

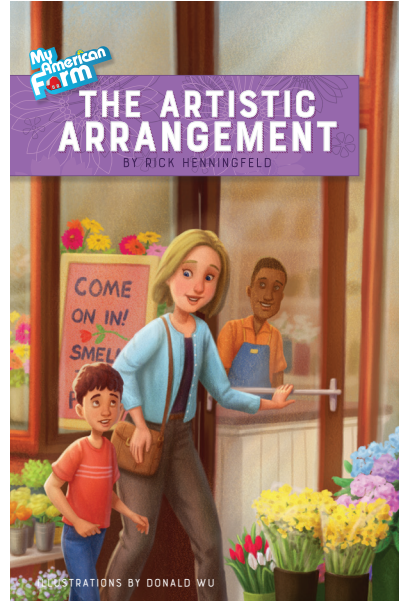
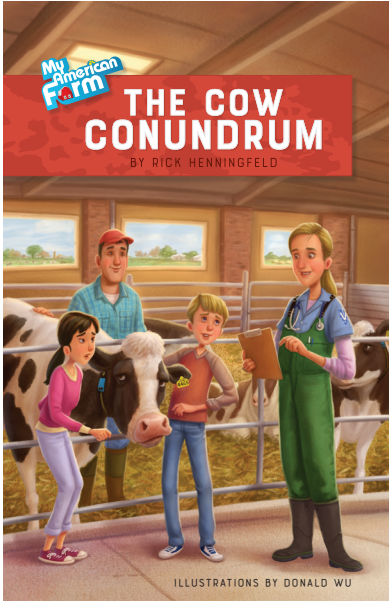


# THE VIBRANT VARIETY

BY RICK HENNINGFELD



ILLUSTRATIONS BY DONALD WU





**THE MY LITTLE AG ME BOOK SERIES** is designed to introduce agricultural careers to youth. Our hope is the stories create curiosity around the highlighted careers and thought processes professionals use to complete their work.

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To Brooke and all the kiddos  
who keep my life vibrant each day!

Love you.

R.D.H.

## **BOOK TITLE VOCABULARY:**

**VIBRANT** [adjective]: having or giving a sense of strong life

**VARIETY** [noun]: things that differ from each other

## **HIGHLIGHTED CAREERS:**

**PLANT SCIENTIST:** Someone who studies and does research on plants

**PRODUCE BUYER:** A person that buys fruits and vegetables for a business

# CHAPTER 1: WELCOME TO CAMPUS!

“This is going to be AWESOME!” I thought to myself as I looked out the window of our family van, as we drove down the interstate.

Hi, I’m Jonah and I have been looking forward to this day for a long time. Today, my family is going to visit the college that my dad went to which also happens to be home to my favorite college football team, basketball team, hockey team...well, I love all their teams.

My dad said that when he went to school there, he had classes with people who are now in the NFL, NBA, and played on Olympic teams. He said that it was normal to see these people on the sidewalks every day!

I asked my dad for the hundredth time, “So, how many famous people do you think we will see today?”

He responded, “Well, you will see a lot of things today. Just keep your eyes open! Who knows what could happen?”

We finally got to the campus, and there were people everywhere.

How would I find Moose in all these people? Moose is the nickname of my favorite basketball player. He is the one person I really wanted to meet that day. Then I remembered that Moose is almost seven feet tall. He would probably stick out! So, I began to scan the crowd for the tallest person I could find.





## CHAPTER 2: NOT WHAT I THOUGHT

Meanwhile, my dad pulled into a parking spot and said, “We’re here!” We were parked in front of a large brick building.

My sister, Brynn, said, “Where is ‘here’?”

Dad responded, “This is Horticulture Hall. I have some fond memories in this building.”

“What’s Horticulture?” I asked. My dad thought for a second and then said, “It’s the science of growing plants. When I was at school here, I spent a lot of time in this building learning about all sorts of plants. Let’s go in! I think that will help you understand.”

I quickly responded, “Dad, when are we going to the football

field or basketball arena?”

He assured me we would check those out later. Well, this is not what I expected, I thought. How would I find Moose in here?

Brynn and I hopped out of the van and followed Dad into the building. Outside the door was a big sign that said, “Welcome to Horticulture Hall! Open House Today! Come in and meet our Plant Scientists.” Hmm, I didn’t want to meet a plant scientist. I wanted to meet Moose!

# CHAPTER 3: THE RESEARCH LAB

When we walked in the door, I was instantly struck by the strong smell of my favorite food, french fries!

A lady in a white lab coat, like the ones doctors wear, walked up to us and said, “Welcome to Horticulture Hall! Do you two like french fries by chance?”

She was looking right at Brynn and me.

We both shouted, “Yes!”

“Great! Come on into my lab, I want to show you something.”  
We both looked at Dad.

He smiled and nodded, so we followed the lady into the room where the french fry smell was coming from.

She said, “I am Dr. Jade, and this is my plant science lab.”

Brynn hesitantly asked, “So, you’re a doctor for plants?”

Dr. Jade smiled and said, “Yes, but probably not what you are thinking. I am called a doctor because I am an expert in my field of study: plants. Potatoes to be specific!”



## CHAPTER 4: POTATOES... I LOVE FRENCH FRIES

“So, you take care of sick potatoes?” I asked.

“Sometimes, if the plant gets sick, but that is rare,” Dr. Jade responded.

“I am what is called a plant scientist, and I research and study potatoes.” Dr. Jade grabbed a potato off the table and handed it to Brynn.

“How do you study a potato? They don’t do anything,” I said.

Brynn added, “Except make delicious french fries, potato chips, or mashed potatoes.”

“Exactly!” said Dr. Jade. “My work helps food processors and restaurants create all those foods made from potatoes that you enjoy! How would you like some french fries made from potato varieties we helped create in this very lab?”

I am assuming the excitement on our faces answered the question, as Dr. Jade handed us each a bowl of steaming hot french fries!

# CHAPTER 5: IDENTIFYING A PROBLEM

As my dad reached over to sneak a french fry from my bowl, he said, “Dr. Jade, can you explain what you mean by a potato variety and what your lab did to help create it?”

“Absolutely!” said Dr. Jade.

Just then, a man walked into the lab with a clipboard.

Dr. Jade said, “Perfect timing, Reid!”

As we looked to see who Reid was, Dr. Jade continued, “I would like you to meet Reid. He is a produce buyer, specifically a potato buyer, for a company that makes potatoes into french fries. Reid came to my lab six years ago and told me about a problem his company was having as they were cutting the potatoes into french fries. Reid, can you tell them about that?”

“Sure!” said Reid, as he set the clipboard down and turned toward us. “Let me ask you this, have you ever eaten french fries from a fast food restaurant?”

“Yeah,” Brynn and I answered.

“What do you always look for in that package of fries you get?” he continued.

I quickly responded, “The longest one!”

“Exactly!” said Reid. “My company was having problems with potatoes being all different sizes. We would have some fries that were seven or eight inches long, and some that were about an inch long because the potatoes we were buying to cut into fries were so different in size.”

He grabbed a small and large potato off the table and said, “Do you think these two potatoes would create french fries that were the same size?”

Brynn and I both shook our heads no.

Reid continued, “Which one would you choose to make french fries from and eat them?”

We both pointed at the big one.

“Exactly!” said Reid. “Restaurants were asking my company to provide them with french fries that were nice and long because that is what their customers wanted. I am the one in charge of buying the potatoes which makes me the produce buyer. That makes it my job to find potatoes that were all similar in size, so we could cut them all to the same length.”

Dr. Jade chimed in, “And that is when we met! Reid knew my lab had created some new varieties of potato that were really good for frying.”

Brynn interrupted by asking, “What is a variety?”

Dr. Jade responded, “Great question! It is a specific type of potato with unique characteristics.”

Brynn and I both looked at Dr. Jade with blank stares.

My dad said, “Think of it this way, are all dogs the same?”

Brynn said, “No.”

Dad continued, “Right! They can be big, little, have different colors, or have short or long noses. We categorize these differences into breeds. With potatoes, they call those categories based on

differences, ‘varieties.’”

Dr. Jade held out four potatoes in her hands. One was big and yellow, one was small and red, one looked brownish, and one was purple!

She said, “These are all varieties we have helped create in this lab!”

I finished eating my last french fry and set the bowl on the table.

“Those were good french fries! Were they made from the new potato variety?” I was pretty proud of myself for using that word correctly!

Dr. Jade said, “They sure are!”

Brynn asked, “How did you create a new variety?”

“Let me show you,” said Dr. Jade.





## CHAPTER 6: AN EXPERIMENT

Dr. Jade continued, “We follow a process when we do any sort of research. The first thing is to identify a problem that needs to be figured out which Reid brought to us.”

“What was Reid’s problem?” I asked.

“Reid needed to find a way to buy potatoes that were all the same size. He could have sorted the potatoes, but then what do you do with the ones that are too small or too big? His company would not have any use for them. So, he figured, if we could create a variety of potato that when a farmer planted them they would all grow to nearly the same size that would be the easiest way

to solve his problem.”

“And that is why he came to you, because you are a plant scientist!” said Brynn.

“Exactly right!” replied Dr. Jade.

My dad chimed in excitedly, “This lab has access to a lot of varieties of potatoes. When I was at school here, I worked in a lab like this one! We were breeding different varieties of potato to create a new variety that when fried would make a crunchier potato chip.”

“What do you mean by breeding potatoes?” I asked.

Dr. Jade smiled and said, “Let’s go out to the greenhouse and I will show you.”

We followed Dr. Jade into a large glass building that was really warm. The sun was shining and it was bright! It was also full of buckets with plants growing in them.

“These are the parent potatoes we are using for breeding,” Dr. Jade said.

“Potatoes have parents?” I replied.

My dad said, “Yeah, it’s a little different than mom and me, but a plant will have a parent too. A parent plant is able to make new, little plants, I guess you could call them baby plants....”

Dr. Jade chimed in, “Your dad is right. A plant needs a parent. These are mature, or adult, plants of two varieties of potatoes. You see this flower?” Dr. Jade said as she reached out to grab a small purple flower.

“This is where the breeding happens. We will take the pollen from the flowers on this side of the greenhouse and breed the potatoes on that side of the greenhouse.”

She pulled out a small tool from her jacket pocket and pulled something off the flower.

“What is that?” I asked.

“This is a pair of forceps, or big tweezers, like the ones you might use to remove a splinter from your hand. I am using it to harvest the pollen over here,” she said as she began walking across the greenhouse, “to breed with the plants over here.”

As she took the pollen in the forceps and rubbed it on the flower of another plant.

“This plant will now create seeds that are a mix of both parents which are different varieties. Hopefully creating a new one with the characteristics we want.” Dr. Jade paused and stepped back from her plant.

“How do you know these two variety will create what you want?” Brynn asked.

“Let me take you to the test plot and I will show you.”

We left the greenhouse and walked down the hall and out a back door of the building. It looked like we just walked into a huge garden.

Dr. Jade said, “This is our test plot. It’s where we grow the potatoes and collect data to make sure they are the size we were hoping for.”

# CHAPTER 7: COLLECTING DATA

On a table next to the door were baskets full of potatoes.

Dr. Jade gestured at them and said, “These potatoes were just harvested and need to be measured. You want to help me?”

“Sure,” Brynn and I said.

Although I was starting to think I would never have time to find Moose if we were in a garden all day!

Dr. Jade handed us each a box and said, “This box is exactly five inches long and three inches wide. Place each potato in the box. If it is too big and does not fit, place it over here.” She pointed to a bucket. “If it is too small or does not fill most of the box, put it over here. The rest go in here.” She pointed to other buckets.

We worked through the baskets on the table quickly.

Dr. Jade said, “Great, follow me!”

She grabbed the bucket of potatoes that fit in the box and headed back into her lab.

# CHAPTER 8: ANALYZING THE NUMBERS

Reid turned from the computer he was looking at and said excitedly, “Another set of data!”

“Yup!” said Dr. Jade as she set the bucket on a table. “Now we need to count how many we have. Jonah and Brynn, can you count how many are in the bucket?”

We got right to work counting.

“198!” I shouted.

“Reid, can you add that to our data table on the computer?” Dr. Jade asked.

“Done!” Reid said.

# CHAPTER 9: THE CONCLUSION

Reid clicked on a few more things and said, “Look at this!”

On the computer there were a bunch of numbers and a bar graph.

“I just ran the analysis, and we are getting really close to a new variety we can use! Let’s plant these and collect another round of data,” said Reid.

Dr. Jade agreed and said, “We can start setting up that research tomorrow. I think we are getting really close to a new variety that will solve your problem, Reid.”



## CHAPTER 10: SHARING THE RESEARCH

At this point, I was getting hungry again and asked, “Could we have some more fries!”

Dr. Jade chuckled and said, “If it’s okay with your dad.”

He nodded with approval. Brynn and I washed our hands and each grabbed another bowl. We were not going to pass up the offer to have french fries twice in one day. That is unheard of in our house!

I began scarfing down my fries and Brynn asked, “How do you become a plant scientist?”

A voice behind me said, “Great question, that is what I am

here to find out.”

I didn't recognize the voice, so I turned around and looked up...it was Moose!

Before I could even think, I blurted, “Moose, what are you doing here?”

“I am doing my homework,” Moose responded.

“You have homework?” I said.

I couldn't believe the star of the college basketball team had homework!

“Yeah,” he said. “I am writing an article on the partnership between Dr. Jade and Reid and how they are researching the development of a new potato variety. It's for my Ag Journalism class.”

I was blown away that he knew about this research.

“What's Ag Journalism?” I blurted out.

If Moose was doing that, I wanted to do it too!

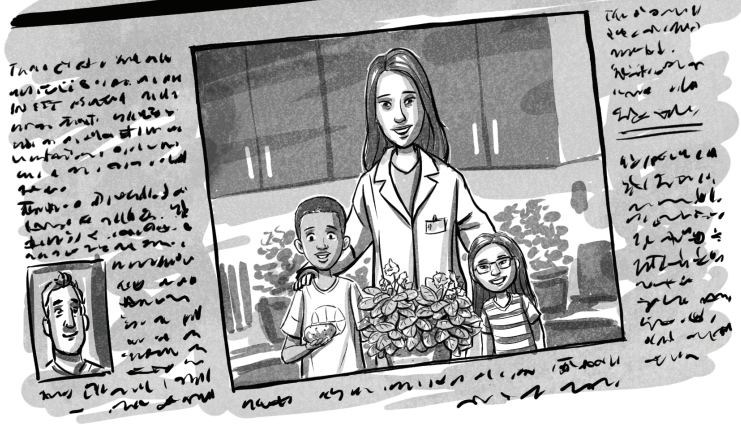
Moose responded, “Ag Journalism or Life Science Communication, technically, is my major or what I study at college. When I graduate I will look for a job writing articles or stories for an agricultural paper or magazine, or maybe a potato company.”

Moose smirked and looked at Reid.

Dr. Jade jumped in and said, “Hey, these guys helped with our data collection today, so they are part of the research. Let's get a picture with everyone and then do the interview.”



# STATE I I I V



## CHAPTER 11: I AM FAMOUS!

The next weekend that picture with Moose’s article made the front page of the “State Times”! The biggest newspaper in the state! I guess that kind of makes me a famous plant scientist!



**DISCOVER YOUR  
PERFECT CAREER** on  
**MyAmericanFarm.org** in  
the game My Little Ag Me.

Use the code “My Ag Job” to unlock a secret level of game play!



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Jonah is super excited to meet his college basketball hero when his dad takes him to the state college. When he gets to campus, he quickly realizes dad has a different plan for him and his sister Brynn. Come along as Jonah and Brynn meet a plant scientist and produce buyer who have been working for years to create a variety of potato to make delicious french fries. This is a college visit Jonah will never forget!



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