



# MILKED

WHITE LIES IN DAIRY LAND

DISCUSSION & EDUCATION GUIDE





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# OVERVIEW

## FILM SUMMARY

**MILKED** is a topical feature documentary that exposes the whitewash of New Zealand's multi-billion dollar dairy industry. Young activist Chris Huriwai travels around the country searching for the truth about how this source of national pride has become the nation's biggest threat. New Zealand has rapidly gone from a land with no cows to being the biggest exporter of dairy in the world, and yet the industry seems to be failing in every way possible.

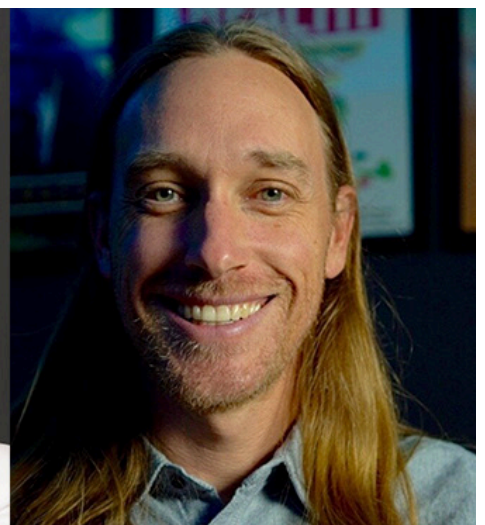
Featuring interviews with high-profile contributors such as Dr. Jane Goodall, environmentalist

and former actress Suzy Amis Cameron, and *Cowspiracy* co-director, Keegan Kuhn, **MILKED** reveals the behind-the-scenes reality of the kiwi dairy farming fairy-tale. It uncovers alarming information about the impacts of the industry on the environment and health, leading up to the discovery that we're on the edge of the biggest global disruption of food and agriculture in history.

An impactful global story told with a local eye, the film also points to what New Zealand and other countries can do to change their fate.

"WE ALL EACH HAVE A RESPONSIBILITY BECAUSE EVERY DAY WE LIVE WE MAKE SOME IMPACT ON THE PLANET. WE HAVE A CHOICE AS TO WHAT SORT OF IMPACT WE'RE GOING TO MAKE. AND IF BILLIONS OF PEOPLE MAKE ETHICAL CHOICES EVERY DAY, EVEN SMALL ONES, THAT'S GOING TO LEAD TO CHANGE. AND EVENTUALLY THE IMPOSSIBLE WILL HAVE BECOME POSSIBLE AND WE'LL CHANGE THE WORLD."

DR. JANE GOODALL



## DIRECTOR'S STATEMENT



When I decided to make this film, the original idea was to investigate the environmental and health impacts of all animal agriculture in New Zealand. But as we began researching and started to get deeper into it, it soon became obvious that dairy was the story I needed to tell. What we uncovered was even more shocking than what we could have imagined, and it was also evident that the impacts are similar worldwide. With each interview, we understood more clearly just how alarming and wide-reaching the impacts of the dairy industry were, despite our country's claim to be the world's best dairy producers.

This film has been a labor of love, and I have spent the last three years of my life working closely with the people in the film, and the scientists, politicians, and farmers who, like myself, have a vision for change. My goal is not to tear down an industry, but to reveal a vision for the future where we can truly understand the challenges before us to build towards a more sustainable future.

We felt excited learning about the alternatives and solutions - how farmers can transition away from animal agriculture, and how through the simple act of what we choose to

eat, we can create a more positive future for people, the planet, and the animals we share it with. **MILKED** exposes the truth, and explores the solutions. We can't sustainably and ethically produce animal protein to feed the world's growing population, and it's time to wake up to that and focus on a new way forward. We hope you will join us!



—AMY TAYLOR



## OVERVIEW

### SCREENING AN ISSUE-BASED FILM

**MILKED** is a film with a mission - to educate audiences about the impacts of the dairy industry on our health and planet, and to offer potential solutions and alternatives.

**MILKED** is part of a genre of issue-based films that illuminate the harms of industrialized food systems. It is important to keep this point of view in mind as you plan and host a screening. Acknowledging that the film

conveys a specific perspective offers an opportunity for dialogue about critical media literacy so vital in today's media-rich environment.

**MILKED** is uniquely useful for this approach as so much of the investigation, including questioning the veracity of different websites and the way different kinds of research is funded, is a clear part of the film's narrative.



### USING THIS GUIDE



**MILKED** is a springboard for dialogue, education, and action in many settings, including community based organizations, advocacy groups, classrooms, and higher education campuses. This guide provides suggestions and tips for hosting and facilitating an event in multiple community settings, with the dialogue questions and suggested activities easily adaptable for classrooms. The "Pathways for Education" section includes research prompts for faculty to encourage students to research, learn more about the dairy industry in their region, or

delve deeper into any one of the topics raised in the film.

Reference the [MILKED Booklet](#), or the annotated [Facts](#) page available for free on the [MILKED.film](#) website to explore the science detailed in the film.

The film is available to screen for free on the documentary film platform [WaterBear.com](#). The platform requires free registration, but streaming on the platform benefits the film team by giving us a sense of who is using the film and how. The film is also available for free on [YouTube](#).

# FILM CHAPTERS

For educators in middle or secondary schools, or for other groups with limited time or focused interest, the film has also been edited into five shorter chapters. These chapters will enable educators and students to concentrate on the particular area of study most relevant to them.

### ▶ **Chapter 1: Environment** (28:39)

The focus in this chapter is on the multiple negative environmental impacts of the dairy industry. Those effects include the impact of the greenhouse gas emissions produced by dairy herds, the use and pollution of water and land, and the unsustainability of using land and water to support animal agriculture rather than regenerative plant-based food production that is a more efficient and sustainable.

### ▶ **Chapter 2: Health** (9:34)

This chapter explores the widely held and false assumption that dairy products are beneficial for people, even leading to widespread

distribution of milk through schools. Not only is dairy unnecessary for humans, but many studies show a correlation between dairy and increased rates of cancer and other common illnesses. In addition, around 65% of the global population is lactose intolerant.

### ▶ **Chapter 3: Economy** (7:47)

This chapter discusses the current and impending economic collapse of the dairy industry. Powerful lobbies and government interests are preventing the necessary shifts to more profitable and sustainable plant-based agriculture.

### ▶ **Chapter 4: Animal Welfare** (11:00)

*Content note: this chapter includes graphic images and descriptions of animal cruelty.*

An exploration of the impact of the dairy industry and other animal agriculture on the animals themselves, including the cruelty of conditions in industrial agricultural settings,

especially the treatment of surplus calves as byproducts of the industry.

### ▶ **Chapter 5: Solutions** (21:37)

This chapter presents multiple solutions to the harms caused by the dairy industry, from individual actions like purchasing and eating fewer dairy products, to feasible alternatives for farmers in need of new sources of income, technological disruptions to the industry, and policy solutions like incentivizing sustainable uses of land and water. This chapter also includes information about the relationship between animal agriculture and pandemics like COVID19.





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“I HAVE HOPE FOR A DIFFERENT FUTURE - INSTEAD OF CONTINUING DOWN THIS DOOMED PATH, WE COULD GROW HEALTHIER AND MORE SUSTAINABLE PLANT-BASED FOOD FROM LESS LAND, REWILD THE LAND WE GAIN BACK, AND LIVE ETHICALLY WITH ALL LIFE ON THIS PLANET.”

MILKED



# HOST A SCREENING

## FACILITATING GREAT CONVERSATIONS

A screening of **MILKED** will likely evoke lively discussion and interest, and for some strong opinions and emotions. Keep these tips in mind to set the tone for learning and productive dialogue:

**Prepare Yourself:** Watch the film beforehand and read through this guide so you can map out the agenda for your screening, and notice your own emotional responses to the film.

**Be Clear in Your Invitation:** In your invitation, be clear about the goal of your screening. That way, your audience will walk in expecting education, dialogue, and/or calls to action and won't be surprised.

**Facilitate Gently:** Let your audience know your role as a facilitator is to encourage people to share ideas and learn from one another. It is helpful to offer some guidelines for the group, like not interrupting

one another, paying attention to who is and isn't speaking, and allowing for multiple perspectives.

**Encourage Listening to Understand:** Remind your audience that everyone will come to the film with different life experiences and ideas. Ask audience members to listen to each others' ideas with the intent for understanding, rather than changing minds.





## HOST A SCREENING



### Pre-Screening Questions

Before watching the documentary with students or community members, take a moment discuss these questions:

- What words come to mind when you picture a glass of milk?
- What words come to mind when you picture a dairy farm?
- What interests you about the film MILKED?
- What do you expect to see in this film?



### Post-Screening Questions

Offer audience members a few moments to gather their thoughts after you watch the film. Some people benefit from writing down their thoughts and responses before participating in dialogue.

- What did you see in the film that was new or surprising to you?
- Think back to the words that came to mind when you thought of a glass of milk or a dairy farm before the screening. Would you choose different words now? What would they be?
- The film focuses on the dairy industry in New Zealand. How do you imagine the dairy industry in your country or region is similar or different?
- In the film, activist Chris Huriwai reviews research to understand the dairy industry in New Zealand. If you were to conduct similar research in your area, where would you start? What search terms would you use?
- What actions and solutions to the damage done by dairy and the dairy industry stood out to you?
- How might this film influence your own decisions about what you eat and drink?



## ADDRESSING COMMON MYTHS ABOUT DAIRY

There are many common misconceptions about the dairy industry and dairy products. To support audiences and classrooms in dialogue, consider projecting or printing these myths as a handout, or posting them around the screening room in a gallery-style.

### **MYTH: Dairy is part of a healthy diet**

Though mother's milk is a critically important part of the diet for infants and toddlers, cow's milk is neither particularly healthy for or suited to most human dietary needs. In fact, 60-75 percent of people on the planet lack the ability to break down the lactase enzyme found in milk after the age of 20.<sup>1</sup>

### **MYTH: Dairy is the best source of dietary calcium**

Calcium is an important part of growing and maintaining strong and healthy bones, but dairy is not an efficient way to get calcium into our systems. Dairy is associated with obesity, diabetes, and other chronic illnesses.<sup>2</sup> The best sources of calcium are plant-powered,

including fruits and vegetables, especially dark, leafy greens. Tofu, almonds and kidney beans are also great sources of calcium.

### **MYTH: An attack on the dairy industry is an attack on farmers**

Farmers are a critical part of our food security and food systems. Though there are farms and farmers who rely on dairy for their livelihood, they are the audience most urgently in need of the information that the industry as a whole is not sustainable. Any solution to the harms caused by dairy must include consideration for different crops and/or different farming methods to support farmers.

### **MYTH: Dairy cows are happy cows**

The dairy industry causes harm to its cows. Dairy cows are separated from their young and have been selectively bred to produce more milk, causing mastitis and other illnesses. They are also forced to calve each year and be milked intensively, which shortens their lifespans from an average

of 20 years to 5-6 years, as when their milk production drops, they are sent to be slaughtered.<sup>3</sup>

### **MYTH: Grass-fed cows are good for the environment**

Grass-fed animals on industrial farms require nitrogen-rich synthetic fertilizers that pollute groundwater and waterways. Furthermore, contrary to popular belief, any potential carbon sequestration on farms, even grass-fed ones, does not compensate for the methane produced by the cows.<sup>4</sup>

### **MYTH: New Zealand has the most emissions-efficient dairy industry in the world**

Fronterra, New Zealand's largest company and dairy exporter, has grossly underreported its carbon emissions - producing 44 million tons rather than 22 million tons - more than the entire nation of Sweden, which has twice the population of New Zealand.<sup>5</sup>

Learn more Dairy Facts at [Milked.Film/Facts](#)





“EVERY TIME YOU PUT PLANT  
BASED FOOD ON YOUR PLATE,  
YOU’RE DOING SOMETHING GOOD  
FOR YOUR HEALTH AND FOR THE  
ENVIRONMENT AND FOR THE  
ANIMALS.

IT WILL NOT MATTER IF WE  
HAVE ELECTRIC CARS, OR IF WE  
HAVE SUSTAINABLE CLOTHING  
TO WEAR, IF WE DON’T DO  
SOMETHING ABOUT OUR  
ENVIRONMENT. AND THAT IS A  
HUGE PIECE OF IT, IS TO BE ABLE  
TO SHIFT AWAY FROM ANIMAL  
AGRICULTURE.”

SUZY AMIS CAMERON, OMD AUTHOR



# FILM BACKGROUND



**MILKED** is an exploration of the impact of the dairy industry in New Zealand, but the challenges and solutions it raises are of global importance.

## **History & Colonization**

Dairy cows are not native to New Zealand. Prior to the arrival of British settlers in 1769, the indigenous Māori population thrived on a diet excluding any dairy products. The British settlers introduced the first dairy cows, rapidly changing both the landscape of the islands and the diet of the indigenous people.

## **The Dairy Industry in New Zealand**

In recent times, a marked increase in global demand for dairy products has produced a “white-gold rush” in New Zealand, prompting many farmers to convert sheep pastures to more profitable dairy farms. This shift has caused a rapid and substantial decline in the sheep population and an enormous increase in the dairy herd size.

Milk products are, by far, the largest export products from New Zealand to the rest of the world, and New Zealand is the largest exporter of dairy

products to the world, exporting nearly twenty thousand tons in 2020 alone.<sup>6</sup> New Zealand’s dairy industry contributes an estimated \$10 billion New Zealand dollars to the national economy every year,<sup>7</sup> and the dairy company Fonterra is New Zealand’s biggest company.

## **The Dairy Industry Globally**

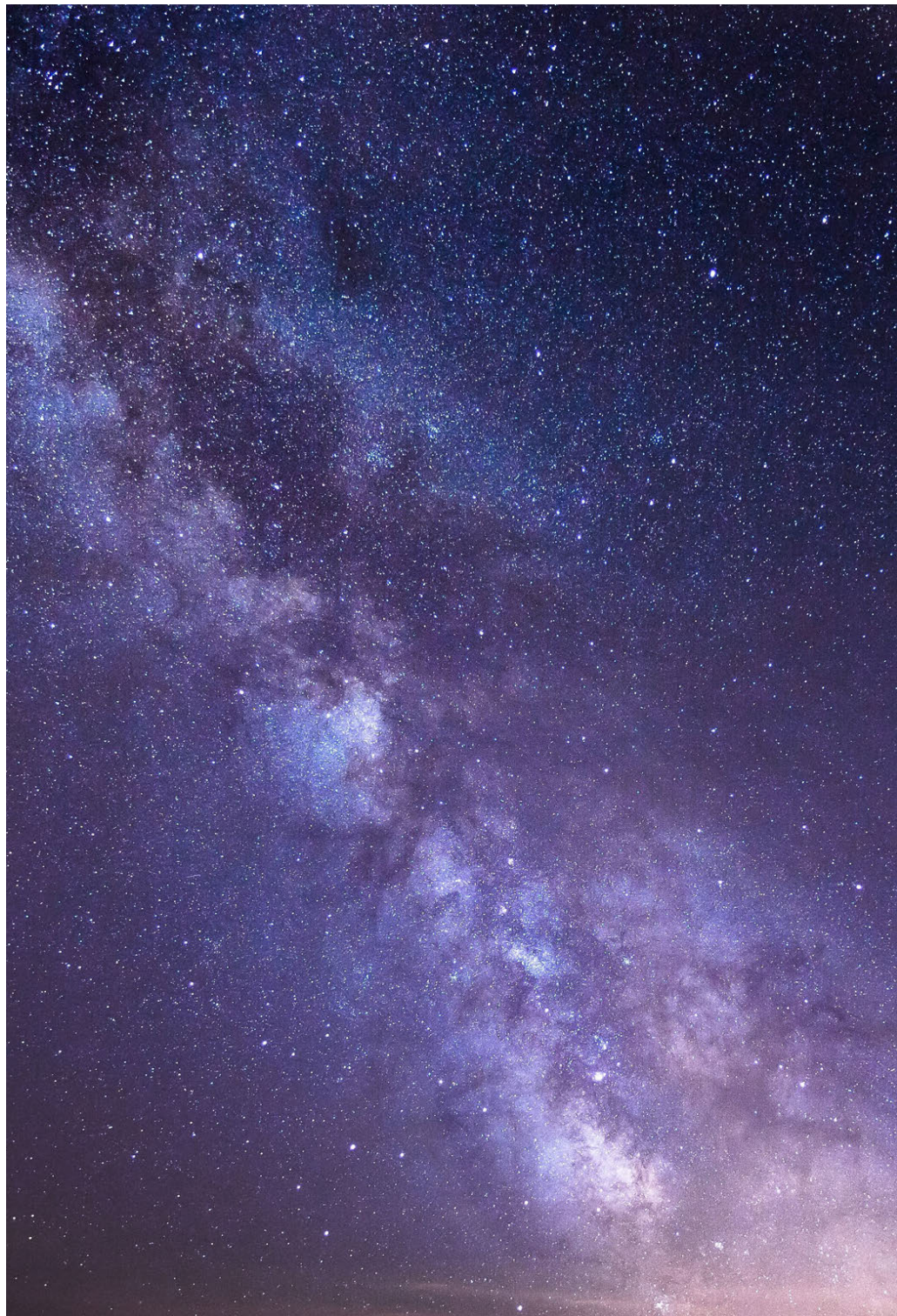
World trade in milk products increases yearly, driven in particular by increases in demand for them in China, Saudi Arabia, Brazil, and other countries. After New Zealand, the United States and the European Union are the largest exporters of milk products.<sup>8</sup>



# DISCUSSION TOPICS

A panel discussion that features local perspectives, such as dairy farmers, nutrition experts, and/or organizations working on climate change, or others who can offer their perspectives on the dairy industry in your region is always a useful way to learn more after a screening of the film.

Alternatively, each of the following topics includes quotes from the film and suggested discussion questions to use in large or small groups to deepen your audience's understanding. The shorter film chapters (see p 6) are also aligned with each of these topics.





# TOPIC 1: THE DAIRY INDUSTRY AND THE ENVIRONMENT

### LAND USE

“Scientists warn that we’d need at least 5 earths by (2050) if everyone on the planet eats as much dairy and meat as countries like New Zealand & The United States.”

MILKED

“There are too many cows on this planet. And we we can’t keep farming them, even if every single one of them has farmed regeneratively. We cannot be having these land uses which are all about producing milk or all about producing meat, we have to diversify into plant based production. That’s what the science is telling us.”

Genevieve Toop

### WATER

“All through nature for the 10,000 years that humans have been doing agriculture, it’s about natural balances. What we’ve done now is a one-way system. Where the way we have so many cows, is we put heaps of synthetic nitrogen fertilizer on made from fossil fuels. And we’re the biggest importer of palm kernel in the world. So we put all of this stuff on the farm to have this really high stocking rate, we could never have that stocking rate without all these inputs. And so the more you pour into a farming system from the outside, the more leaks out the bottom, and the leaking out of the bottom we’re seeing is the impacts on our waterways. If nitrate turned our rivers red, you know, we wouldn’t have the problem. It’s only because people can’t see it. They don’t know it’s there.”

Dr. Mike Joy

### EMISSIONS

“(Dairy) is a global problem too. The top five meat and dairy companies, which includes Fonterra, produce more emissions than the whole of the United Kingdom and its 66 million people. That’s also more than the oil and gas companies ExxonMobile, Shell and BP.”

MILKED

### Discussion Questions

- In your own words, describe your understanding of the impact of the dairy industry on climate change.
- What are some reasons you heard and saw in the film that the environmental impact of dairy is not more widely known?
- Which of these or other environmental concerns do you think is most prevalent in your region?



### TOPIC 2: DAIRY AND OUR HEALTH

*"I think it would be very, very beneficial for society as a whole if doctors were trained in nutrition, but they're not. They get very limited amounts of nutrition training. And so basically, what they teach is what's popular opinion. The main issue is that the majority of the world's population cannot digest the lactose in milk."*

Shakul Kachwalla

*"Everything that's contained in any of these dairy products or in any animal product, with the exception of vitamin b12 of course, comes from the plants essentially. And so by having the animals eat them first and then us eating the animals it's a very inefficient way of us getting to that nutrition which we could have just got from the plants in the first place. We don't need to filter our nutrition through animals, we'd do a lot better going straight to the source of the nutrition in the first instance."*

Dr. Luke Wilson

*"One study found that even moderate amounts of dairy milk consumption can increase women's risk of breast cancer up to 80%, and yet this isn't even mentioned on our national breast cancer foundation website, who are still promoting dairy products saying they're important for bone health – that same old idea."*

MILKED

#### Discussion Questions

- What is new or different information to you about the health of dairy products?
- What did you see or hear in the film about how information about the relative health of dairy products is disseminated?
- What, if any, of the health issues raised in the film is of particular interest or concern to you?

### TOPIC 3: THE ECONOMICS OF THE DAIRY INDUSTRY

*“New Zealand’s like your beautiful friend that’s just gone and got cancer. And so what’s the source of the cancer? Well, it’s primarily the dairy industry. There’s a particular New Zealand mode of economic development, where we have these bonanzas and the bonanzas are based on cashing in our natural resources. The dairy industry for the last 20 years has been a throwback to that 19th century style of development, where we cash something in, and what we’ve cashed in is our fresh water.”*

Peter Fraser

*“We all just wanna make a dollar. And if it’s better returns growing some alternative foods, show us the money. I think some farmers would be quite happy to hang up the apron and grow crops if that was a better return on investment. I don’t mind changing. If I can provide a better future for my family, I’ll change. I’ll stop milking those cows and I’ll jump ship. It’s quite simple, really, innit?”*

Chris Lewis

*“I did some more investigating and found out even the country’s nutrition guidelines are influenced by the dairy industry. Consultation with “Key stakeholders” meant that Fonterra had a say, and three out of the four issues they raised were changed - including the removal of milk alternatives.”*

MILKED

#### Discussion Questions

- What are the economic concerns and pressures that affect the dairy industry?
- In what ways does the film suggest that local and global markets influence the production, sale, and use of dairy products?



### TOPIC 4: THE DAIRY INDUSTRY AND ANIMAL WELFARE

*"Most people drive past paddocks just like this, and they just see cows eating grass, and they think that that's all there is to it. But when you kind of think about the fact that they're artificially inseminated, the fact that they are then pregnant and being milked for nine months and then they have a baby that's taken away from them every year. I think a lot of people don't know that that happens."*

Debbie Matthews

*"If the animal experimentation industry wasn't so well hidden and people could actually see the research and tests that cows are used in they'd know that it's not natural. If people who go and buy their natural milk from the supermarket saw a fistulated cow that looks more like a Frankenstein animal than a natural cow running about in a field like they probably imagine, it would be pretty clear to them that there is not a lot natural about the dairy industry."*

Tara Jackson

*"It's much more convenient for (the farmers) if they believe that the animals, just because they're bred for food, they're just things and they don't have these emotions. And of course, it's completely untrue."*

Dr. Jane Goodall

#### Discussion Questions

- In what ways, if any, did this film change your idea about the welfare of dairy cows and their calves?
- Do you believe the welfare of animals should figure into the way they are raised for human consumption? Why or why not?
- Should humans consume animals and their products? Why or why not?

“IF EVERYONE ATE A PLANT-BASED DIET WE’D FREE UP LAND AREA GREATER THAN THE SIZE OF AFRICA. A LOT OF THE WORLD’S FARMLAND COULD BE RETURNED TO NATIVE SPECIES, AN EFFECTIVE WAY OF STORING CARBON AND INCREASING BIODIVERSITY AT THE SAME TIME.”

MILKED





# PATHWAYS FOR EDUCATION



The following are research questions for classroom settings to deepen students' understanding of the topics raised in the film.

Reference the [MILKED Booklet](#), or the annotated [Facts](#) page available for free on the [MILKED.film](#) website to explore the science detailed in the film.



### **Research Pathway: Understand the Science**

In the film and the chapter "[Environment](#)", experts describe how the dairy industry causes emissions, pollutes water, and uses land inefficiently.

Choose emissions, water, or land, and create a presentation or report that explains one of the following:

1. *What is the science of the impact*
2. *What are the statistics in your region or country*
3. *The impact on local communities and beyond*

### **Research Pathway: Human Health**

Experts in the film and the chapter "[Health](#)" suggest that the health benefits of cow's milk have been misrepresented. Choose one of the following topics raised in the film and create an informational brochure, well-cited, about your understanding of the topic:

- *Lactose Intolerance*
- *Diabetes, obesity, heart disease and other chronic illnesses*
- *Bone Health*
- *Cancer*

### **Research Pathway: Animal Welfare**

The film and the short chapter "[Animal Welfare](#)" detail ways in which dairy cows and their calves are harmed by the industry, from mastitis and sickness, to shortened lifespans and being separated from their young. Research what happens to dairy cows in your area or in a country of your choice with regard to:

- *The lifespan and health of the cows that are milked*
- *What happens to the calves that are separated from their mothers*
- *Experimentation to increase milk production and reduce emissions*

### **Research Pathway: Industry Greenwashing**

The film and the chapter "[Economy](#)" shows several ways in which the dairy industry misleads or misrepresents consumers with claims of sustainable practices.

Choose one of the following industry claims to research and report on:

1. *New Zealand's dairy industry is the most carbon efficient*
2. *Grass-fed dairy farms benefit the climate by sequestering carbon (the report "[Grazed and Confused](#)" will be helpful)*
3. *Purchasing carbon-offset milk balances dairy emissions*
4. *Dairy farms do not promote deforestation*





### **Research Pathway: Plant-Based and Technology Solutions**

The film and the chapter "[Solutions](#)" suggests several different solutions to mitigate or eliminate the impacts of the dairy industry.

Research the environmental, health, and economic impacts of the following:

- *Plant-based alternatives to milk, such as soy, almond, and/or oat milk*
- *Creating animal-free dairy using precision fermentation*
- *Regenerative farming of plant-based foods*

### **Research Pathway: Policy Solutions**

Using the resources from **MILKED** partners [Plant Based News](#), [Switch4Good](#) or [others](#), research actions and policies that have been enacted or are being advocated for around the world and assess their potential for impact.

Here are a few examples:

1. [\*Push corporations towards non-dairy practices\*](#)
2. [\*Demand a governmental plan of action in New Zealand to transition away from dairy farming\*](#)
3. [\*Remove dairy from U.S. Dietary Guidelines\*](#)



1 <https://www.thelancet.com/action/showPdf?pii=S2468-1253%2817%2930154-1>  
2 <https://www.pcrm.org/good-nutrition/nutrition-information/health-concerns-about-dairy#:~:text=Milk%20and%20other%20dairy%20products,%2C%20ovarian%2C%20and%20prostate%20cancers.>  
3 <https://www.nytimes.com/2020/12/29/science/dairy-farming-cows-milk.html>  
4 <https://www.tabledebates.org/publication/grazed-and-confused>  
5 <https://www.iatp.org/sites/default/files/2018-08/Emissions%20impossible%20EN%2012.pdf>  
6 <https://www.fao.org/3/cb4230en/cb4230en.pdf>  
7 <https://www.statista.com/topics/6069/dairy-industry-in-new-zealand/#dossierKeyfigures>  
8 <https://www.fao.org/3/cb4230en/cb4230en.pdf>

# MANY PATHS FORWARD: TAKE ACTION



CHOOSE PLANT-BASED FOODS  
AND SIGN UP FOR A DAIRY FREE CHALLENGE



SUPPORT FARMERS TO TRANSITION



REWILD THE LAND WITH NATIVE SPECIES



SHARE THE FILM AND/OR EDUCATIONAL CHAPTERS WITH A FRIEND, JOIN THE MAILING LIST



Learn about more ways to take action at [milked.film/take-action](https://milked.film/take-action)





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