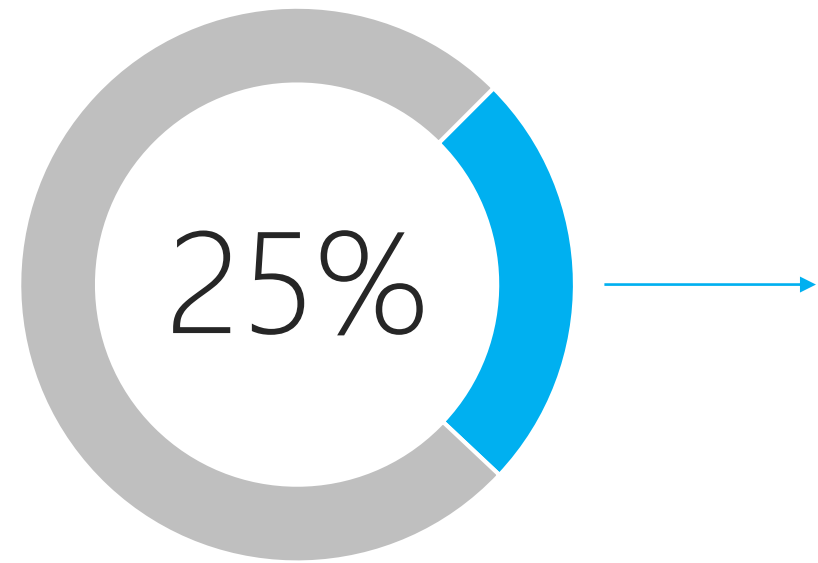
Though broadliners are the most common source for blended protein, around half purchase it elsewhere.

« Pre-formed burger patties are the most commonly purchased products, but the majority of C&U operators also buy bulk blended protein.

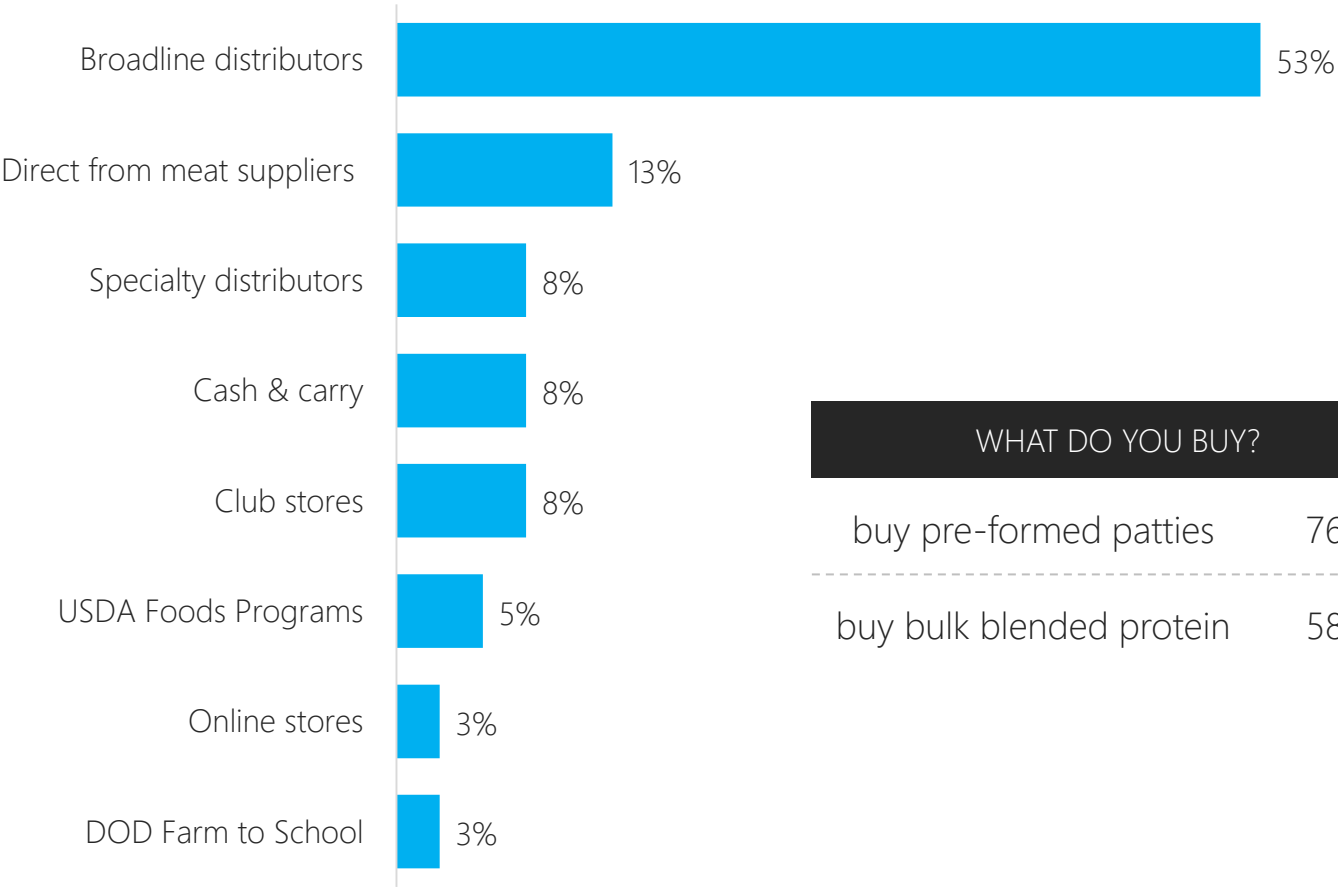
PRIMARY PRE-BLENDED MUSHROOM SOURCE

among C&U operators who purchase pre-blended protein

What is your primary source?



of C&U operators
purchase pre-blended
protein



WHAT DO YOU BUY?



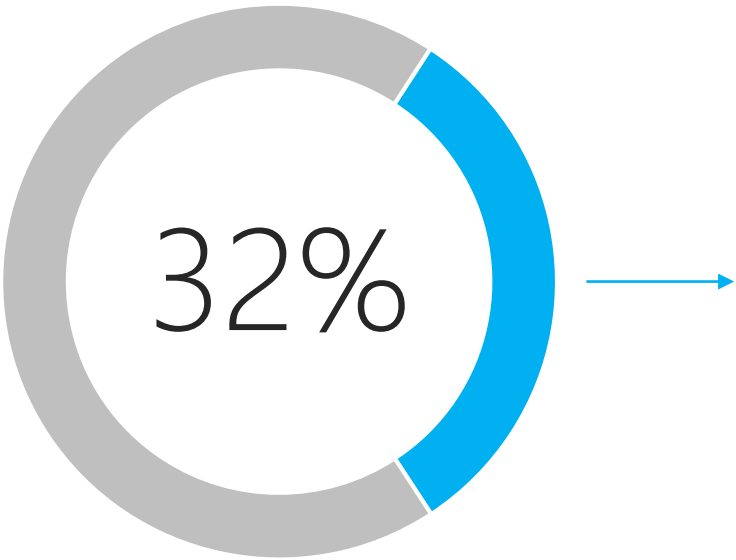
Most C&U operators use multiple types of mushrooms to blend protein in-house; nearly all roast them first.

« Few operators who blend in-house purchase pre-diced or pre-roasted mushrooms.

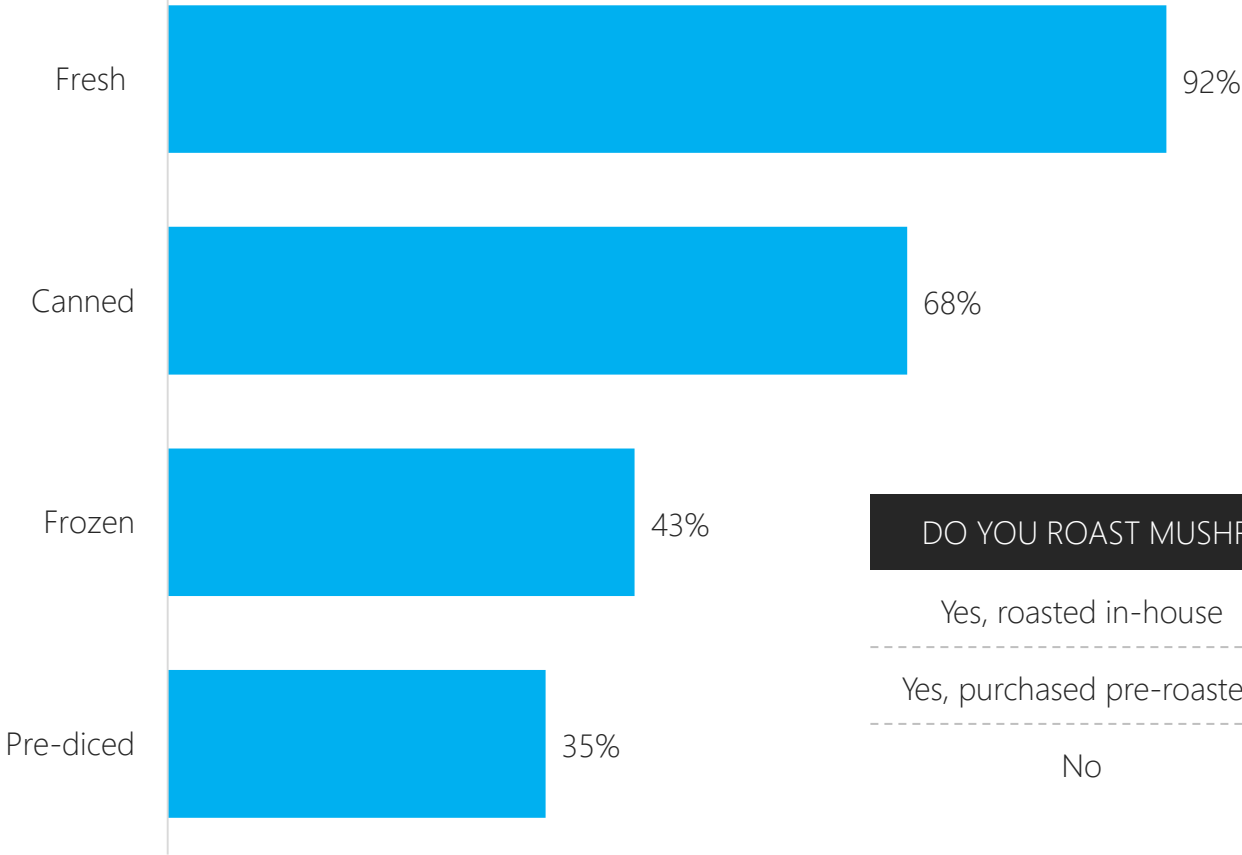
IN-HOUSE BLENDED PROTEIN DETAILS

What kinds of mushrooms do you use?

among C&U operators who blend their own blended protein

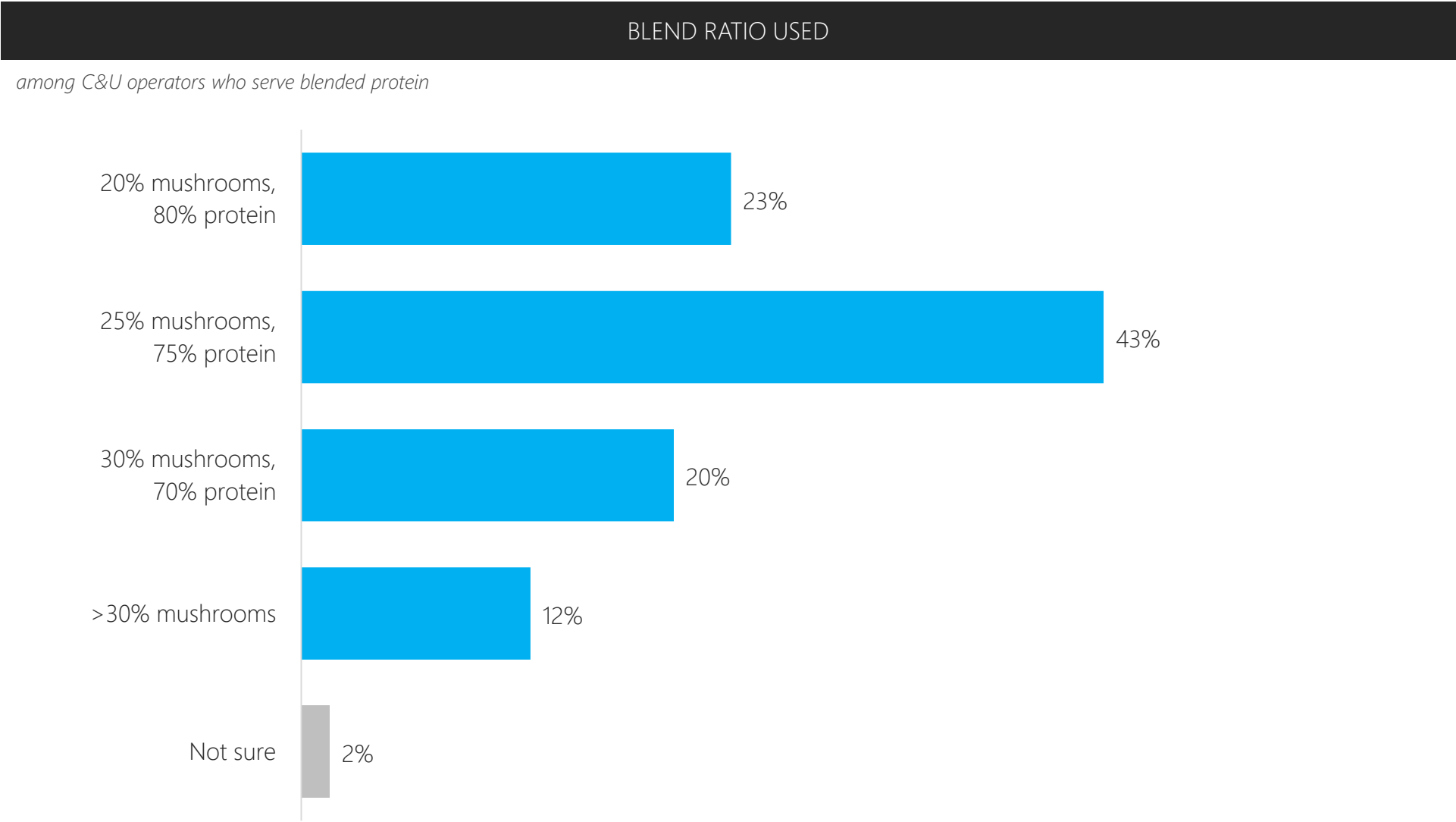


of C&U operators
blend protein
in-house



DO YOU ROAST MUSHROOMS?	
Yes, roasted in-house	73%
Yes, purchased pre-roasted	20%
No	6%

Two thirds of C&U operators use 20% or 25% mushrooms in their protein blends.





C&U: blended
protein attitudes

The forecast for blended protein at C&Us is overwhelmingly positive.

BLENDING PROTEIN USAGE OVER TIME

among C&U operators who serve blended protein

CHANGE OVER PAST TWO YEARS



CHANGE OVER NEXT TWO YEARS



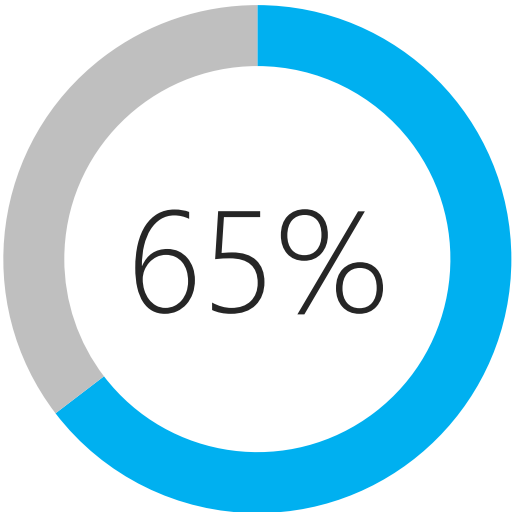
C&U operators do not plan to decrease the amount of blended protein served over the next two years

Blended protein's nutritional profile and taste is driving increased usage.

« The decision to menu more blended protein is not typically based on price.

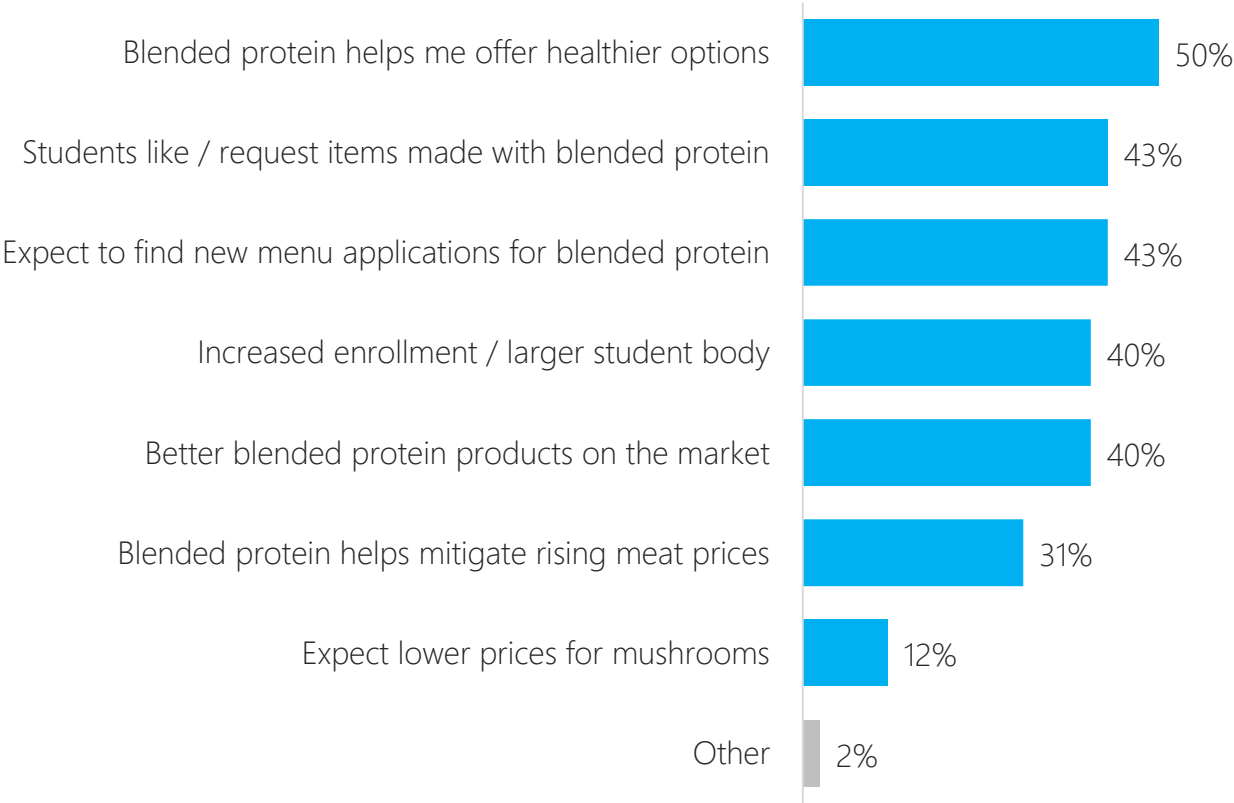
REASONS FOR INCREASING BLENDED PROTEIN USAGE

among C&U operators who serve blended protein



will use **more** blended protein over the next two years

Why will usage increase?

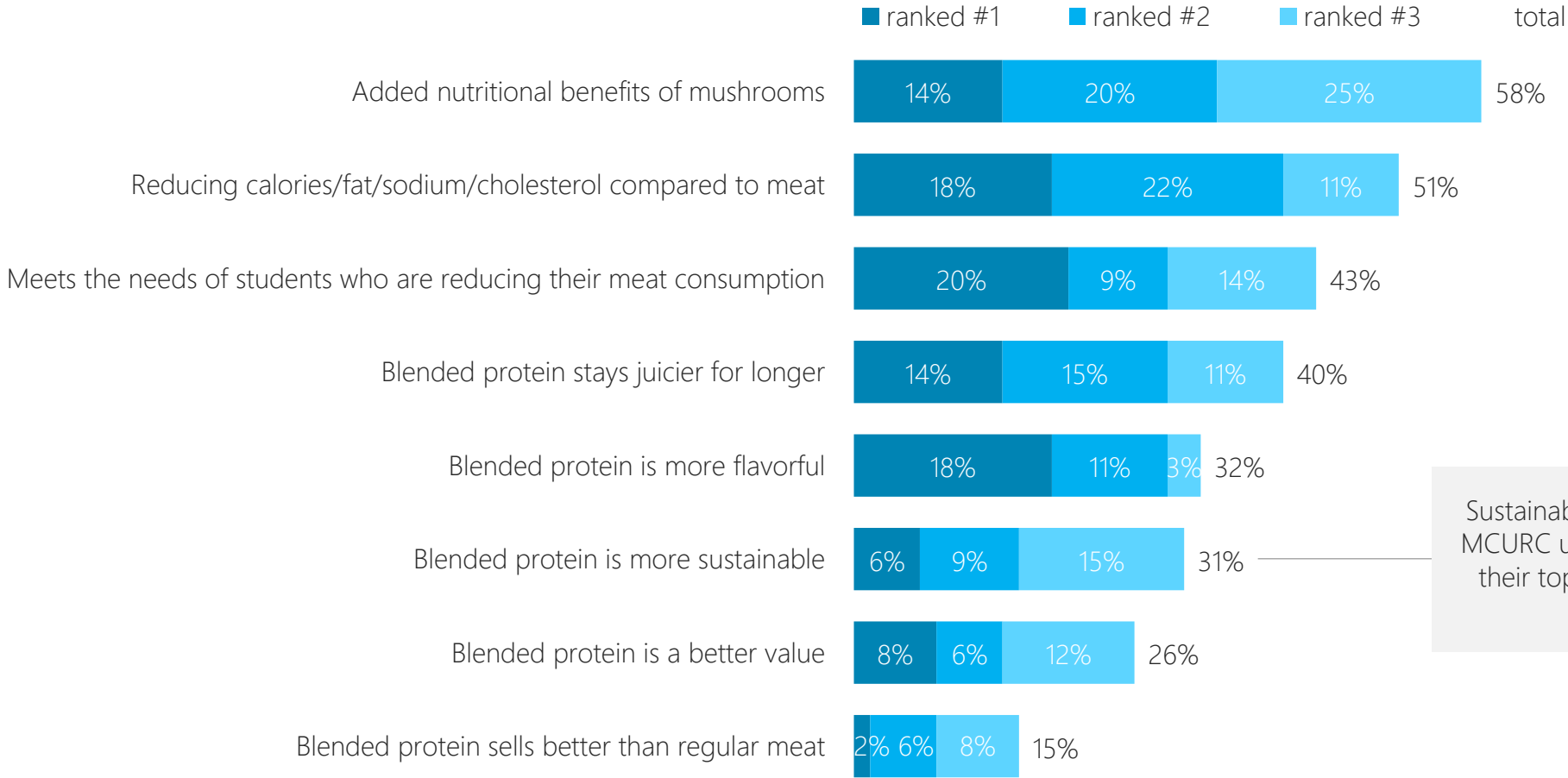


Most offer blended protein because mushrooms augment beef's nutritional profile while cutting fat and calories.

« Meeting the needs of flexitarian students is also important; C&U operators are most likely to rank it as their top reason for serving blended protein.

REASONS FOR OFFERING BLENDED PROTEIN

among C&U operators who serve blended protein

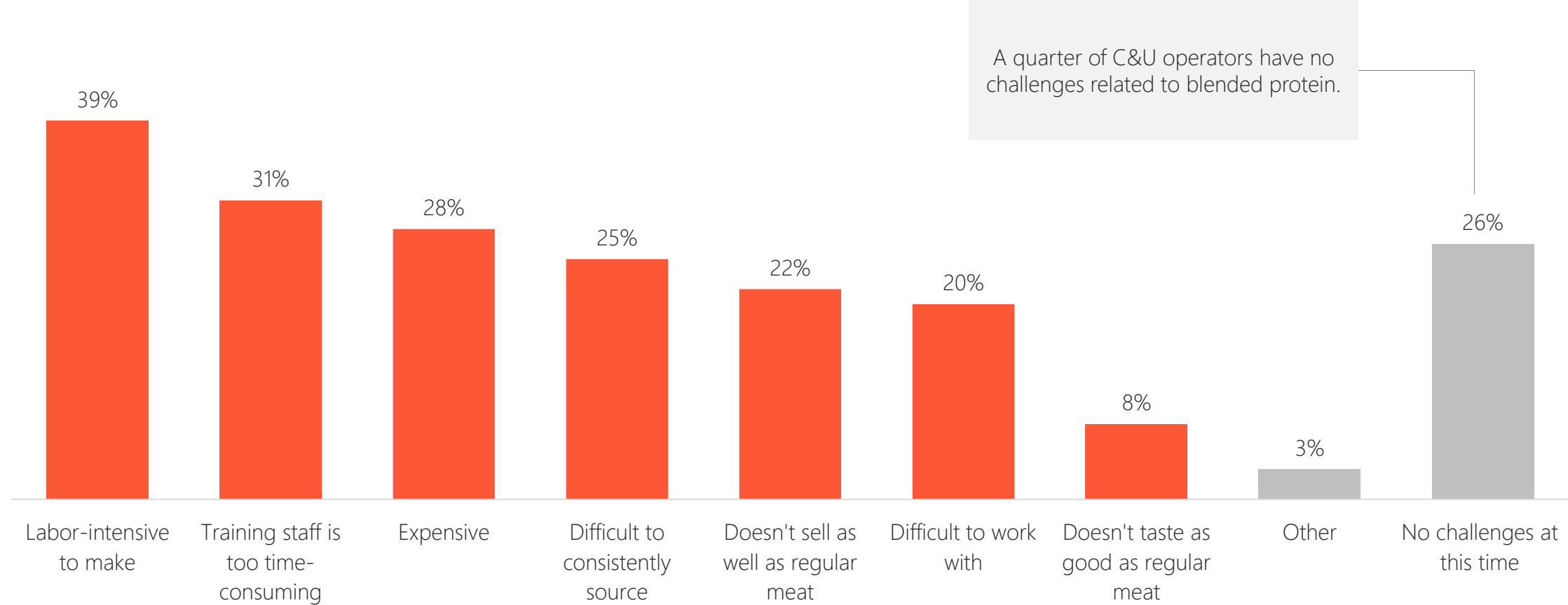


Sustainability is the top motivator for MCURC users—75% ranked it among their top three reasons for offering blended protein.

Blended protein challenges center around logistics like labor and cost.

BLENDED PROTEIN CHALLENGES

among C&U operators who serve blended protein

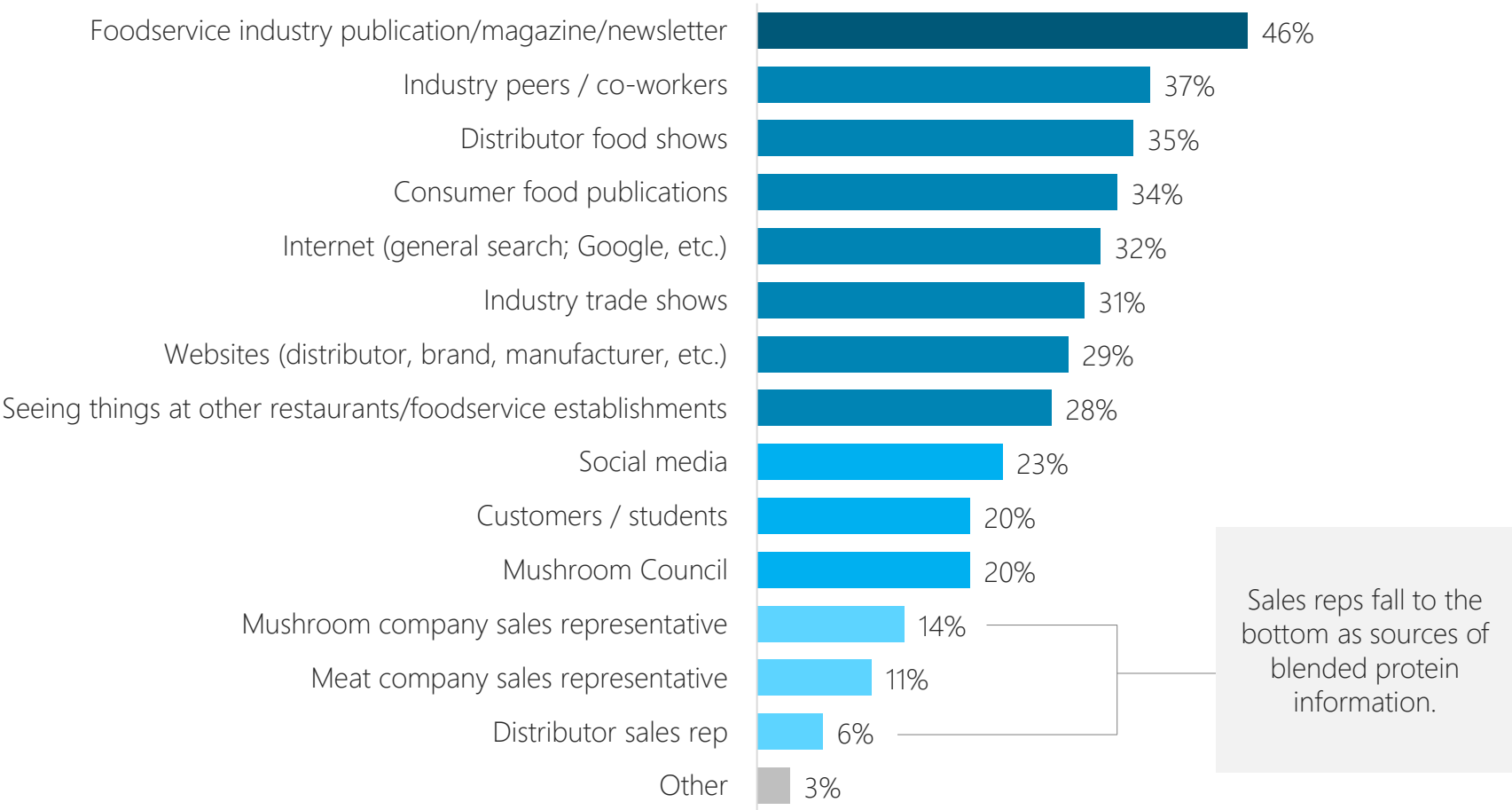


Operators are getting information on blended protein from publications, peers, food/trade shows, and the internet.

« The Mushroom Council is not a significant source of information at this time, although five out of eight MCURC members have used it as a resource to learn about blended protein.

SOURCES OF INFORMATION ABOUT BLENDED PROTEIN

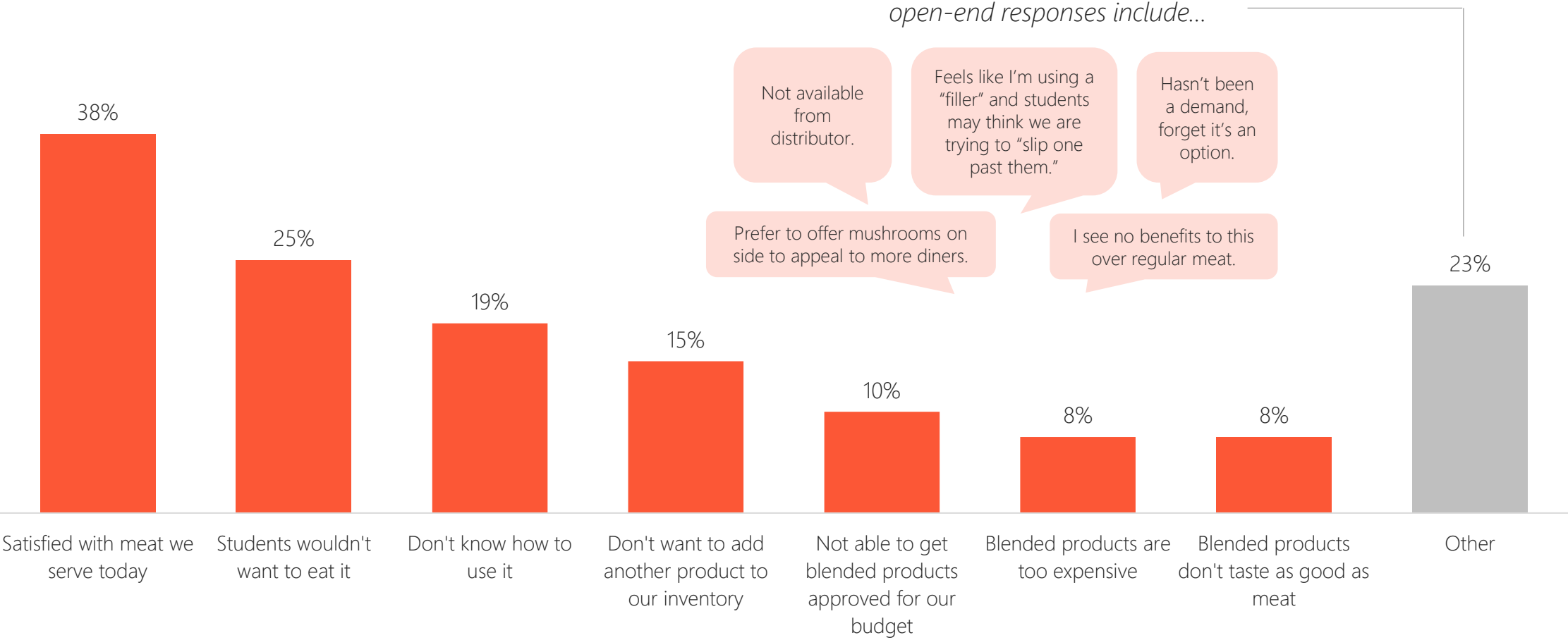
among C&U operators who serve blended protein



Non-users see no reason to switch out their current products and are doubtful that students will like blended protein.

REASONS FOR NOT SERVING BLENDED PROTEIN

among C&U operators who have never served blended protein

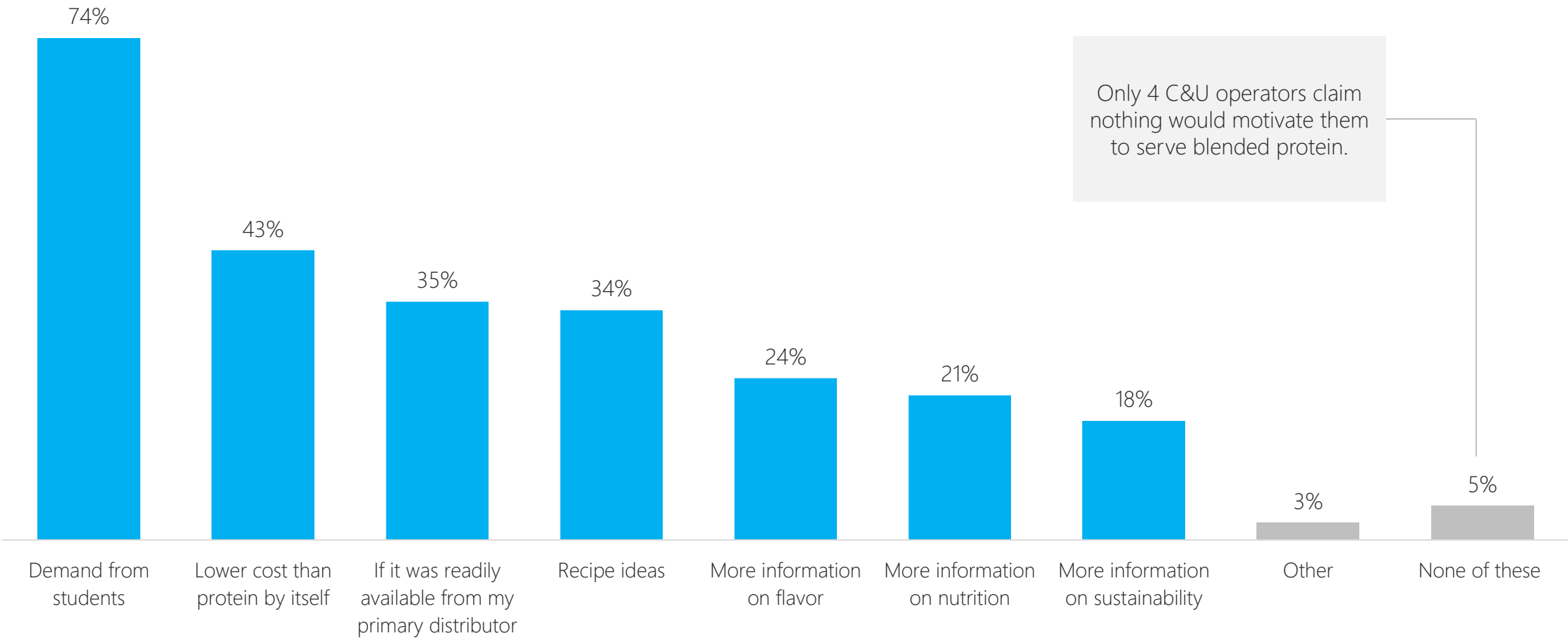


Student demand would be the greatest motivator for non-users by a large margin.

« The fact that so few operators would be moved by additional information on flavor, nutrition, or sustainability could point to the success of past marketing efforts for blended protein.

MOTIVATIONS TO SERVE BLENDED PROTEIN

among C&U operators who have never served blended protein



blended protein at K-12



INTRO TO BLENDED PROTEIN AT K-12

Since only 8 out of the 151 K-12 operators surveyed for this study offer blended protein in their operation, using percentages to report on their blended protein behavior could be misleading. As such, the next few slides will explore the K-12 experience with blended protein using a more qualitative approach.



BLENDED PROTEIN BASICS

- Of the handful of K-12 operators who use blended protein, nearly all have been using it for at least a year. Only one started using blended protein in the last 12 months.
- Nearly all blend beef and mushrooms; a handful also blend turkey or plant-based protein.
 - There is limited interest in blending turkey or chicken among those who do not blend those proteins today.
- Most serve blended burgers, but a handful also offer tacos, meatballs, and meatloaf.
- Operators are split on how often they serve blended protein – a handful serve blended protein every day, but most serve it once a week or less often.
- K-12 operators have varying approaches to labeling blended protein: some always label, some label sometimes, some don't label.
- Most have learned about blended protein products and recipes from food shows or foodservice industry publications.



BLENDED PROTEIN SOURCING

- Half buy pre-blended protein, half blend in-house. Unlike C&U operators, none of the K-12 operators who use blended protein supplement pre-blended protein with in-house blends.
- A variety of blend ratios are used: half use an 80/20 ratio, some use at least 30% mushrooms, and others aren't sure.
- All K-12s who purchase pre-blended protein buy pre-formed patties.
 - One operator who buys pre-blended purchases from USDA programs; others source from broadliners.
- All four of the operators who blend in-house use both fresh and canned mushrooms – it is unclear if they are used together or in separate batches.
 - Three roast the mushrooms for blended protein in-house, one does not roast them.



ATTITUDES & FUTURE

- As with C&U operators, mushrooms' nutritional profile and blended protein's ability to cater to a growing flexitarian population are the key drivers for usage.
 - Few find sustainability, hold time, or value important.
 - Most don't mention having any challenges with blended protein.
- Most K-12 operators have not seen their blended protein usage grow in the past two years, and three-quarters do not see it changing in the next two years.
 - The handful that expect to purchase more blended protein in the coming years agree that finding additional uses for blended protein and a need to create healthier dishes will drive growth.



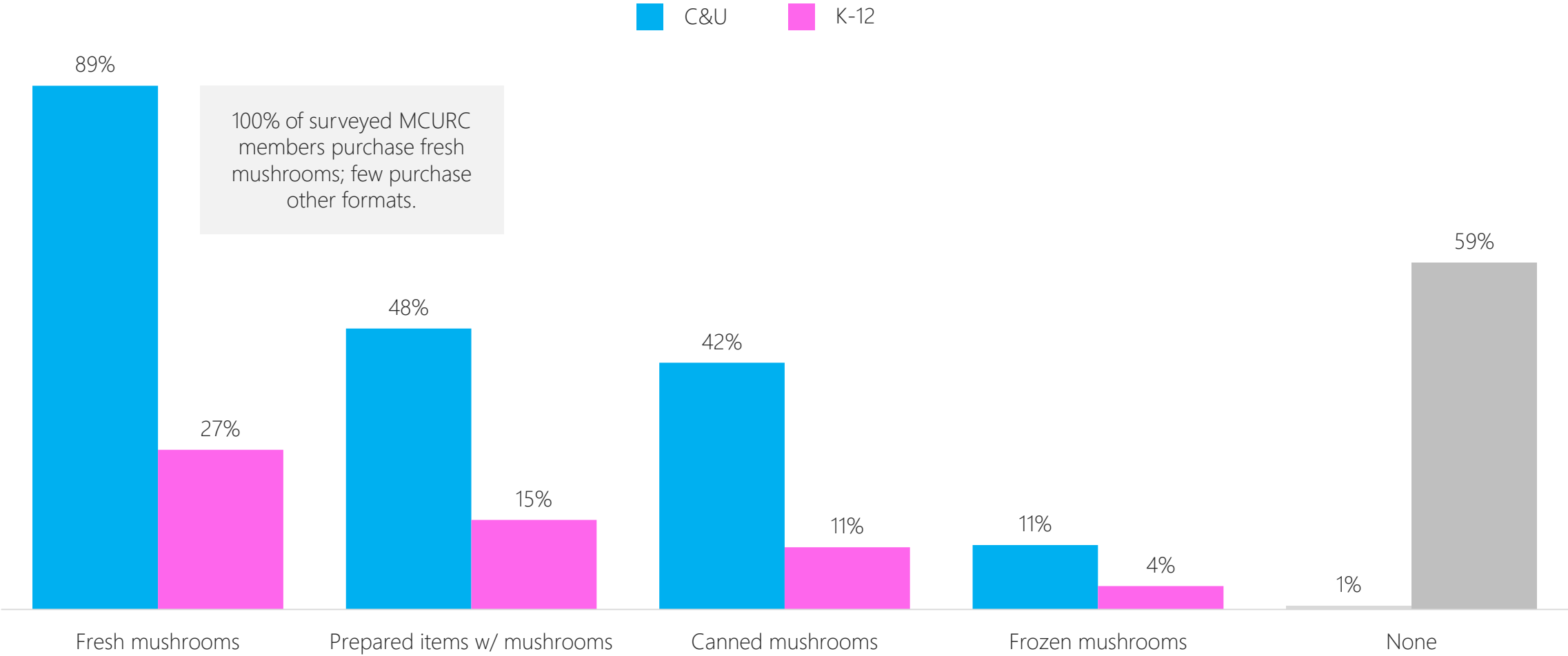


mushrooms today

Mushrooms are much more common in kitchens at C&Us than K-12s.

- « Fresh mushrooms are most common in both types of educational institutions.
- « Nearly half of C&U operators purchase prepared items made with mushrooms, like pizzas.

MUSHROOM PRODUCTS PURCHASED TODAY



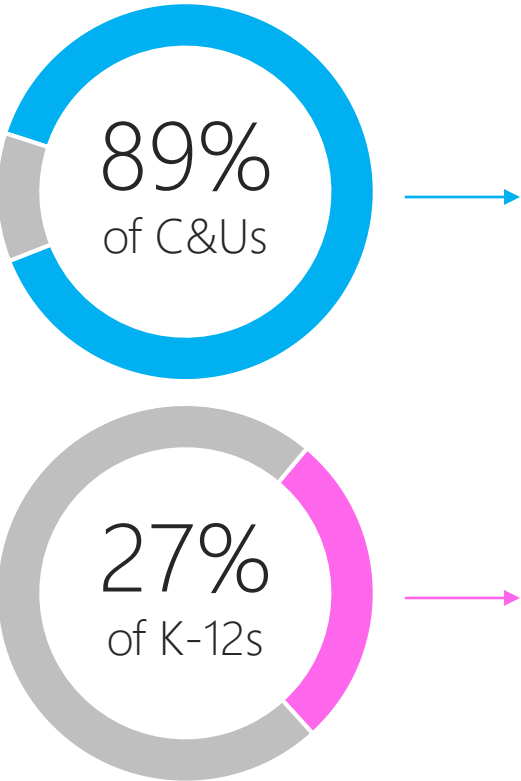
White buttons are most prevalent, but portobellos are a close second at C&Us.

« Half of C&U operators purchase at least one type of specialty mushroom like shiitake, oyster, or trumpet; those mushrooms are very rare among K-12s.

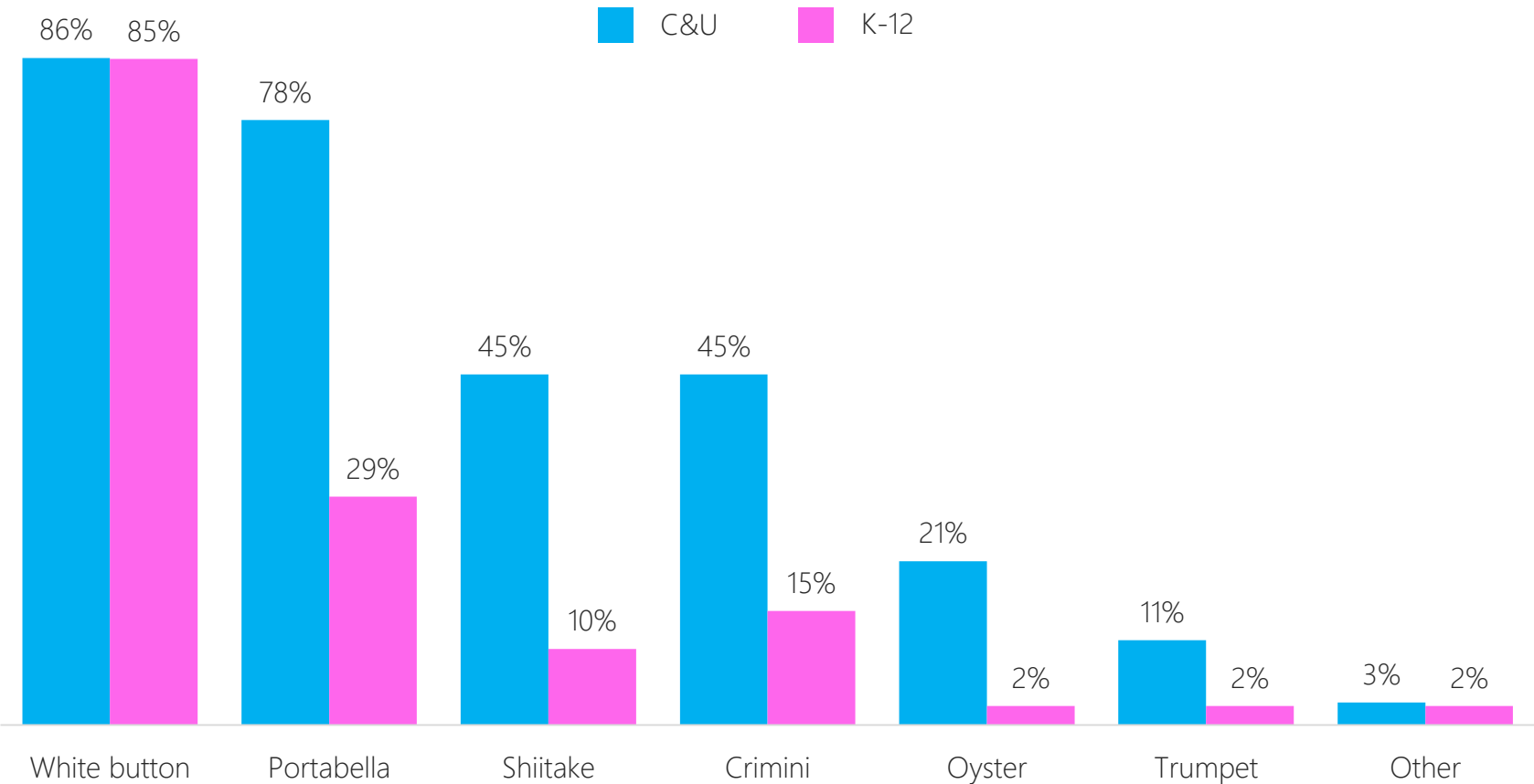
FRESH MUSHROOM VARIETIES PURCHASED TODAY

among operators who purchase fresh mushrooms

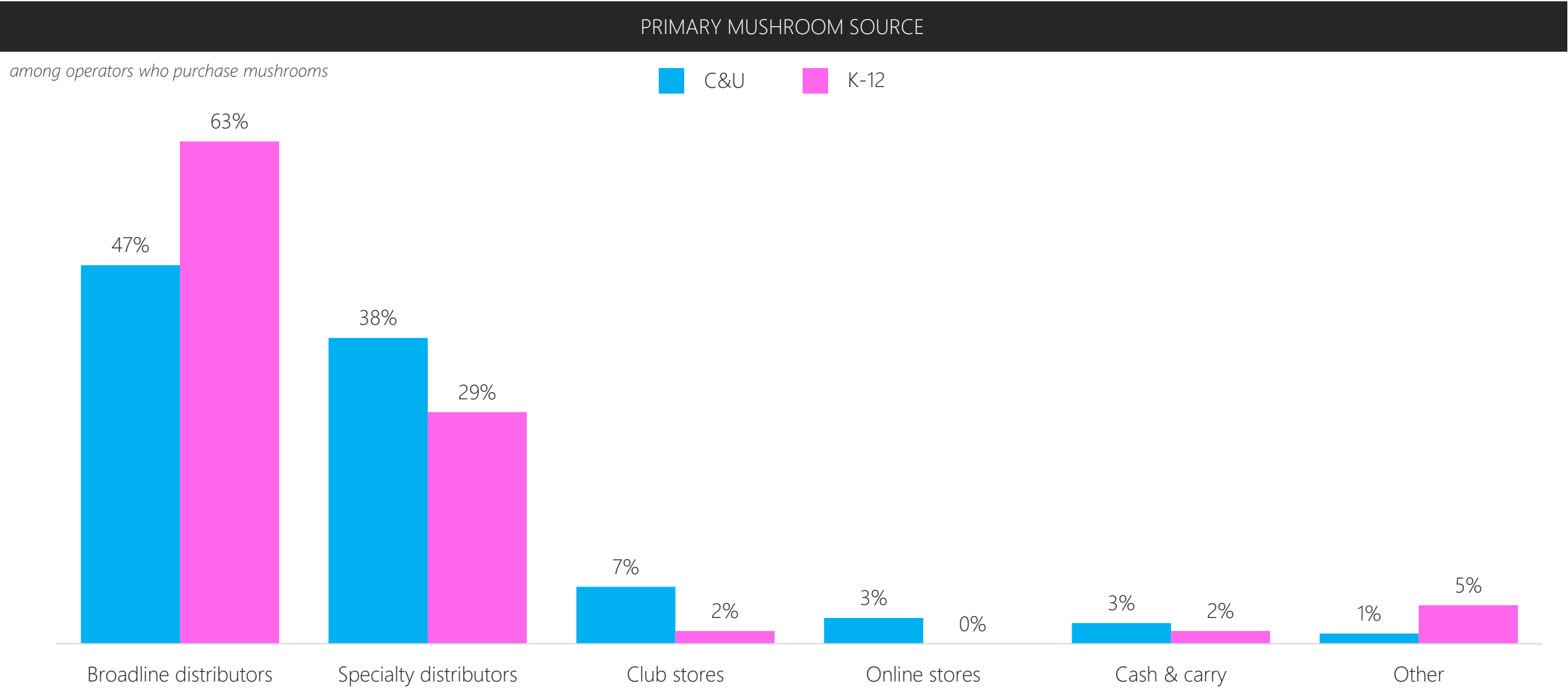
Who offers fresh mushrooms?



What do they purchase?



Broadliners are the biggest source for mushroom products, but many depend on specialty distributors.



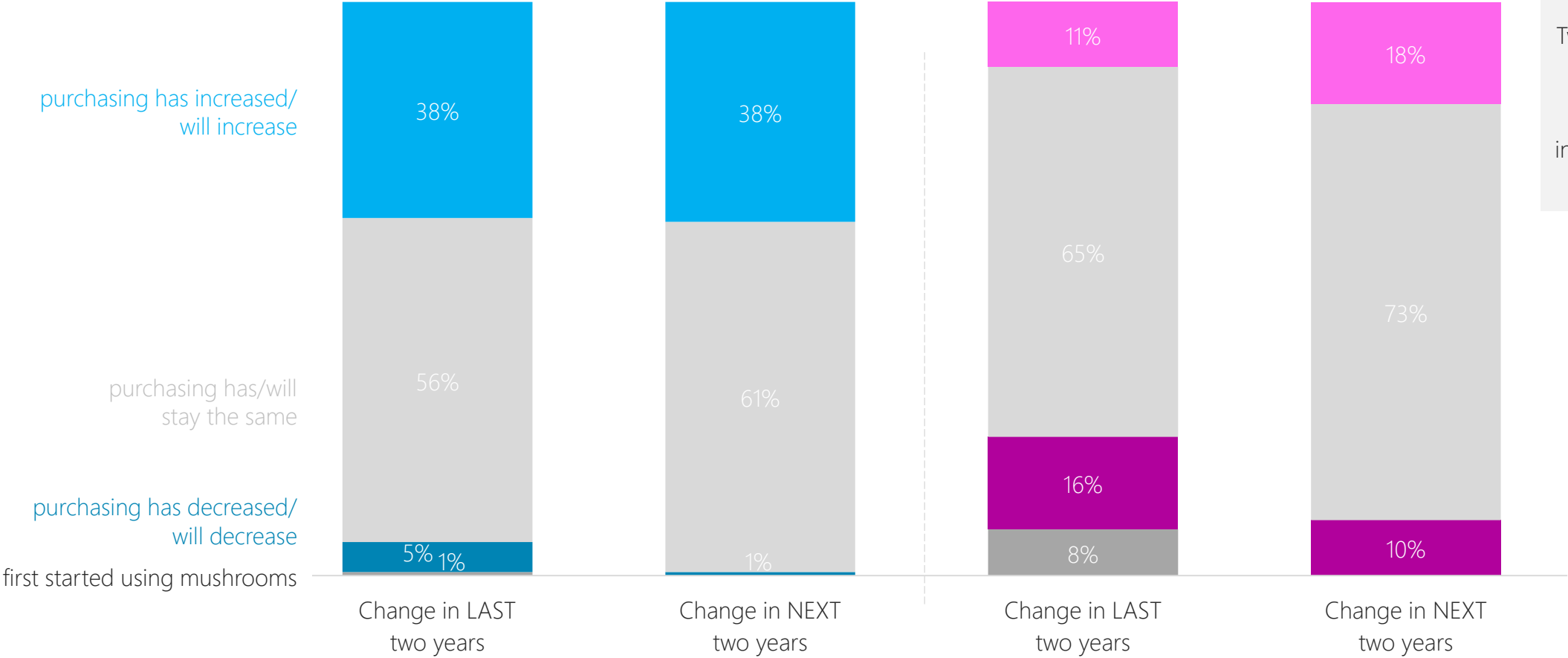
C&U operators have a much more optimistic outlook on mushrooms than K-12 operators.

CHANGE IN MUSHROOM PURCHASING

among operators who purchase mushrooms

C&U

K-12



Two thirds of MCURC members expect mushroom purchasing to increase; none expect it to decrease.

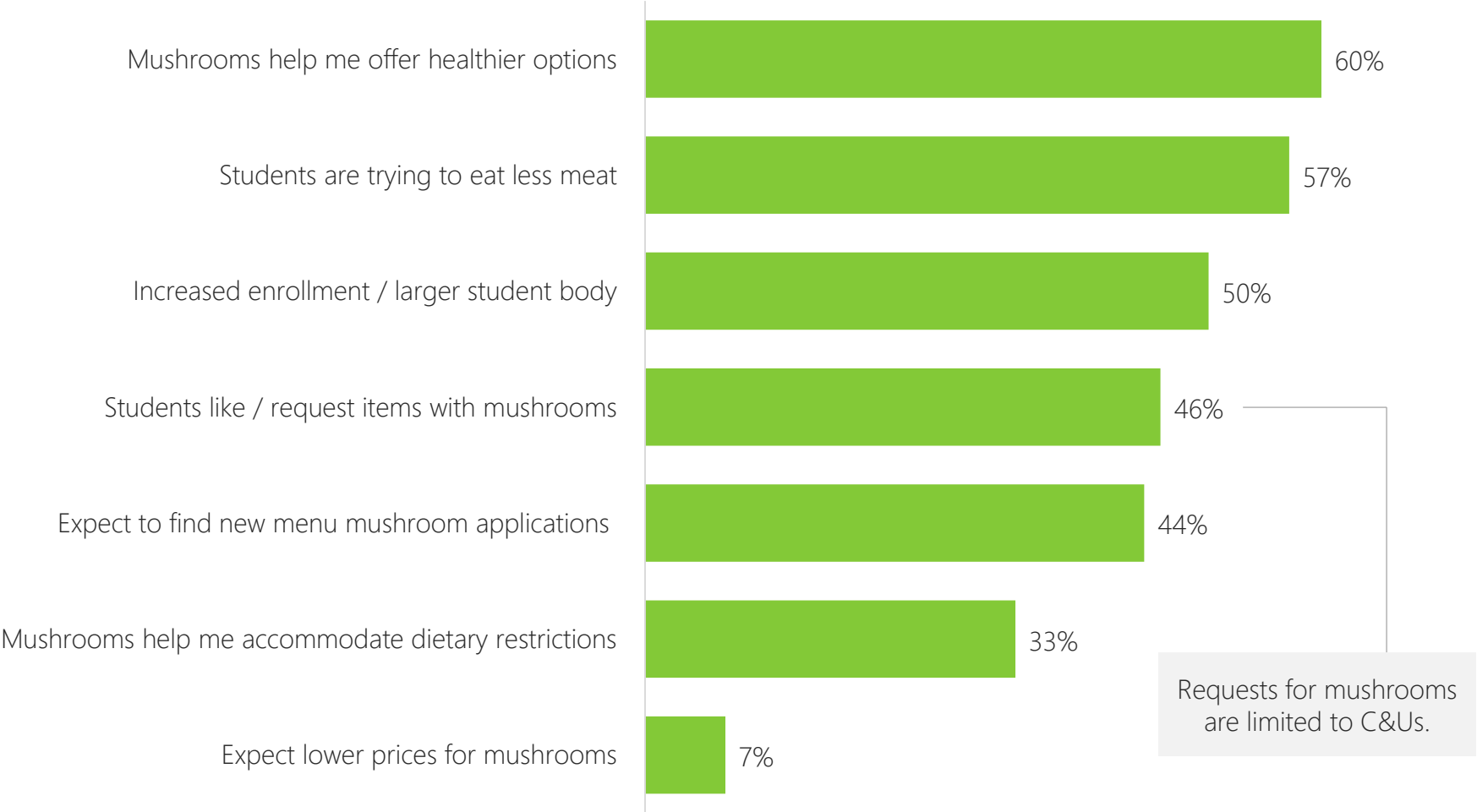
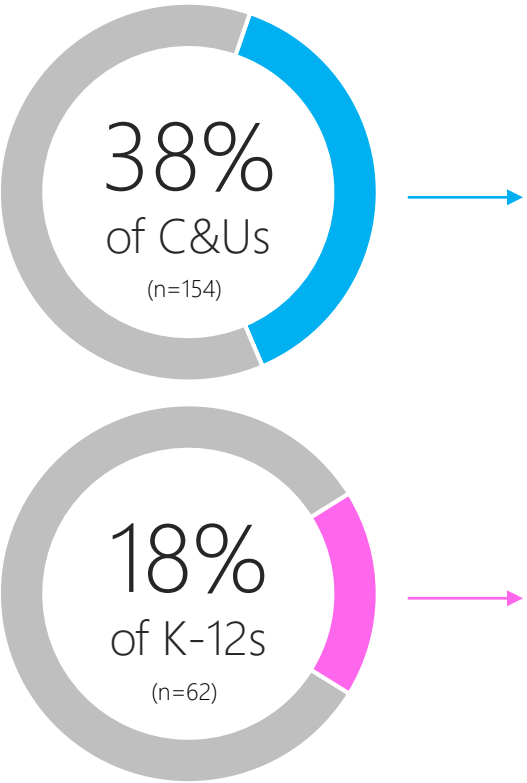
Flexitarianism among students is as important as mushrooms' nutritional profile in driving growth.

« Decreasing meat consumption, not eliminating it altogether, appears to be the driver of mushroom growth.

REASONS FOR INCREASED MUSHROOM PURCHASING

among operators who purchase mushrooms

Who thinks purchasing will increase?

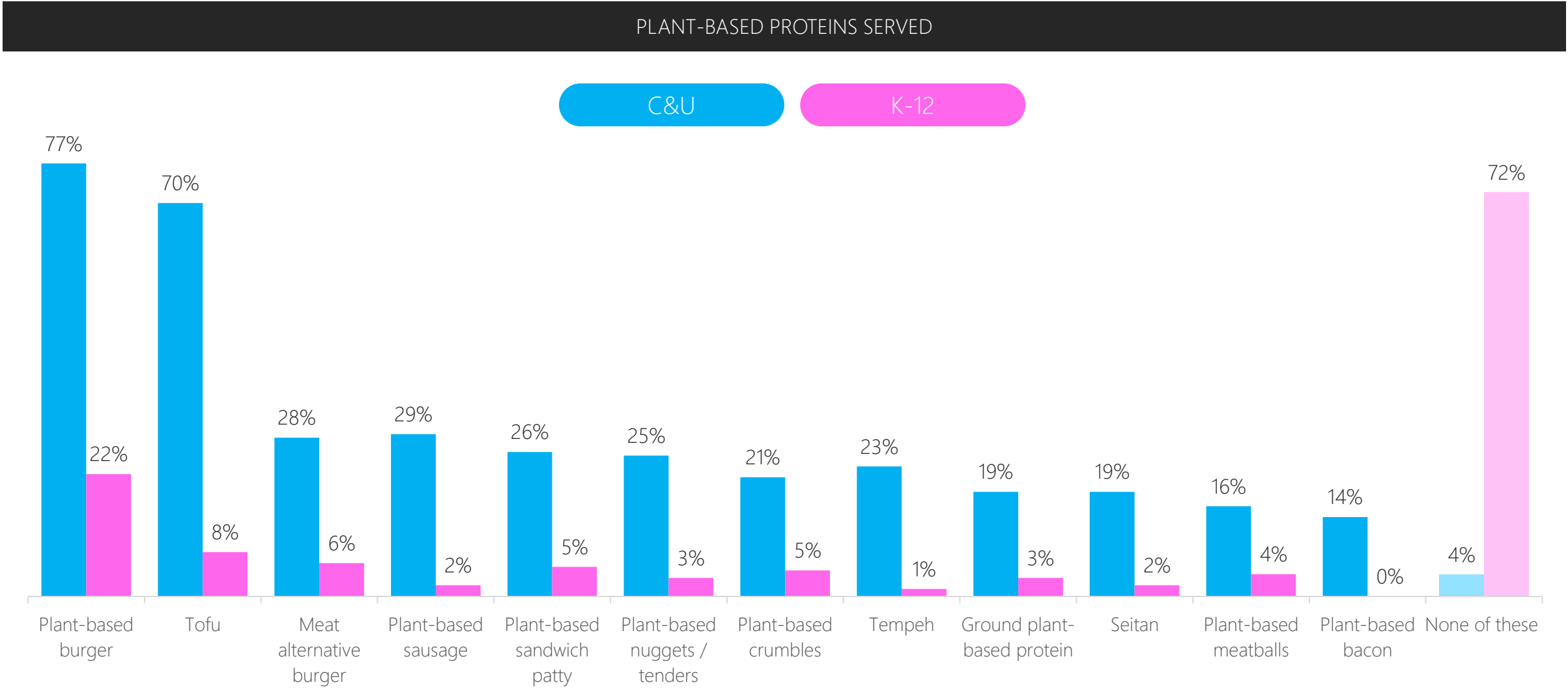




plant-based protein

Basic burgers or tofu are available at most C&Us; few K-12s offer any plant-based protein at all.

- « C&Us with at least 10,000 students are more likely than smaller schools to offer a broad range of plant-based proteins.
- « All surveyed MCURC members use plant-based protein in their operation.



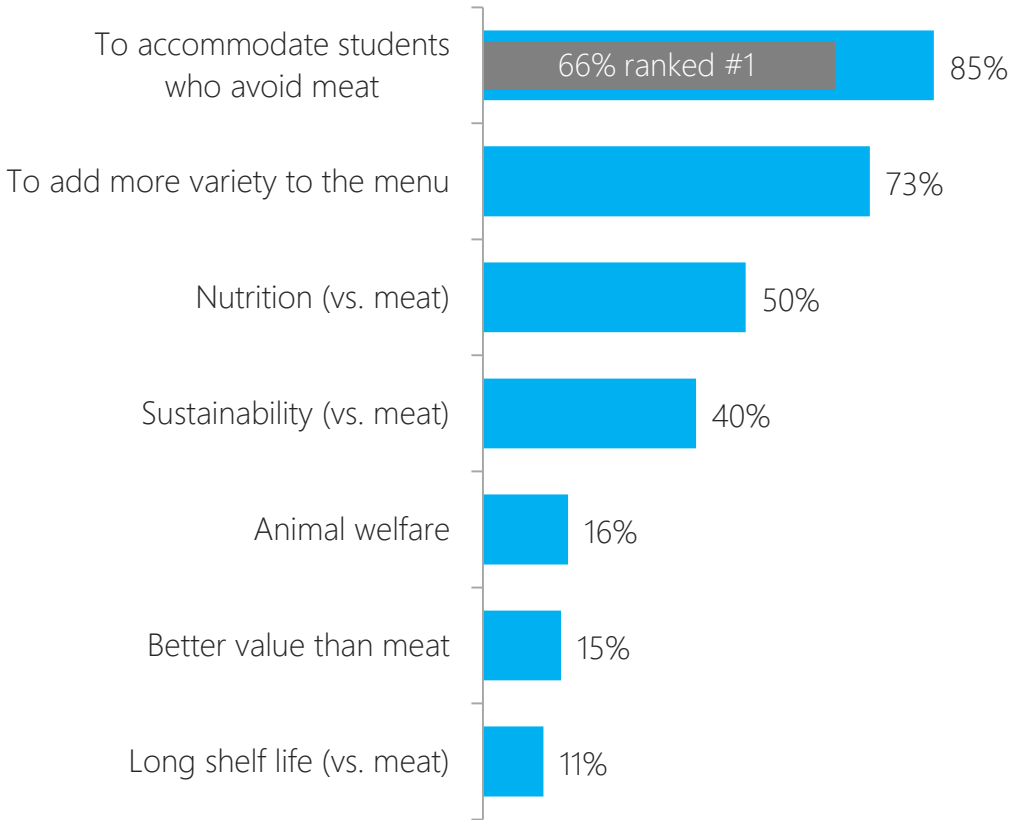
Accommodating students is the primary reason for offering plant-based protein.

- « The priority of reasons is generally the same across segments; however, K-12 operators are unlikely to be motivated by animal welfare.
- « For MCURC members, sustainability is tied with accommodating students as a top reason.

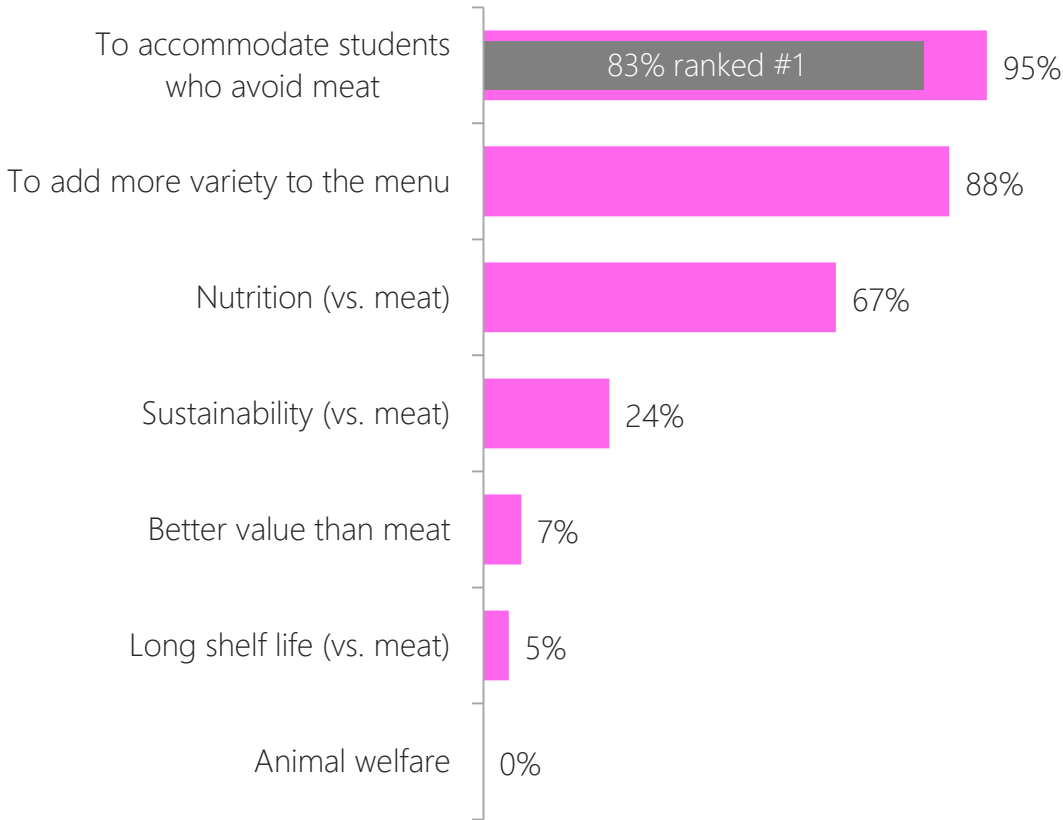
REASONS FOR OFFERING PLANT-BASED PROTEIN

among those who offer plant-based protein | % ranked each reason among top 3

C&U



K-12

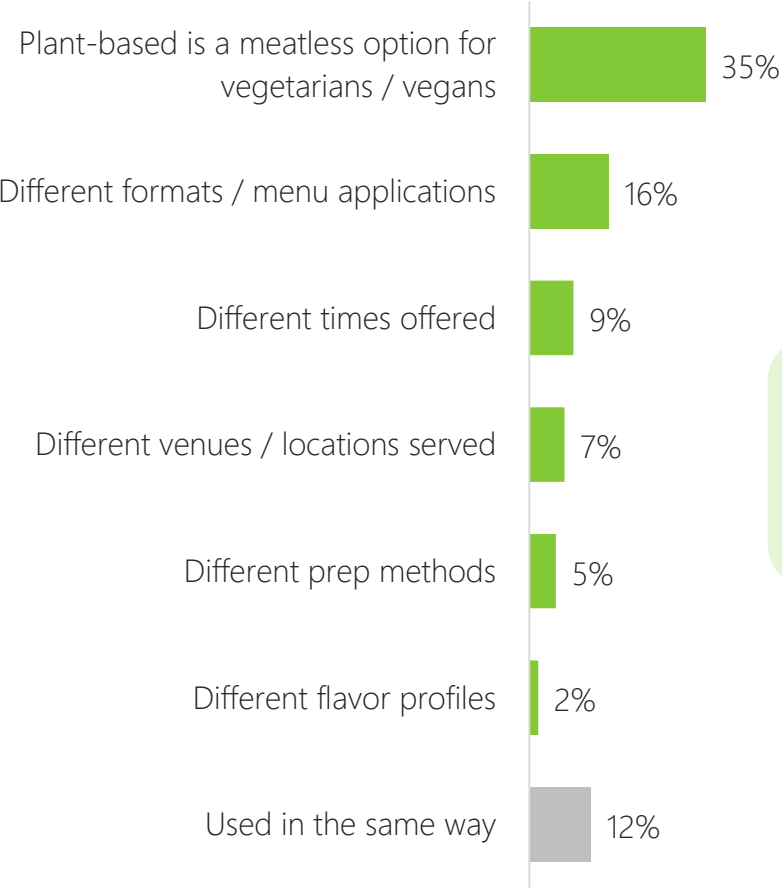


For most education operators, blended and plant-based protein play completely different roles.

« Blended is seen as a healthier beef alternative to be used anywhere beef is used, while plant-based protein is served separately in vegan or vegetarian areas.

DIFFERENCE IN USE OF BLENDED AND PLANT-BASED PROTEIN: UNAIDED

among those who serve both blended protein and plant-based / meat alternative burgers



The plant-based burgers are for full-time vegetarians and vegans. The blended burger is for the customer who is looking to have the **beef burger with less fat and calories.** –C&U

We serve the blended protein in our **taco meat and sloppy joes.** We use plant-based patty for a vegetarian option. –K-12

We offer these two different products on **different days of the week** to ensure that our menu has enough variety. –C&U

Plant-based burgers are served at a vegan/vegetarian section. Blended burgers are served at the **burger bar.** –C&U

Plant-based burgers are typically offered during lunch time, while blended protein makes up more of the **dinner menu.** –C&U

Plant-based burgers are always available upon request as a quick option. Blended protein is more of an **occasionally offered item.** –C&U

It is just **important to carry alternatives.** –C&U

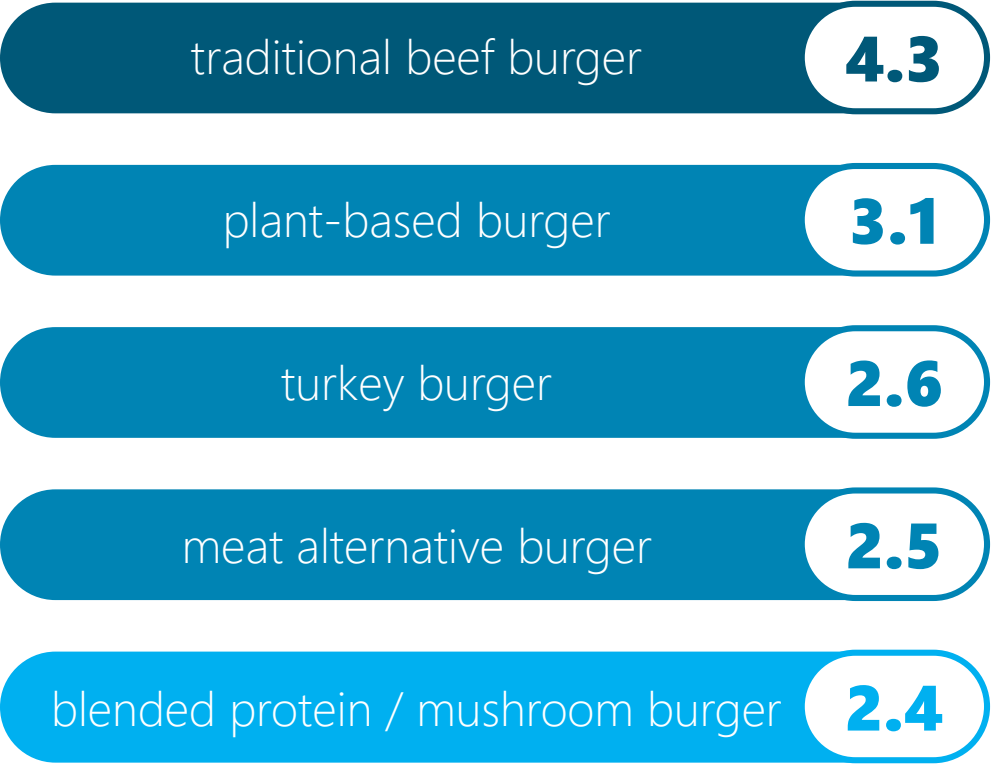
There is work to be done in convincing operators that blended protein is a good fit for their operation.

- « MCURC members are more alert to the benefits of blended protein; among this group, blended burgers score second best after traditional beef burgers.
- « For blended protein users, blended burgers score third, following traditional beef and plant-based burgers.

OPERATIONAL FIT OF BURGER TYPES

among those who offer plant-based protein | operational fit rated on scale from 1–5

C&U



K-12



Fit Score = (% ranked most fitting x 5) + (% ranked second most fitting x 4) + (% ranked third most fitting x 3) + (% ranked fourth most fitting x 2) + (% ranked least fitting x 1)

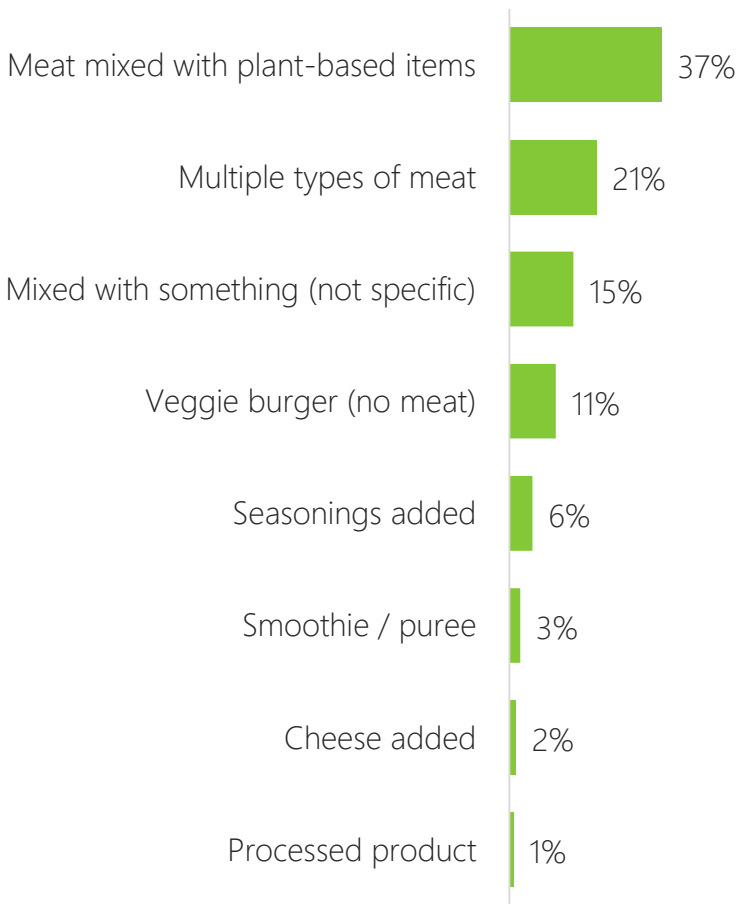


appendix

Educational operators do not automatically associate “blended burger” with mushrooms.

« Some are confused about the meaning of the term, and many seem to just be guessing at what it might mean.

UNAIDED IMPRESSIONS OF “BLENDED BURGER”



I am **confused by the term**. Is it a blend of different beef cuts? Is it a beef burger with soy protein in it? Is it a beef burger with mushrooms? I wouldn't even be surprised if it was none of the above. -C&U

I am not familiar with the term "blended burger" but it makes me think of a patty comprised of a **mixture of animal and plant proteins**. -C&U

I think of a **meatless burger** with soy and vegetables and a binder. -K-12

only **15%** specifically mentioned mushrooms

Burgers that are mixed with chopped mushrooms. They are **healthier and better for sustainability**. -C&U

My first thought is that it is meat that is **over processed**. My second thought is that it is a blend of product, whether veggie, seasoning, or meats that have extra flavor. -C&U

As an adult, I would be interested. I'm **not sure the students would be receptive**. They struggle as it is. -K-12

A burger that is blended in a blender and mixed with water that is a **smoothie for quick protein**. -C&U

Gross meat that could contain any number of **unwanted ingredients** or contaminates. -C&U

Mushroom and beef combine to make a burger. Other companies use chicken, cranberries, herbs as a blended burger. It's a way to **cut the protein, fat and calories**. -C&U

I **mainly think of mushrooms**. Either beef or turkey mixed with mushrooms and formed into patties. -C&U

I think of a **mixed meat burger**. Possibly has turkey, chicken, pork, and beef in it. I've had one before and didn't like it. -C&U

There is **something added to the beef** to extend it whether for flavor, filler, juicier, or as a healthier alternative. -C&U

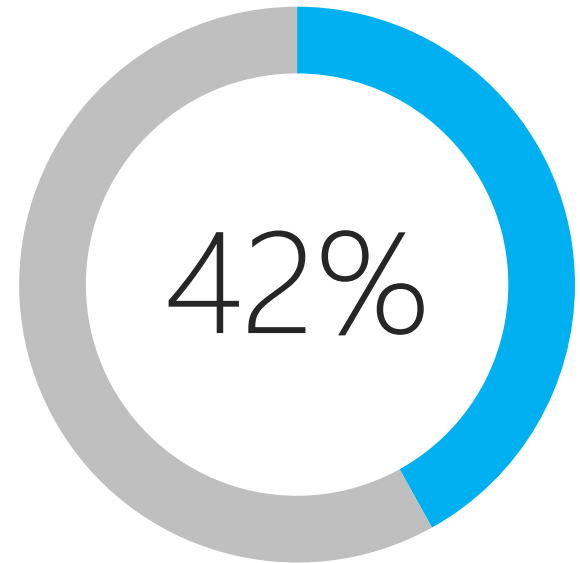
Blended burger. Sounds like a variety of meats, soy, and other plant-based items. We called them **soy burgers** in the mid 80's. -K-12

I think of hamburger meat blended with **spices and other enhancers** to give the beef a certain flavor and texture. -C&U

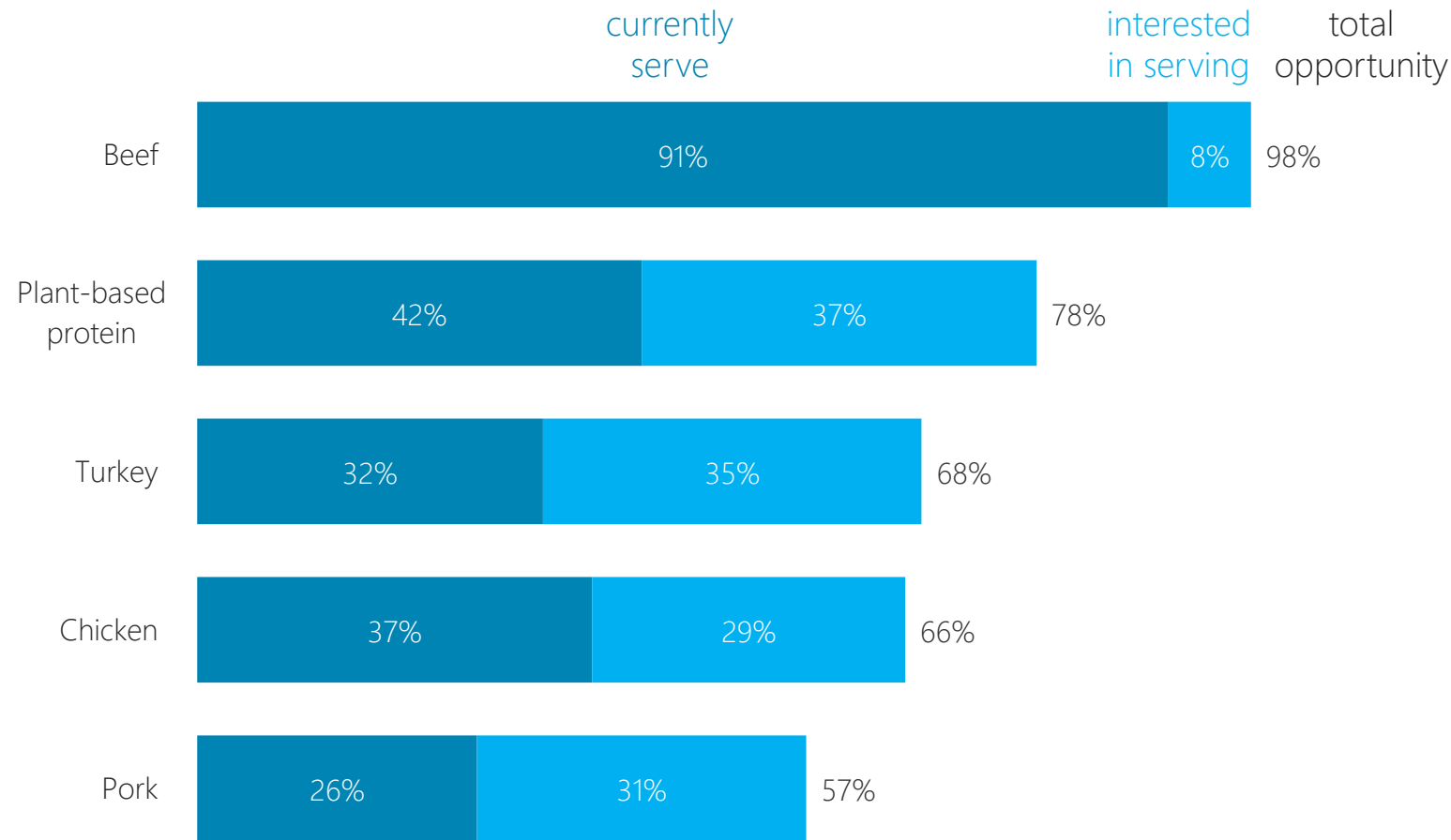
Among C&U operators who serve blended protein, usage of beef is almost universal.

« Many C&U operators who don't currently blend other proteins would be willing to do so.

C&U USERS: INTEREST & USAGE BY PROTEIN TYPE



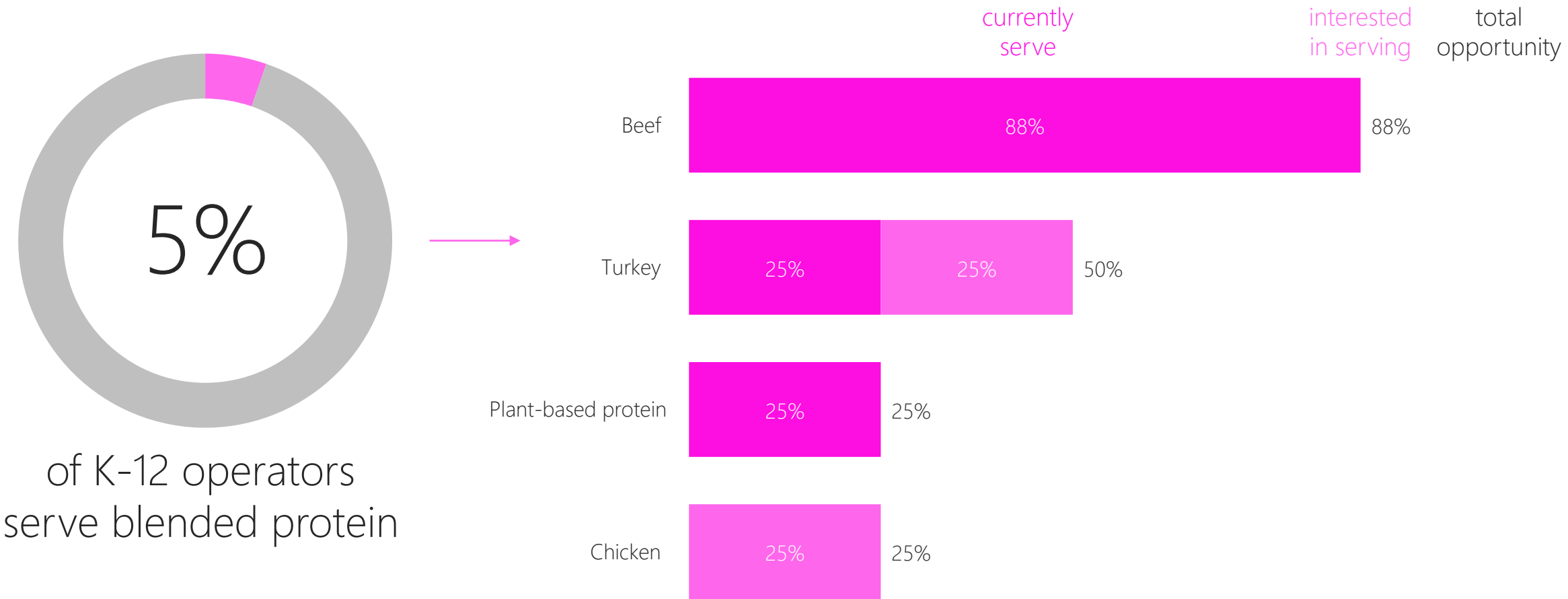
of C&U operators
serve blended protein



Beef is also the most popular protein for the small number of K-12 operators who blend with mushrooms.

« No K-12 operators are serving or interested in serving blended pork.

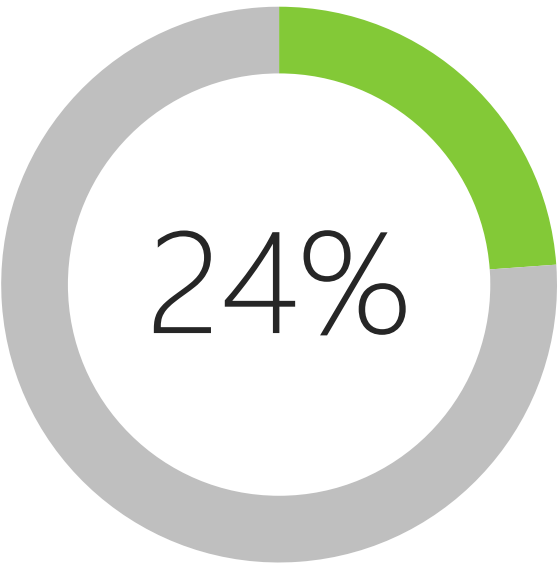
K-12 USERS: INTEREST & USAGE BY PROTEIN TYPE



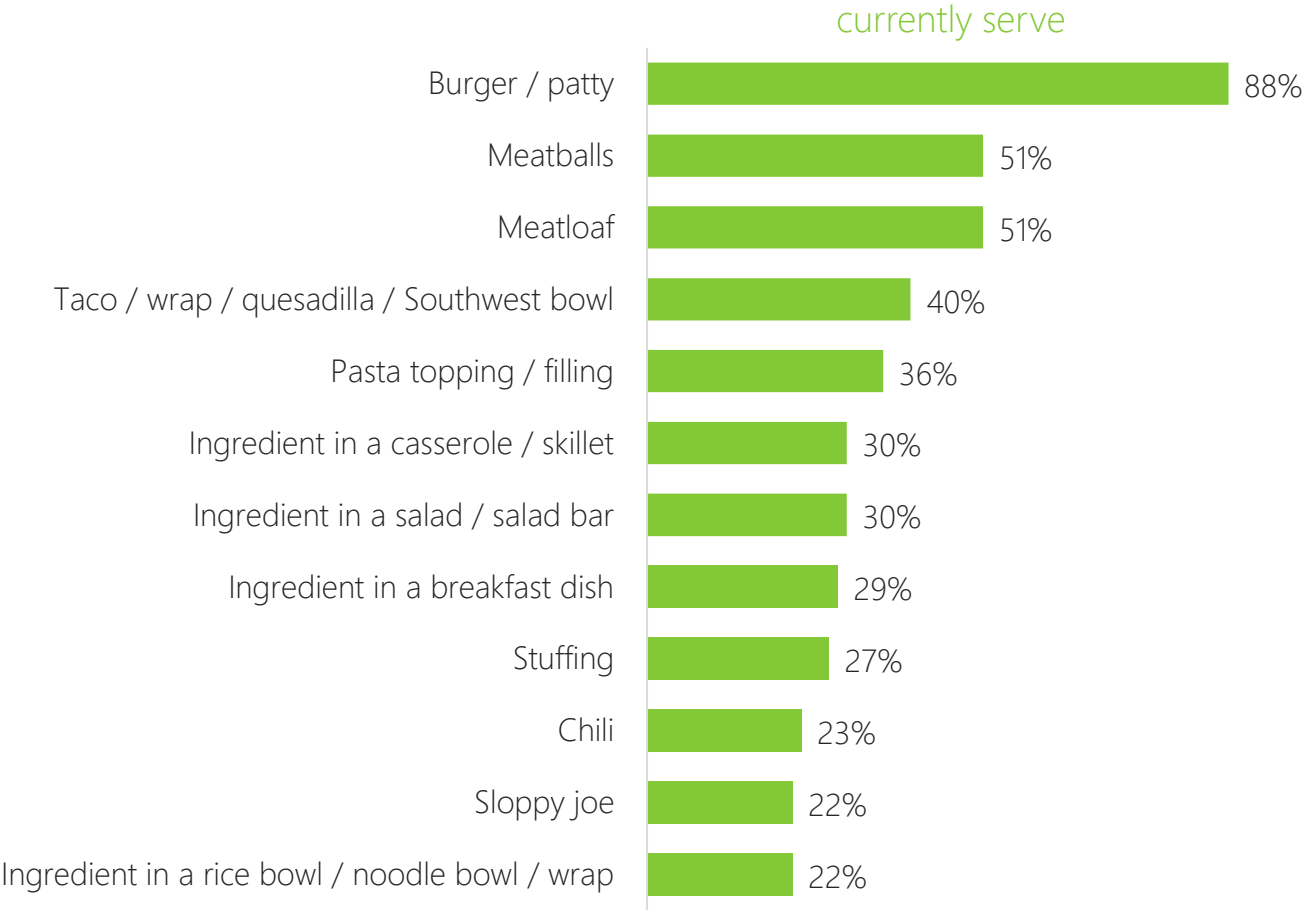
**due to low base size, data should be considered directional*

Burgers are the clear leader for blended protein applications.

BLENDED PROTEIN USERS: USAGE BY MENU APPLICATION



of operators in
education serve
blended protein

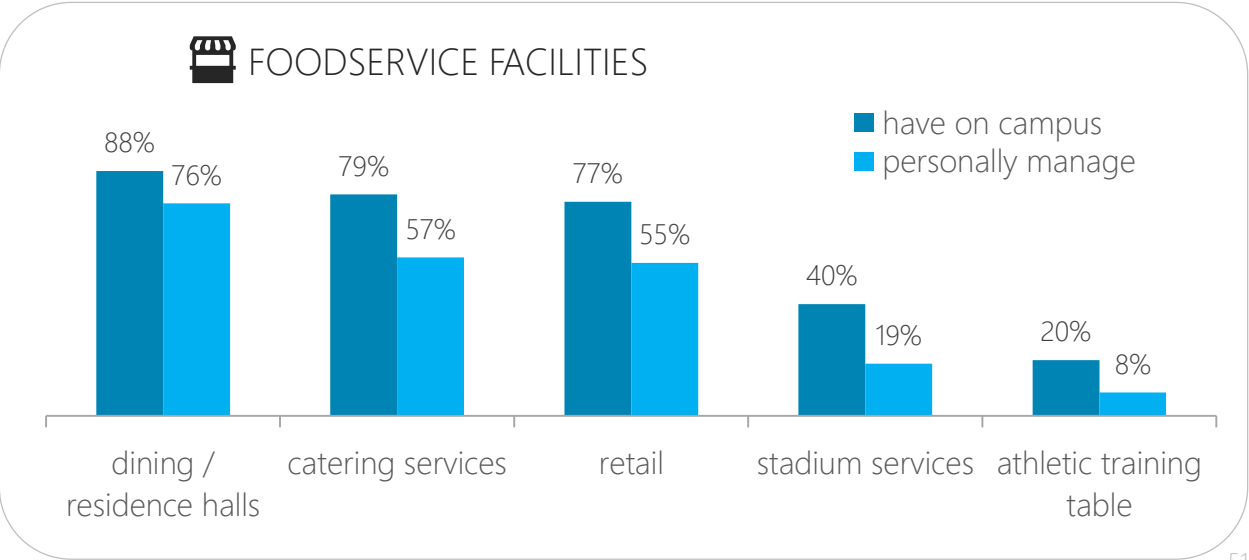
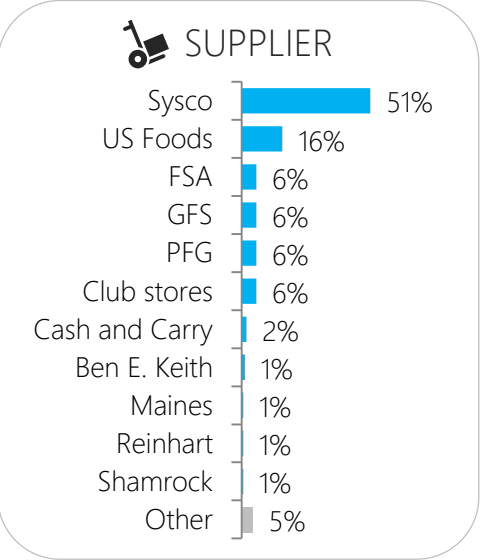
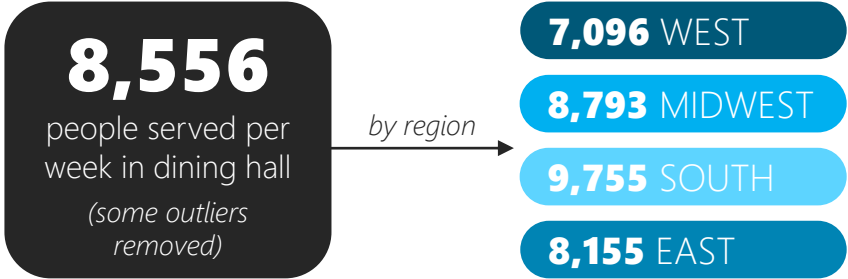
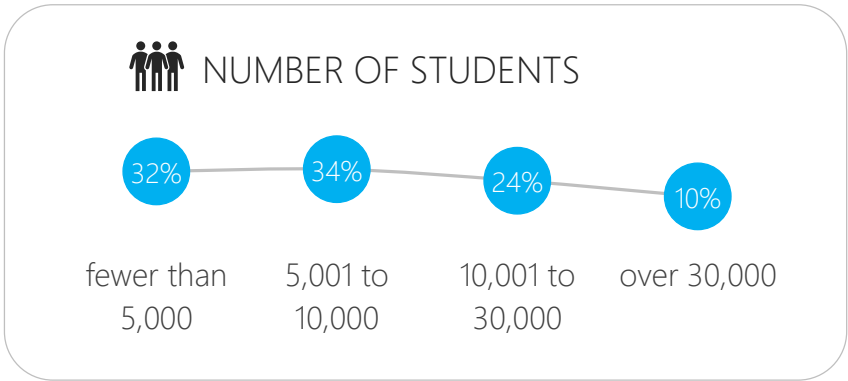
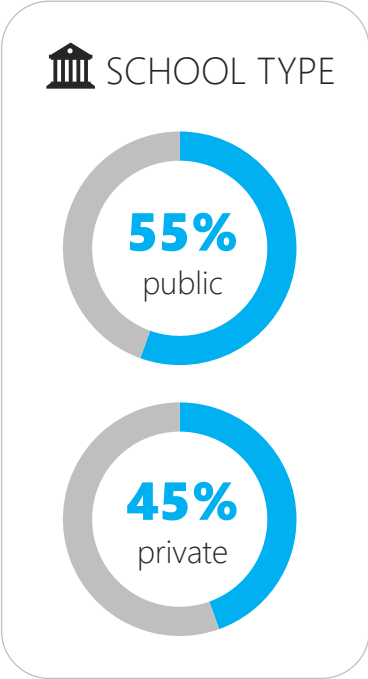
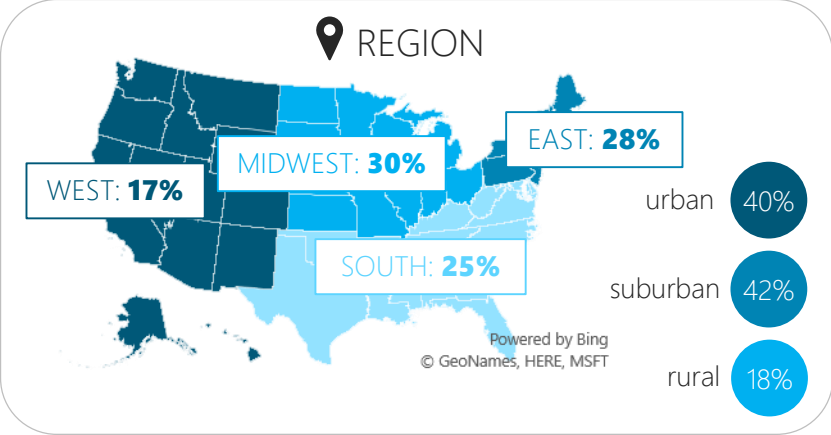
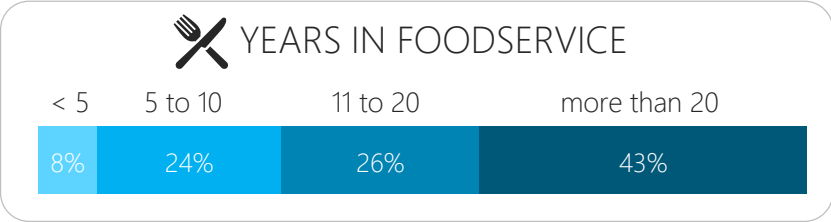




respondent profile

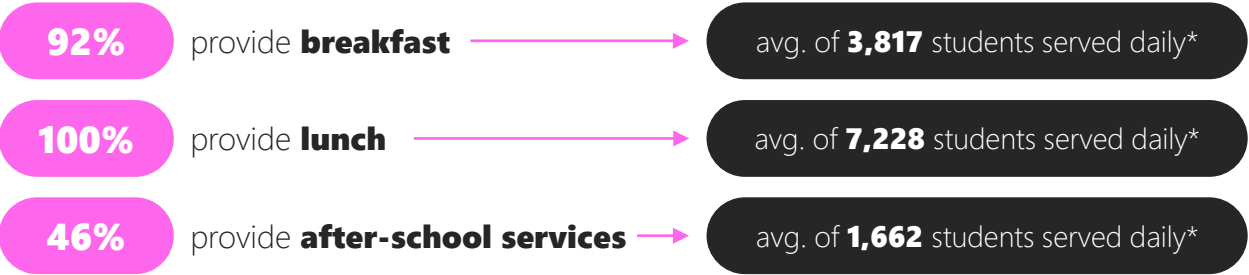
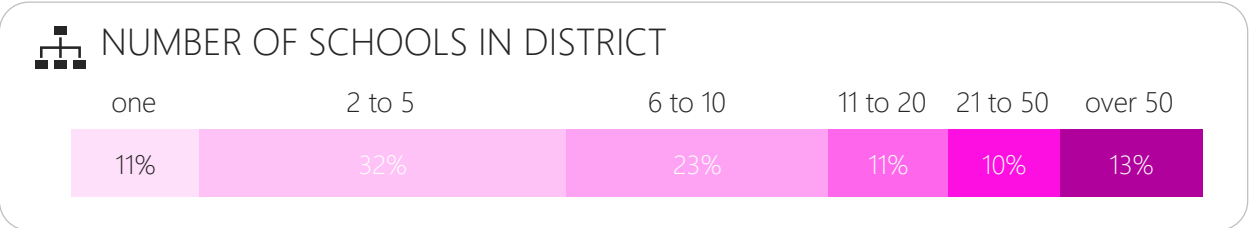
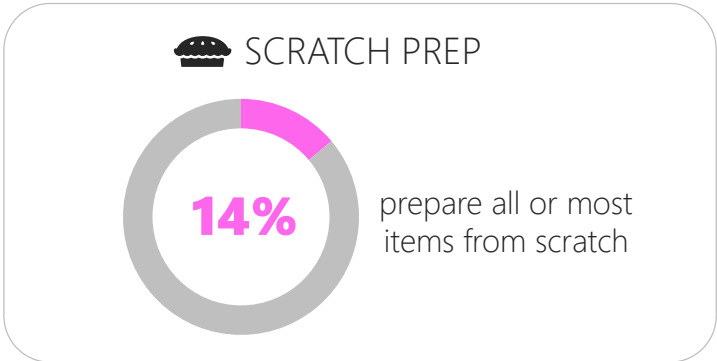
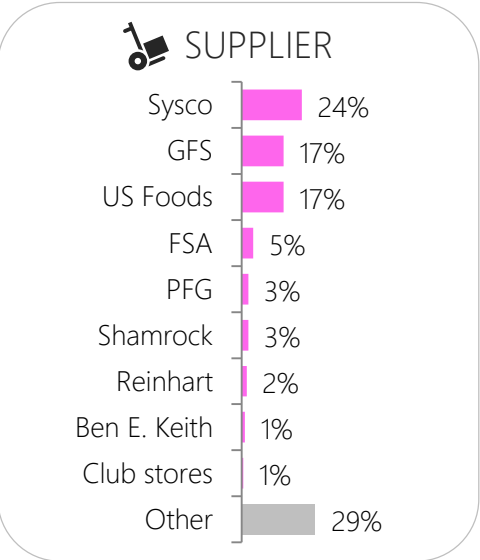
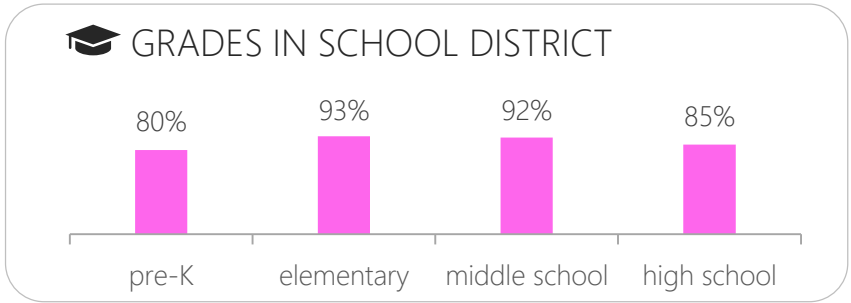
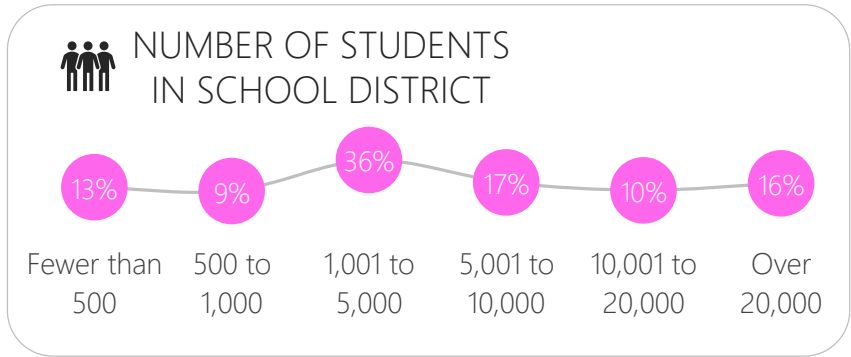
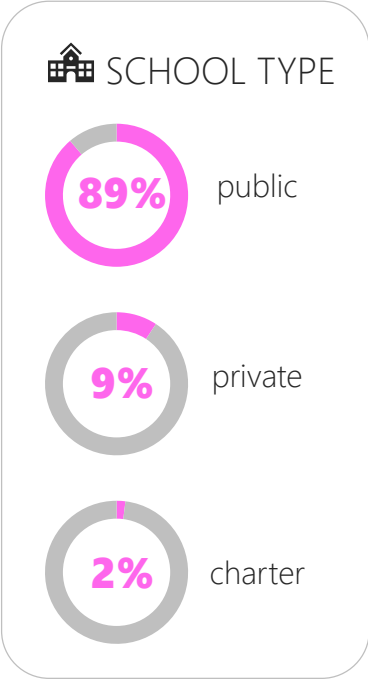
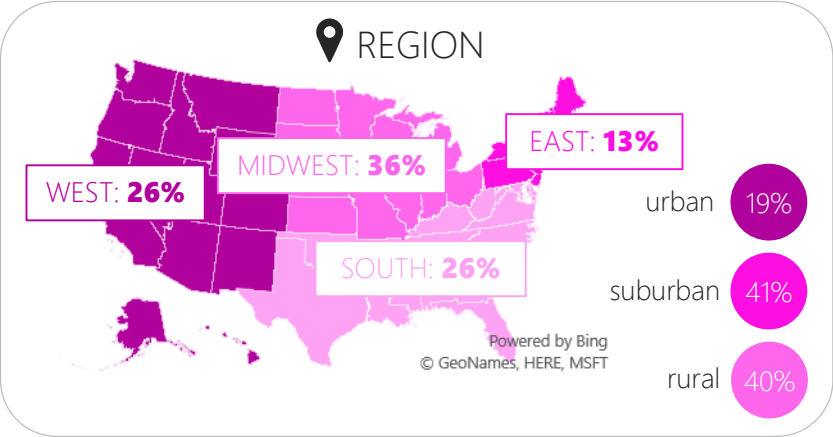
155 C&U OPERATORS

ROLE	
general manager	28%
f&b manager	26%
manager	15%
chef	12%
kitchen manager	5%
operator	3%
dietician / nutritionist	2%
sous chef	1%
other	9%




151 K-12 OPERATORS

ROLE	
f&b manager	26%
kitchen manager	26%
manager	18%
general manager	15%
chef	1%
dietician / nutritionist	1%
operator	1%
sous chef	1%
other	11%



*numbers are across entire school district

73 CURRENT BLEND USERS

 ROLE	
f&b manager	33%
general manager	23%
chef	11%
manager	10%
kitchen manager	10%
operator	3%
sous chef	3%
dietician / nutritionist	1%
other	7%

