God has given human beings guidelines for the type of diet that is best, one that identifies food that will provide health and vitality to live healthful lives. In the Genesis record, God said: ‘‘I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food. And to all the beasts of the earth and all the birds in the sky and all the creatures that move along the ground—everything that has the breath of life in it—I give every green plant for food. ‘ And it was so’’ (Genesis 1:29, 30, NIV).1 Also, in The Ministry of Healing, Ellen White noted that grains, fruit, nuts, and vegetables constitute the diet chosen for human beings by the Creator. These foods are the most healthful and nourishing when prepared simply and naturally. They impart strength, a power of endurance, and a vigor of intellect that are not obtained from a more complex and stimulating diet.2

Adventist education promotes wholistic mental, physical, social, and spiritual development. Learning about food and nutrition at school helps students understand God’s plan for their overall health. Schools can also help parents learn how to provide for their children’s nutritional needs at home to better support wholistic learning and development. Teaching and implementing plant-based approaches to eating is one way Adventist schools can do this.

Why Plant-based Diets?

Plant-based diets are becoming popular globally for several reasons, including the prevention and treatment of chronic human diseases such as hypertension, obesity, and type 2 diabetes. Emerging evidence indicates that plant-based diets, usually high in fiber content, can help to lower the production of uremic toxins, and this helps the gut microbiome.3

The increased interest in plant-based eating has led to increased production and accessibility of meat and plant-based dairy alternatives such as soya, oat, almond, and coconut plant-based drinks, plant-based oils, and vegetable spreads.4 There has been an increase in food appropriate for vegetarian and vegan diets, which can be considered a part of a plant-based dietary regimen. Restaurants, food outlets, and snack companies have in-

BY SHONDELL DEVELDE
Dicated increased sales and consumption of snacks made from seeds, nuts, and pulses (legumes).5

Health and environmental concerns are two major driving forces behind the shift to plant-based diets. Studies have shown an association between the high intake of red and processed meat and an increase in some forms of cancer. The increased interest in plant-based diets is also linked to ethical, animal welfare, and environmental concerns. Some people believe that changing the frequency and types of food eaten can reduce the pressure on the global food system. Consuming more plant-based products, as encouraged by most dietary guidelines globally, helps to protect the environment.6 An important decision that a person can make to prevent chronic diseases and improve overall energy and health levels is consistently consuming diets high in plant-based foods.

What Are Plant-based Diets?

Plant-based diets are dietary patterns that focus on foods from plant sources. These foods include fruits, vegetables, beans, legumes, whole grains, proteins, seeds, nuts, and oils. Students and their parents may voice concerns that plant-based diets cannot meet dietary needs; however, this approach to eating can provide almost all the nutrients necessary for optimal health. These nutrients include proteins, carbohydrates, fats, vitamins, and minerals. Continuous research provides extensive evidence about the benefits of plant-based diets to human health. These benefits include but are not limited to the following:

1. Supports the immune system. Plants have essential nutrients that are not obtainable from other foods. These nutrients are minerals, vitamins, antioxidants, and phytochemicals, which keep the body’s cells healthy and balanced to ensure that the immune system can function at its best. In addition, plants help the body fight infections, strengthen the immune system, and protect the body against germs and microorganisms.7

2. Reduces inflammation. The essential nutrients in plants, which include antioxidants and phytochemicals, help to fight inflammation and boost the immune system, neutralize toxins from pollution, bacteria, processed foods, and viruses, and help fulfill many other processes. Antioxidants capture all the free radicals that can cause imbalances in the body.8

3. Helps maintain a healthy weight. One of the most important things people can do to reduce their risk of chronic diseases is to maintain a healthy weight. Excess weight causes inflammation and hormonal imbalance and increases the risk of developing chronic disease, specifically several different types of cancers. A plant-based diet reduces the consumption of foods that lead to weight gain and combined with a balanced intake of calories and an active lifestyle, can prevent obesity.9

4. Increases fiber consumption. Fiber is a component of plant structure; therefore, consuming the required amount of fiber provides several benefits, such as improving gut health, which will help with the absorption of the nutrients from foods that support the immune system and

“I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food. And to all the beasts of the earth and all the birds in the sky and all the creatures that move along the ground—everything that has the breath of life in it—I give every green plant for food.’ And it was so” (Genesis 1:29, 30, NIV).
reduce inflammation. Fiber also lowers the level of cholesterol, stabilizes blood sugar, and aids with regulating the digestive system.10

5. Offers healthy alternatives. Eating plant-based meals does not necessarily guarantee that one avoids the trap of consuming foods high in fat and sugar. Many school cafeterias tend to serve high-fat, high-sugar, and high-sodium snacks or foods prepared in a way that reduces their nutritional value. Obtaining the maximum nutrients and benefits from cooked foods and specific vegetables requires appropriate cooking methods. Cafeteria managers should choose foods with the highest nutrient density: whole grain, high fiber, unprocessed, and organic foods, instead of processed foods such as white bread, white rice, and pasta made from white flour. They should choose 100 percent whole-wheat bread and pasta, and brown rice. They should also limit desserts high in sugar, fat, and carbohydrates, which consumed consistently in high quantities, contribute to weight gain. Careful attention must be given to appropriate cooking methods that preserve the nutritional value of foods. Foods from plant sources are essential to sustain health; consuming appropriate amounts of them will help the body’s system work efficiently.

Planning Balanced Plant-based Meals
Eating a healthful, balanced diet is paramount to maintaining good health and helps people feel their best. A balanced diet means eating the required proportions of food from the five food groups: fruits, vegetables, grains, proteins, and dairy. Food from plant sources such as fortified soy alternatives, almond milk, cashew milk, oat milk, etc., are alternatives for those who choose to eliminate dairy or are unable to process it. However, before transitioning to a plant-based diet, individuals with a medical condition or special needs should seek advice from a registered dietitian or a physician.11 This is especially important in schools where individuals may have specific dietary needs. Contracting the services of a registered dietitian or having one on staff can be beneficial when planning and preparing to meet the needs of the school population.12

The main characteristic of plant-based eating is a high intake of plant-based foods. Even though these foods vary or have different food components, the recommended composition of a healthy plant-based diet generally includes the following:
- Vegetables, fruit, and whole grains;
- Low-fat dairy products (or dairy alternatives), nuts, seeds, legumes;
- Unsaturated fat;
- Lower intakes of processed or refined grains, sugar-sweetened foods, and beverages.13

Some suggestions for helping students eat a healthy, balanced, plant-based diet:
- Promote eating at least five portions of a variety of fruits and vegetables every day.
- Prepare meals from higher-fiber, starchy foods like potatoes, bread, rice, or pasta.
- Offer some dairy or dairy alternatives such as soya drinks and almond milk.
- Incorporate beans, pulses, and other proteins.
- Choose unsaturated oils, and spreads, and eat them in small amounts.
- Promote drinking plenty of fluids, at least six to eight glasses of pure water each day14 and consider situating water stations throughout the school.

Nutritional Limitations of Plant-based Diets
Consuming a nutritious plant-based diet requires that individuals be aware of their nutrient needs and the sources of those nutrients. After obtaining that knowledge, they can plan and prepare a diet that provides them with the daily required nutrients for optimal health. Grains, fruit, and vegetables are found in large quantities in plant-based diets and provide adequate nutrients in plant foods such as carbohydrates, fiber, protein, and vitamins. Plant-based diets should provide the most natural nutrients such as carbohydrates, fiber, protein, healthful fats (polyunsaturated, monounsaturated), and macro- and micronutrients in adequate amounts.

However, physicians and nutrition professionals have opined that a strict plant-based diet usually lacks vitamin B12, vitamin D, and calcium, which are mainly derived from animal sources. Vitamin B12 (cobalamin), is naturally found in animal foods and is an essential nutrient to the body as it keeps the blood and nerve cells healthy, makes up DNA, the genetic material of all cells in the body, and, along with vitamin B9 (folate), helps to prevent megaloblastic anemia. This blood condition makes people tired and weak.15

On the other hand, vitamin D promotes intestinal calcium absorption and helps maintain adequate blood levels of calcium and phosphorus, which is necessary for healthy bone mineralization. An adequate vitamin D intake supports good immune system function and reduces the risk of autoimmune diseases. The human
body produces vitamin D as a response to sun exposure. It is highly recommended that individuals who consume plant-based diets should find alternative ways of obtaining these nutrients. These alternative sources may include supplements as recommended by their physicians and the consumption of fortified foods with these nutrients.

Transitioning to a Plant-based Diet

For some individuals, transitioning to a plant-based diet can be challenging. Human beings are creatures of habit. Transitioning from consuming animal to plant food sources requires changes in people’s eating habits and dietary behaviors. Habits are formed when behavior is frequently and consistently performed in the same context. An example of habitual behavior is children frequently and consistently eating fruits at snack time. At some point, eating fruits at snack time will become a habit. The regular co-occurrence of context and behavior creates an association that may guide future behavior.

Transitioning to a plant-based diet can be challenging if there is a lack of affordable and available foods needed to sustain a balanced diet. “Food deserts” are areas where 20 percent or more of the population live in poverty or have limited access to stores that sell nutritious foods such as fresh fruits and vegetables. These are real challenges for which communities are still trying to find solutions; however, some recommendations include utilizing frozen produce, dried beans, and legumes or accessing community gardens. Additional garden options, especially where there is limited space, include raised bed gardens, container gardens, or scrap gardens (typically used for fresh herbs).

Behaviors modeled at school can be encouraged at home. Here are suggestions that schools can share with parents through newsletters, in-school seminars, or cooking classes:

**Recommendations for Transitioning to a Plant-based Diet**

1. **Eat a variety of vegetables.** Choose a variety of vegetables, including many colors, for lunch and dinner. Enjoy vegetables as a snack with sauces made from other vegetables, such as low-sodium salsa or hummus.

2. **Change the way you think about meat.** Use smaller portions in your meal until it is eliminated from your diet.

3. **Choose healthy fats.** Fats in olives, olive oil, nuts, seeds, and avocados are healthful sources of good fat.

4. **Prepare a plant-based meal for dinner at least once per week.** The plant-based meal should be built around vegetables, beans, and whole grains.

5. **Include whole grains for breakfast.** This includes oatmeal, quinoa, buckwheat, barley, rice, bread, and other whole grains and seeds.

6. **Use green leafy vegetables.** Eat a variety of green leafy vegetables such as kale, spinach, collards, Swiss chard, and other greens each day. Steam, grill, braise, or stir-fry to preserve the nutrients and their flavor.

7. **Build a meal around a salad.** Eat a bowl with romaine, spinach, or red leafy greens salad. Add a mixture of other vegetables and fresh herbs, beans, peas, or tofu. Careful attention should be given to food preparation to avoid food-borne illnesses such as E. coli.

8. **Eat fruit for dessert.** Use fruit in various forms such as juice, whole, diced, sliced, and pureed.

**Can Plant-based Diets Support Sustained Growth for Children?**

When children consume plant-based diets, a common concern is nutritional inadequacy; as a result, parents who choose to provide plant-based diets for their children as well as school food-service managers need to be knowledgeable about the nutritional adequacy of the foods children consume daily. Consuming unplanned and unbalanced plant-based diets can increase children’s risk of not meeting the daily required nutrient intake of some nutrients like vitamin D, vitamin B12, calcium, iron, and omega-3 fatty acids.

Like their peers who consume animal-based diets, children eating well-planned plant-based diets can receive adequate nutrients, grow well, and enjoy sustained health. Children’s protein and energy needs can be met by fortified cereals, bread, rice, or pasta served with various sources such as beans, peas, nuts, legumes, and unsaturated fats. Similarly, whole-grain foods and vegetables are sources for children’s mineral requirements, but some minerals such as zinc and iron may be lacking in the diet; hence, supplements and fortified food sources may be needed to meet the daily requirements. Children who consume plant-based diets obtain their proteins from only plant sources. Therefore, food service managers and parents should carefully choose the food sources and use a combination of plant-based proteins to ensure that their children consume the daily required intake of protein (see Sidebar 1 on page 15).

**Evidence-based Practice in Schools**

Evidence-based nutrition education will help children develop appropriate food and nutrition habits. Teaching children and their parents to prepare and choose a wholesome plant-based diet can be a means of helping children practice healthful living behaviors. The foundation for good health across the lifespan is developed during childhood.

Like the home, schools provide a great immersive experience to teach and help children and families learn about planning, shopping, and preparing healthful meals. The food and nutrition curriculum in schools should provide training in food skills and opportunities for extra-curricular activities, including food services, community nutrition, and health evangelism. For this reason, facilitating nutrition education in schools as a standalone discipline that is both concept and skill-based is beneficial to...
students because it can achieve the end goal of helping them become knowledgeable about food and its importance to the body.26

Evidence-based opportunities
As the homeroom teacher of the 7th grade in a Seventh-day Adventist school, I incorporate aspects of nutrition education in my family-life classes. I teach children that their bodies are the temple of God, and He expects them to take care of them. Children are taught that healthful eating is one of the ways God expects them to take care of their bodies (see Sidebar 2 for a survey of my students).

Evidence-based nutrition education will help children develop appropriate food and nutrition skills.27 The students’ responses to the survey, observing their dietary behaviors at school, and knowledge about healthful eating, provide extensive opportunities for me to promote plant-based eating in school.

My current work setting stipulates that only vegetarian meals should be prepared and served on the school’s campus. Most of the student population are not Seventh-day Adventists, and they need to know the school’s policies and nutrition guidelines regarding school meals. Even though students are not forced to choose plant-based meals, they will be exposed to the health benefits of making good food choices and encouraged to increase their daily intake of fruits and vegetables.

The students surveyed indicated that they do not have a kitchen garden, nor are they involved in backyard farming, which is an increasing practice in the local community. The students also indicated that having a kitchen garden could help increase their intake of fruits and vegetables. These dynamics provide opportunities for the school to promote and establish a school garden to teach children how to grow fruits and vegetables, provide opportunities for physical activity and social interaction, and even offer a source of income for the school, all of which will extend beyond the parameters of the school setting. Promoting a plant-based diet in Seventh-day Adventist schools also promotes opportunities for community nutrition and health evangelism.

Conclusion
In 1 Corinthians 10:31, the apostle Paul wrote, “So whether you eat or drink or whatever you do, do it all for the glory of God” (NIV). Preparing and serving healthful, attractive plant-based meals is an excellent way to help children and adults embrace the plant-based lifestyle. Sharing tasty, nutritious recipes that require inexpensive ingredients and are simple and easy to prepare is also a way to engage and facilitate a change in attitude toward plant-based eating. For most individuals, transitioning to such a diet requires careful planning, budgeting, time management, and commitment to positive dietary changes. This is because some of the nutrients required for the optimal functioning of the body can be obtained only from a combination of plant-based sources.28 Individuals preparing and serving plant-based meals, particularly to children, should ensure that the meals consist of foods from each food group, including fruits, vegetables, healthy carbohydrates, and proteins. All these nutrients are excellent nutritional sources for a healthful diet.

At every stage of a person’s life, healthful eating is necessary. In the case of children, parents and teachers are responsible for teaching them about healthful food choices and eat-
I developed and conducted a survey for my 7th-grade class to determine their views of plant-based diets. The class had 10 students. Five were Seventh-day Adventists, and five were non-Seventh-day Adventists. This small group is not generalizable to a global population; however, it provides a glimpse into how students in my context (Freeport, Bahamas) respond to plant-based eating. The interview questions and students’ responses are as follows:

**Do you understand what the phrase “plant-based meal” means?**
Six students believed a plant-based diet consisted of foods from only plant sources, while four of them believed that a plant-based diet consisted primarily of foods from plant sources in addition to some animal sources.

**Have you ever had a meal consisting of only food from plant sources?**
Four students said they had never eaten an entirely plant-based meal. Six students stated that they had had total plant-based meals before, and two of them who are Seventh-day Adventists indicated that they eat entire plant-based meals at least once per week.

**Can you share one of your typical daily meals?**
All the students ate similar foods daily despite being from diverse backgrounds. These foods were rice, chicken, peas, meat, eggs, sausage, bread, and fruit drinks. There was a noticeable absence of fruits, vegetables, and grains other than rice from the students’ daily meals.

**Do you think that people should eat only food from plant sources?**
Only two students believed they should eat a plant-based diet only, and these two students were Seventh-day Adventists.

**Do you eat fruit and vegetables every day?**
Three of the 10 students indicated that they ate fruits and vegetables some days.

**What are some of your reasons for not eating fruits and vegetables daily? (Students could choose more than one option.)**
Six students said fruits and vegetables were too expensive to eat daily. Five students said that they did not like fruits and vegetables. Three students said they were tired of eating the same type of fruits and vegetables; as a result, they did not eat them daily.

**Do you think eating fruits and vegetables every day is good practice?**
Five of the students believed that eating fruits and vegetables every day was good practice.

**Do you believe that you should increase your daily intake of fruit and vegetables?**
The five students who indicated that eating fruits and vegetables every day was a good practice also indicated that they should increase their daily intake of fruit and vegetables.

**Does your family have a kitchen garden, or are they involved in backyard farming?**
All the students indicated that they did not have a kitchen garden, neither did they have an opportunity to be involved in backyard farming.

**Do you think if you had a kitchen garden, it would increase your intake of fruits and vegetables?**
All the students believed that they would increase their intake of fruit and vegetables if they grew them.

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**Sidebar 2. Students’ Views of a Plant-based Diet**

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**This article has been peer reviewed.**

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**Recommended citation:**

17. Ibid.


28. Some examples of this include grains combined with legumes such as bean soup and crackers or black beans and rice; or nuts and seeds combined with legumes such as garbanzo hummus or lentils with almonds. For more examples, see Sheereen Lehman, “Complete Protein Combinations for Vegans” (2023): https://www.verywellfit.com/vegan-protein-combinations-2506396; Kerry Health and Nutrition Institute, “Nutrition for Plant-based Diets: Managing Nutrient Intake and Bioavailability” (2020): https://khnkerry.com/news/nutrition-for-plant-based-diets-managing-nutrient-intake-and-bioavailability/.