

Optimize Your Combine

BUSHEL PLUS 2022



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HISTORY

An idea that forever changed the agriculture industry...
 “What if we could check harvest loss
 and optimize your combine?”



ABOUT BUSHEL PLUS

Marcel Krings's background in Ag Engineering and Agronomy means he is always thinking about agriculture and solving the challenges ahead. While working as an Agronomist around the world, Marcel kept seeing large amounts of wasted grain; grain that farmers worked so hard to grow. But this waste wasn't from poor storage or excess moisture, it was from the very equipment meant to capture it: the combine. Marcel, a German-born farmer, relocated to Canada and introduced the Bushel Plus Harvest Loss System to help farmers assess grain loss more safely and accurately during harvest.

An Idea Emerges

Born to farm, Marcel grew up on a family farm in the mountains of Germany. He describes the enterprise as "10 acres, 5 cows, 10 chickens and a goat." Four generations lived together and worked the farm, which provided supplemental income, food, and an education. "I stood beside my great-grandfather, grandfather, and father and learned a lot," Krings said. "They could fix anything, and they worked hard. Growing up like that, you gain a different perspective on life." Krings knew from childhood he wanted to own or work on a farm, and he knew the family operation could never generate enough income to be his life's work. He pursued an education in agriculture engineering and agronomy in a program that combined classroom theory with the American equivalent of a series of internships.



Pursuing his dream, Krings found a way to satisfy both his love for farming and his interest in seeing the world. His first internship in 2009 took him to Canada for harvest. "That was a 3,000-acre farm, and I thought, 'This is it; I've seen it all,'" he said. "It was what I had dreamed of." Until ... "I went back to university and saw a job posting for a farm in Russia," he said. "They were trying to build an 80,000-acre farm in three years. They were looking for combine drivers and supervisors for harvest and seeding. I thought, 'Right on, this is right up my alley.' Adventure. A different language. It was awesome." Krings spent two summers in Russia, another fall in Canada, and three weeks in Brazil working on farms while also completing his university work.



MARCEL KRINGS

After Krings earned his degree, he settled in Canada with "nothing but a bag of clothes." He worked on various farms, then Cargill hired him to sell seed and serve as an agronomy consultant to farmers. Meanwhile, he and a friend in Germany worked on designing a drop tray that would measure waste from a combine more safely. They developed a prototype, which Krings gave to farmers to try. One of them called him after he had used the prototype for a week. He said, "Hey, we did the math on this, and it saved us \$60,000 to \$70,000 Canadian," Krings remembers. Things started to happen quickly then. Krings refined the prototype and produced enough to meet the demand generated through farmer recommendations. He worked for Cargill by day and Bushel Plus at night. In the winter of 2017, Krings left Cargill to focus full-time on Bushel Plus. His goal was to sell 120 pieces of equipment in 2018; sales exceeded that goal by many hundreds.

A LONG, LONG TRIP TO AUSTRALIA



2018

In the summer of 2018, a big order arrived from Australia, which led Kringe to make an 8,800-mile flight that would lead to an eight-month ordeal. “For one week, I went from dealership to dealership, stopping to talk to farmers and talking about the product,” Kringe said. “I went around with an agronomist who showed me the Australian way of farming. I didn’t need to organize anything. One farmer would send me to the next farmer.”

The warmth he encountered would be on display in an extraordinary way when Marcel was involved in a two-car collision. Among his injuries: a fractured spine in a dozen places, a shattered rib cage, an open pelvis break, a shoulder virtually broken in half, and internal bleeding. “Angels were watching,” he said. “I survived, and the other driver survived. The doctor in the hospital said: ‘You have a lot of fractures. It is quite insane, but you have one thing going for you, nothing has dislocated. If we can get you into surgery without anything moving, we can get you back to walking.’”

Kringe was in intensive care in a hospital in Perth, a seven-hour trip from the places he’d been visiting. His family was in Germany and his coworkers in Canada. It would have been a lonely situation if not for a network of compassionate people. The agronomist Marcel had met the week before flew to Perth with his wife to sit at his bedside. Farmers he’d spoken with over dinner stepped forward to assist with arranging health insurance, establishing an Australian phone number, or simply visiting.

Then there was Melanie. She and her husband were scheduled to meet Kringe, but the accident happened before the meeting. A mutual connection in Canada alerted Melanie to Marcel’s situation. “She got my full name from him, then she called every hospital in western Australia until she found me,” Kringe said. “She was seven hours away from Perth, and it was harvest at her family’s farm, but she came to Perth with a bag of toiletries, walked into my room and said, ‘Hi, I’m Melanie, how can I help you?’ I was high on morphine. I’d never met her. I didn’t even understand what was happening.”

Melanie and her family became central characters in Marcel’s recovery. She cared for him and Marcel’s visiting sister in the early critical days and ultimately provided him a home when he transitioned to longer-term rehabilitation and while he learned to walk again. “She is like my second mum” Kringe said. “Her husband calls me his second son. It has been an amazing experience.”

BEYOND RECOVERY

Kringe returned home to Canada in July 2019. While recovering in Australia, Bushel Plus’s growth continued in his absence. Today, Bushel Plus sells its product on every continent and in more than two dozen countries. It also has relationships with combine manufacturers who are integrating the drop pan into their products. John Deere just released a marketing video of a new combine that shows the Bushel Plus product in its field testing. The company was also featured on the reality television show *Corn Warriors*, which follows highyielding farmers in the United States.

As it continues to expand its distribution network and refine its product and app, Bushel Plus remains focused on its mission: “Our number one priority will always be making farms more profitable. Happy customers are what drive us!” Kringe said. “We love to work with our customers and are looking forward to making many more great relationships with hard-working people around the world.”



2022

WHAT IS BUSHEL PLUS?

An integrated system that helps a combine operator safely and efficiently check and quantify what is being lost during harvest. Operators remotely drop the pan, from the cab or from a safe distance, onto the ground to capture loss.

Bushel Plus has expanded its capabilities by publishing an app. The app allows farmers to calculate their losses within seconds of dropping the pan. The calculations offer estimates on dollars lost per acre. If a calculation shows a minimum loss, a farmer can save the combine settings specific to the crop to maintain that level of efficiency next time.

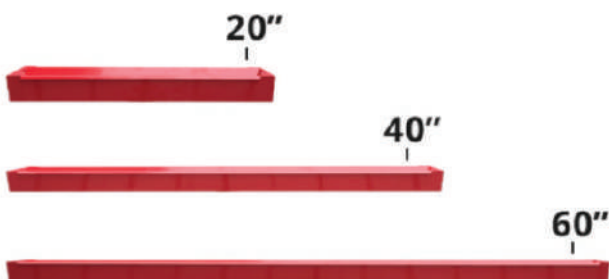
Knowing what is falling to the ground can signal a problem with combine settings, and of course, capturing more of what falls means more grain in the bin.

1 SYSTEM, 4 EASY STEPS



DO YOU TRULY KNOW YOUR COMBINE HARVEST LOSS?

PRODUCTS



Drop Pan Sizes for Every Operation

Bushel Plus Mini / Chaff Deck Version

20" - 0.5m
Perfect for plot combines and measuring harvest loss off the chaff spreader.

The Flagship - Our Best Seller

40" - 1.0m
Easy to transport, this versatile unit is our most popular choice.

The Wide Setup

60" - 1.5m
Catch a sample from the entire width of your sieves or operate with a chaff cart.

THE MINI - 20" DROP PAN KIT [kit comes with scale and air separator]



Carrier Unit

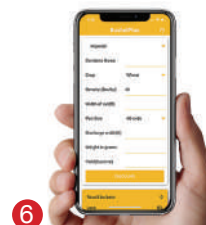


Wide Drop Pan



20" [0.5m]

- 1 Carrier Unit [attaches to the combine]
- 2 Wide Drop Pan
- 3 Air Separator
- 4 Smart Charger
- 5 Scale
- 6 Free Smart Drop App
- 7 User Manual [not shown]
- 8 Drop Pan Remote



THE MINI:

- Is a terrific solution for plot and research combines – drumroll researchers and agronomists.
- Is ideal for collecting samples in long stubble conditions with 30" row spacing (corn, sorghum, sunflowers, etc.)
- Fits between the wide stubble rows and works well with other implement options such as chaff decks.

THE FLAGSHIP - 40" DROP PAN KIT [kit comes with scale and air separator]



- 1 Carrier Unit [attaches to the combine]
- 2 Wide Drop Pan
- 3 Narrow Drop Pan
- 4 Air Separator
- 5 Smart Charger
- 6 Scale
- 7 Free Smart Drop App
- 8 User Manual [not shown]
- 9 Drop Pan Remote



THE FLAGSHIP:

- Is our most versatile DROP PAN!
- Fits perfectly on the back axle, which allows you to check your losses from the rotor and the sieves.
- Is great in high stubble crops (with stripper headers, canola, hemp, corn, sunflower, etc.). It fits beneath the feeder house, to be kept safe and high enough away from the tall stubble compared to the back axle mounting point.
- When attached to the header, allows you to understand your header losses as well as your losses while using a chaff spreader/chopper implement.
- Is a must-have for anyone that is harvesting grains and specialty crops.
- ✓ **PRO-TIP:** Use two FLAGSHIP solutions with our SMART DROP app and collect samples from the back axle and header at the same time. Truly understand your losses while harvesting in spread mode.

THE WIDE SETUP - 60" DROP PAN KIT [kit comes with scale and air separator]



Carrier Unit



Wide Drop Pan



Narrow Drop Pan

60" [1.5m]

- 1 Carrier Unit [attaches to the combine]
- 2 Wide Drop Pan
- 3 Narrow Drop Pan
- 4 Air Separator
- 5 Smart Charger
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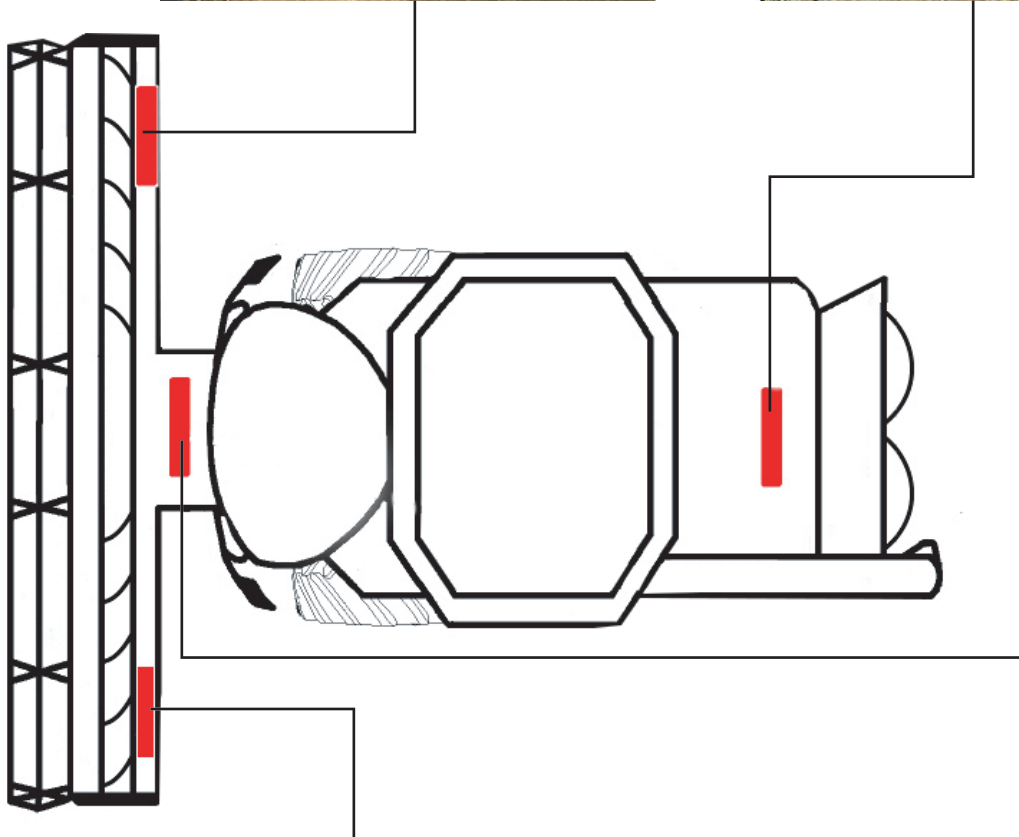


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THE WIDE SETUP:

- Is for those growers and agriculturists that would like to take a slightly different approach in sample collection and combine calibration.
- Is great for collecting a sample from the entire width of the sieves while dropping straw and chaff in a windrow.
- Is built with you in mind!

DROP PAN MOUNTING OPTIONS



HOW TO USE AIR SEPARATOR

Cleaning your sample:

- Remove the straw, chaff and kernel mix from the drop pan and fill the separator.
- Pour the sample into the separator before you turn it on.
- Place one hand on top of material and slightly down, while you turn the separator on.
- Start the unit slowly, and increase speed as required.
- The airflow of the separator will force the chaff and straw out of the sample and out of the separator.
- Once the sample is clean, pour the contents onto the scale to weigh.

Note: Don't forget to tare the scale with the container that you are going to use prior to weighing your sample



MOBILE APP FOR ON-THE-GO ANALYSIS

Quick and Easy Harvest Loss Calculation.

The App compliments the Bushel Plus system in the field.

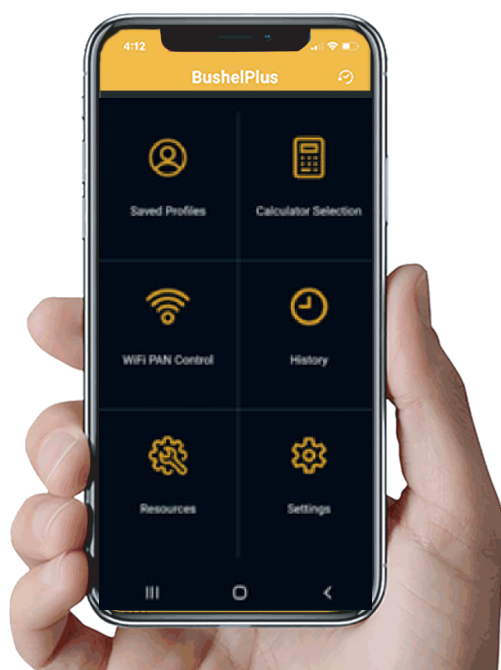
It's as easy as these 5 steps:

1. Download the Bushel Plus - Smart Drop App [Google Play or Apple App store]
2. Create your account with your email and create a password.
3. Register the serial number of your carrier and contact details as your warranty.
4. Choose your language, currency, and unit of measure after your first log in.
5. Pair and add the unit to your phone, and you are ready for use.

Additional Features:

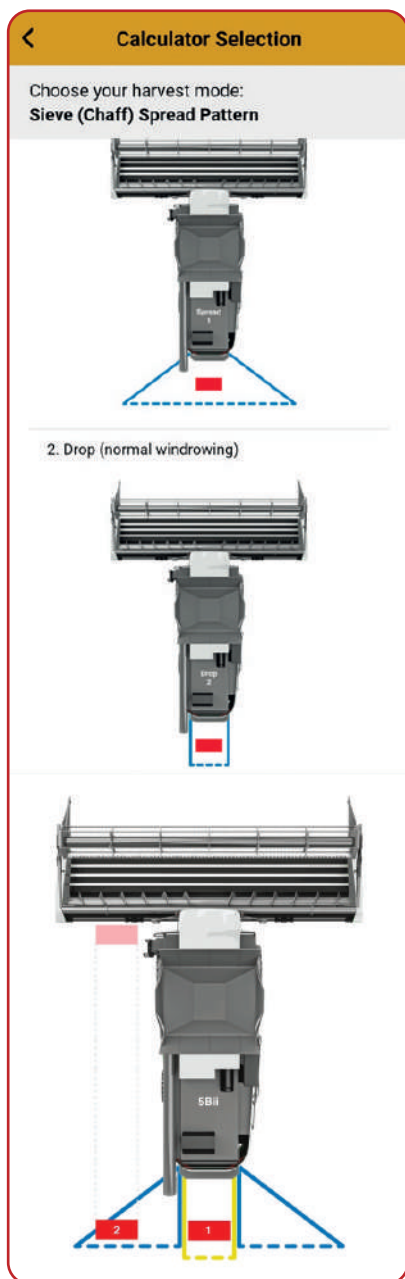
- Drop the pan from the combine through the app on your smartphone
- App includes combine tips from the Canola Council of Canada
- Metric and Imperial measurements
- Option to enter and save your combine settings and crop conditions

MORE GRAIN IN THE BIN - LESS IN THE FIELD

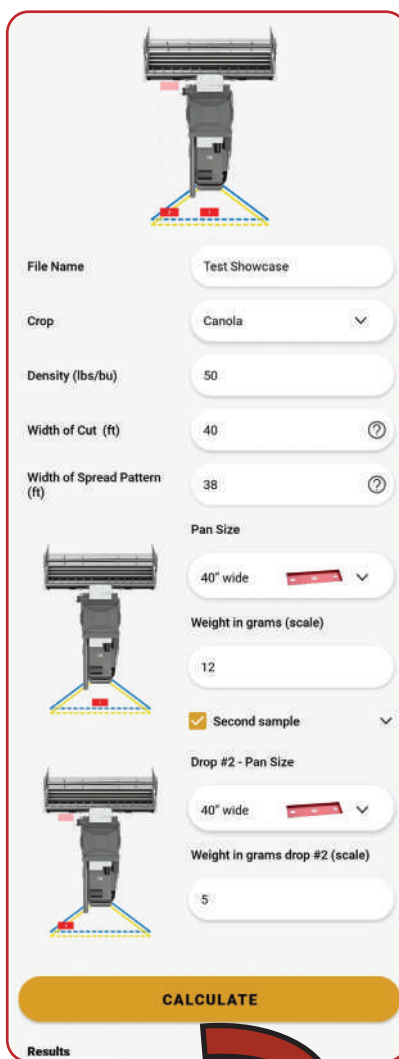


CUSTOMIZED INNOVATION AT HAND

Intuitive quick selections with customizable profiles



Quick and easy harvest loss calculation:



File Name: Test Showcase

Crop: Canola

Density (lbs/bu): 50

Width of Cut (ft): 40

Width of Spread Pattern (ft): 38

Pan Size: 40" wide

Weight in grams (scale): 12

Second sample

Drop #2 - Pan Size: 40" wide

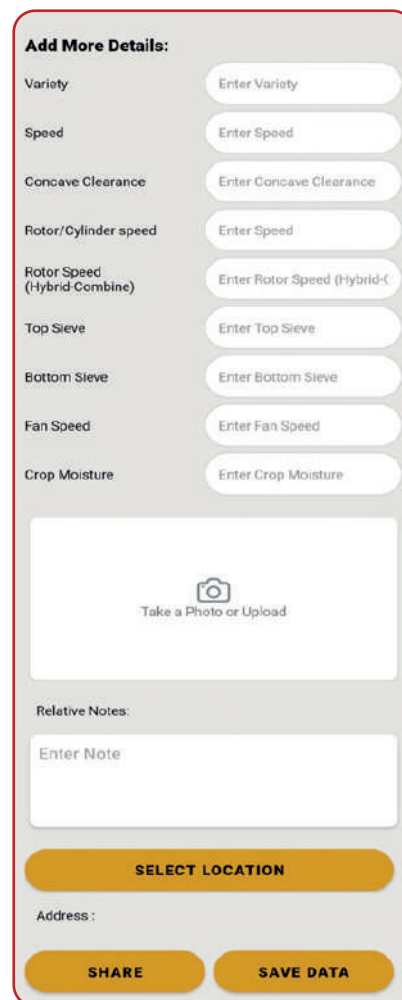
Weight in grams drop #2 (scale): 5

CALCULATE

Results

Learn more about your machine each time you use the app

- Option to enter and share machine settings & crop conditions with your drivers
- Collect data on the go for future reference



Add More Details:

Variety: Enter Variety

Speed: Enter Speed

Concave Clearance: Enter Concave Clearance

Rotor/Cylinder speed: Enter Speed

Rotor Speed (Hybrid-Combine): Enter Rotor Speed (Hybrid-Combine)

Top Sieve: Enter Top Sieve

Bottom Sieve: Enter Bottom Sieve

Fan Speed: Enter Fan Speed

Crop Moisture: Enter Crop Moisture

Take a Photo or Upload

Relative Notes:
Enter Note

SELECT LOCATION

Address:

SHARE **SAVE DATA**

Detailed results to review in:
bu/ac, % total loss, \$/acre, \$/hour

AGRONOMY OF HARVEST GAIN

Average profit increases per acre due to better harvest loss management in different regions.

Region	Soil Type	Avg Profit Increase [per acre]
Alberta	Brown	\$12.21
	Dark Brown	\$14.80
	Black	\$18.20
	Grey	\$19.32
	Peace River	\$17.66
	Irrigated	\$28.20
Saskatchewan	Brown Soil	\$13.73
	Dark Brown	\$16.56
	Black	\$18.27
Manitoba	All	\$19.56
Eastern Canada	All	\$33.69

*Note: All data supplied by MASC, Provincial Governments of Quebec, Ontario, Manitoba, Saskatchewan and Alberta, or Statistics Canada. All values are based on data from 2019 and 2020 growing seasons.

“ It paid for itself in the first quarter of canola. We were very satisfied with all of the hardware - well built and easy to use. The app is the [best]. ”

Matthieu Bauche, Redvers SK



“ The Bushel Plus paid for itself many times over on our farm. We didn't realize we were throwing out what we were... ”

Brian - Brightstone Colony

