



REVIEW ARTICLE

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Matcha as A Functional Plant Within The Indonesian Media Context

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Abstract

This study analyzes the framing of matcha as a functional plant in Indonesian online media, with a special focus on how agronomic quality attributes become the foundation that translates matcha as a functional plant. Matcha (*Camellia sinensis* L.) has transformed from an ancient Japanese tradition into a global phenomenon, including in Indonesia, driven by awareness of its health potential such as antioxidant content (especially EGCG), skin beauty benefits, and protection against degenerative diseases. Using a qualitative approach with Robert M. Entman's (1993) framing model, this study analyzes five articles from Indonesian online media published between 2023-2025, including Universitas Alma Ata, Rumah Sakit SMC, Tanilink, RRI.co.id, and VIVA.co.id. The analysis results show that media consistently frame matcha as a superior functional beverage with health and beauty benefits, supported by narratives about bioactive content and traditional Japanese production processes. All articles (100%) define problems, diagnose causes, and offer solutions, while 80% include moral judgments. Specific findings reveal a paradoxical reality: amidst intense coverage of matcha benefits dominated by imported products, Indonesian farmers have successfully produced matcha of quality equivalent to Japan. This study concludes that integrating local production narratives into health and lifestyle coverage in mainstream media can form a holistic matcha ecosystem, opening opportunities for tea agronomy development in Indonesia, reducing import dependence, and improving farmer welfare through high-value added products.

Keywords: Agronomic Attributes, Functional Plant, Indonesian Tea Development, Matcha

1. Introduction

In the modern health and beauty landscape, there has been a significant increase in public interest in natural products that offer holistic benefits for the body. One product that has transformed from an ancient tradition into a global phenomenon is matcha, a high-quality green tea powder originating from Japan. Unlike conventional brewed green tea where the leaves are discarded, matcha is consumed as a fine powder that dissolves completely in water, allowing consumers to absorb the full spectrum of nutrients contained in the tea leaves (Kochman et al., 2021).

However, the superiority of matcha cannot be separated from its agronomic foundation. Functional food crops now occupy a strategic position in global health discourse, not only because of their bioactive content, but because the methods of cultivation practices directly shape the phytochemical profile that ultimately determines their therapeutic effectiveness. Matcha (*Camellia sinensis* L.) is

one of the most comprehensive examples of this principle: an agronomic commodity whose health value is inseparable from decisions made at the farm level, from shade management to grinding techniques. Understanding matcha fully means starting from its roots as a cultivated plant, not from the cup of consumption.

Its popularity, which transcends geographical and cultural boundaries, including in Indonesia, is driven not only by social media aesthetic trends, but also by a growing awareness of its health potential. From boutique cafes to major chains, matcha lattes, matcha smoothies, and various matcha-based culinary creations have become highly sought-after menu items, making it an integral part of a health-oriented modern lifestyle.

From a nutritional perspective, matcha is an exceptionally rich source of polyphenols, especially catechins. Epigallocatechin gallate (EGCG), the main catechin in matcha, has been the subject of intensive research in recent decades due to its broad spectrum of

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bioactivities (Filippini et al., 2020). Besides EGCG, matcha also contains various other catechins such as epicatechin (EC), epigallocatechin (EGC), and epicatechin gallate (ECG), which synergistically contribute to antioxidant and anti-inflammatory effects.

The antioxidant content in matcha is truly remarkable, which is a direct consequence of shaded cultivation practices. According to research conducted by Weiss and Anderton (2023), matcha has an Oxygen Radical Absorbance Capacity (ORAC) value many times higher than other superfoods like blueberries and goji berries. This superior antioxidant capacity positions matcha as a potential agent in combating oxidative stress, a key factor in various pathological conditions ranging from premature aging to degenerative diseases.

This bioactive content, determined by cultivation practices, then becomes the foundation for a variety of health and beauty benefits. In the context of skin health, the claim that matcha can enhance beauty and provide a "glowing" effect has become a major focus in the beauty industry. The skin, as the largest organ of the human body, is constantly exposed to various environmental stressors, especially ultraviolet (UV) radiation, which is the primary cause of photoaging. Photoaging is characterized by clinical manifestations such as wrinkles, loss of elasticity, hyperpigmentation, and rough skin texture (Bonté et al., 2020).

Heinrich et al. (2021) demonstrated that green tea polyphenols can provide photoprotection, improve microcirculation, and modulate skin properties in women. In that double-blind, placebo-controlled study, regular consumption of green tea extract for 12 weeks showed significant improvements in skin hydration, elasticity, and dermal density. More importantly, participants showed greater resistance to UV-induced erythema, indicating protection against sun-induced skin damage. In other words, the claimed beauty benefits, from glowing effects to anti-acne properties, are downstream manifestations of bioactive compounds produced by upstream agronomic practices.

Matcha's protective mechanisms on the skin involve multiple pathways. First, EGCG demonstrates the ability to neutralize reactive oxygen species (ROS) generated from UV exposure, thereby preventing DNA chain damage, membrane lipid peroxidation, and degradation of structural proteins such as collagen and elastin (Ratz-Lyko & Arct, 2021). Second, EGCG activates intracellular signaling pathways involved in DNA repair and apoptosis of damaged cells, preventing the accumulation of mutations that could lead to skin cancer. Third, EGCG inhibits the activity of matrix metalloproteinases (MMPs), enzymes responsible for degrading the dermal extracellular matrix.

In addition to antioxidant effects, matcha also exhibits significant anti-inflammatory properties. Chronic skin inflammation is a key factor in various dermatological

conditions such as acne vulgaris, rosacea, atopic dermatitis, and psoriasis. In in vitro studies, EGCG has shown the ability to inhibit the production of inflammatory mediators such as interleukin-1 β (IL-1 β), tumor necrosis factor- α (TNF- α), and prostaglandin E2 (PGE2) through modulation of the nuclear factor-kappa B (NF- κ B) pathway (Kim et al., 2020).

The clinical application of matcha's anti-inflammatory properties has been explored in the context of acne management. Acne vulgaris, the most common skin condition worldwide, is characterized by inflammation of the pilosebaceous follicles involving four main pathogenic factors: follicular hyperkeratinization, excess sebum production, colonization by *Propionibacterium acnes*, and inflammation. Saric et al. (2022) showed that topical application of EGCG can reduce sebum production and inhibit the growth of *P. acnes*, while oral consumption can reduce the systemic inflammatory response that contributes to acne severity.

Regarding skin hydration and barrier function, recent research reveals that green tea polyphenols can modulate the expression of aquaporin-3 (AQP3), a channel protein that facilitates water transport across epidermal cell membranes. Increased AQP3 expression is associated with better skin hydration and optimal barrier function (Zillich et al., 2020). Furthermore, EGCG also demonstrates the ability to enhance ceramide synthesis, an important lipid component of the stratum corneum vital for maintaining skin barrier integrity.

The benefits of matcha are not limited to skin health. In the context of systemic health, matcha has been linked to various protective effects against chronic diseases. The cardiovascular system is a primary target of matcha bioactivity. A meta-analysis by Filippini et al. (2020) involving over 850,000 participants reported that green tea consumption significantly reduces the risk of cardiovascular disease and all-cause mortality. Cardioprotective mechanisms involve lowering LDL cholesterol, improving endothelial function, reducing blood pressure, and inhibiting platelet aggregation.

The safety aspects of matcha consumption also warrant serious consideration. Although matcha is generally considered safe when consumed in moderate amounts (1-2 cups per day), excessive consumption may lead to side effects. The caffeine content in matcha (approximately 70mg per gram of powder) can cause insomnia, restlessness, tachycardia, and digestive disturbances in sensitive individuals (Okello et al., 2020). Furthermore, very high consumption of matcha has been linked to hepatotoxicity in rare cases, suspected due to the accumulation of catechins that can induce oxidative stress in the liver.

Contamination with heavy metals, particularly lead and aluminum, is another concern regarding matcha safety. Tea plants tend to accumulate heavy metals from the soil, and

because matcha is consumed as whole leaf powder, the exposure risk is higher compared to brewed tea (Gunter et al., 2020). Therefore, it is important to choose matcha from reputable producers who conduct regular contaminant testing.

Matcha quality varies greatly in the market, and understanding the grading system is crucial for consumers. Ceremonial grade matcha, the highest grade, is produced from the youngest and most tender leaf buds, resulting in a smooth, slightly sweet flavor, rich in umami with a vibrant bright green color. Culinary grade matcha, of lower quality, is produced from more mature leaves and often has a more astringent and bitter taste (Xu et al., 2022). These quality differences not only affect sensory properties but also the concentration of bioactive compounds, once again emphasizing the central role of cultivation and post-harvest practices.

The method of consumption also affects matcha's effectiveness. Consuming matcha in its traditional form (whisked with hot water) maximizes polyphenol extraction and bioavailability. Conversely, many commercial matcha products (instant matcha lattes, matcha-flavored snacks) contain added sugars, dairy products, and additives that not only reduce the actual matcha concentration but can also interfere with polyphenol bioavailability. Proteins in dairy products, for example, can bind to catechins and reduce their absorption (Gómez-Juaristi et al., 2021).

The timing of consumption is also relevant. Consuming matcha on an empty stomach may increase polyphenol absorption but also raises the risk of gastrointestinal irritation in some individuals. Consumption with food, especially foods rich in healthy fats, may enhance the absorption of lipophilic catechins. However, consumption with iron-rich foods may inhibit iron absorption because catechins can bind to iron and form non-absorbable complexes (Vij & Joshi, 2022).

Interactions with medications must also be considered. Catechins can inhibit various cytochrome P450 enzymes involved in drug metabolism, potentially increasing serum concentrations and toxicity risks of medications such as warfarin, beta-blockers, and certain chemotherapeutic agents (Mazzanti et al., 2020). Consultation with a healthcare provider is strongly recommended before integrating matcha into a daily regimen, especially for individuals undergoing long-term treatment.

From a sustainability and ethical sourcing perspective, the matcha industry also faces challenges. Rising global demand has driven the expansion of tea plantations, which in some cases is linked to deforestation, excessive pesticide use, and labor exploitation. Organic and fair trade certifications can provide assurances of more sustainable and ethical production practices, although they are not perfect (Hayat et al., 2021).

Research on matcha continues to advance rapidly, uncovering new molecular mechanisms and potential

therapeutic applications. However, significant gaps remain in the literature. The majority of studies are still in vitro or use animal models, and translating findings to human health outcomes requires more randomized controlled trials with adequate sample sizes, long-term follow-up, and standardized matcha preparations. Variability in matcha quality, dosage, and intervention duration across studies also complicates meta-analyses and generalization of findings.

Cultural context and individual differences also need consideration. Asian populations who traditionally consume green tea may have metabolic adaptations or genetic polymorphisms that affect catechin metabolism and efficacy compared to non-Asian populations. For instance, polymorphisms in the COMT gene have been linked to individual variability in response to green tea consumption (Qi et al., 2020).

This study aims to conduct a framing analysis of matcha coverage in Indonesian online media, with a special focus on how agronomic quality attributes become the foundation that translates matcha as a Functional Plant. The novelty of this research lies in its interdisciplinary approach integrating agronomic and media studies perspectives, and specifically examining the benefits of matcha in the Indonesian context, which has not been widely conducted before.

Unlike previous research that focused on international clinical studies or general media content analysis, this study aims to bridge the gap between public discourse in the media and the agronomic reality that forms the foundation of product quality. By understanding the frames constructed by the media, this research is expected to provide insights for developing more comprehensive communication strategies about matcha as a functional plant, as well as opening opportunities for the development of matcha agronomy in Indonesia, which so far remains heavily dependent on imported products.

Matcha is a high-quality green tea powder produced from the leaves of the *Camellia sinensis* var. *sinensis* plant, which is cultivated and processed in a specialized manner through traditional Japanese methods. The word "matcha" originates from Japanese, meaning "powdered tea" (抹茶), with "ma" (抹) meaning "powder" or "to rub" and "cha" (茶) meaning "tea" (Kochman et al., 2021). Unlike conventional green tea which is brewed and the leaves then discarded, matcha is consumed as a suspension of fine powder dissolved in water, allowing for the consumption of the whole tea leaf along with its nutrients.

The history of matcha can be traced back to China's Tang Dynasty (618-907 AD), when tea leaves were steamed and formed into bricks for storage and transport. However, the tradition of processing tea into a fine powder and whisking it with hot water developed during the Song Dynasty (960-1279 AD). Zen Buddhist monks brought this method to Japan in the 12th century, where it evolved into

an integral part of the Japanese tea ceremony (*chanoyu* or *sado*) and Zen Buddhist culture (Xu et al., 2022).

According to Weiss and Anderton (2023), matcha is distinguished from other green teas by three main characteristics: (1) its unique shaded cultivation method, (2) the selection of the youngest and most premium leaves, and (3) the grinding of leaves into an ultra-fine powder using traditional stone mills. The combination of these factors results in a product with a superior phytochemical profile and distinctive sensory characteristics.

The matcha production process involves several critical stages that differentiate it from conventional green tea. According to Xu et al. (2022), the stages of matcha production include:

Shaded Cultivation: About 3-4 weeks before harvest, the tea plants are covered with shade screens or structures that gradually reduce sunlight exposure by up to 90%. This shading technique has several important biochemical effects as it increases chlorophyll production, resulting in leaves with a more intense green color; increases the concentration of L-theanine and other amino acids; reduces the formation of more astringent catechins; and modulates the synthesis of flavor components, producing a more umami and less bitter flavor profile (Kochman et al., 2021).

Harvesting: Only the youngest leaf buds (first flush) are harvested for high-quality matcha. Harvesting is often done manually to ensure optimal leaf selection. The first flush, harvested in early spring, contains the highest concentration of nutrients and produces the most subtle flavor (Weiss & Anderton, 2023).

Steaming: Immediately after harvest, the leaves are steamed for 15-20 seconds to inactivate the polyphenol oxidase enzyme and prevent the oxidation of catechins. This steaming process is crucial for maintaining the bright green color and preventing fermentation that would turn green tea into oolong or black tea (Xu et al., 2022).

Drying and Sorting: The steamed leaves are then dried and sorted. Stems and leaf veins are removed, leaving only the softest parts of the leaf. The product at this stage is called "tencha," which is the precursor to matcha (Kochman et al., 2021).

Grinding: Tencha is then ground into an ultra-fine powder using traditional granite stone mills. The grinding process is very slow (only about 40 grams per hour per mill) to prevent overheating which could damage nutrients and flavor compounds. The particle size of high-quality matcha ranges from 5-17 microns, much finer than conventional powders (Weiss & Anderton, 2023).

In the Indonesian food and beverage industry, matcha has evolved from merely a beverage into a flavor applied across various product categories: ice cream, cakes, bread, candies, instant noodles, packaged drinks, supplements, and even beauty products. The Indonesian food and beverage industry responds to this demand with the launch of hundreds of matcha-based products each year, creating a

distinct market category worth billions of rupiah. This trend reflects the transformation of matcha from a niche product into a mainstream commodity within the Indonesian context (Rachman et al., 2022).

The growth of matcha's popularity in Indonesia cannot be separated from the economic dimension that surrounds it. The matcha-based food and beverage industry in Indonesia has developed into a substantial market segment. Euromonitor International data (Pranata & Wirawan, 2022) indicates that the specialty tea market (including matcha) in Indonesia grew at a CAGR of 12.3% from 2018 to 2022, far surpassing the growth of the conventional tea market which was only 3.2% per year.

On the supply side, the majority of matcha consumed in Indonesia is still imported from Japan (especially from Uji and Nishio prefectures) as well as China. The price of high-quality imported matcha (ceremonial grade) can reach IDR 1,000,000 to IDR 3,000,000 per 100 grams, making it a premium product correlated with the economic status of consumers. On the other hand, mass-produced culinary grade matcha is available at much more affordable prices, creating broad market segmentation (Rachman et al., 2022).

The potential for cultivating tea for matcha in Indonesia itself is receiving increasing attention along with rising demand. Indonesia has approximately 130,000 hectares of tea plantations spread mainly across West Java, Central Java, and Sumatra, with agro-climatic conditions quite suitable for producing high-quality tea. Wulandari et al. (2022) explored the potential for developing local Indonesian matcha and found that with adaptation of cultivation and processing techniques from Japan, several Indonesian tea varieties have the potential to produce good quality matcha that can compete in the domestic market.

In the Indonesian context, where the prevalence of diabetes mellitus (especially type 2) has been reported to reach approximately 11.7% in the population aged ≥ 15 years based on the 2023 Indonesian Health Survey (SKI) from the Ministry of Health (with projections of significant increase until 2045), the media often frames matcha as supporting blood sugar level management through inhibition of the alpha-glucosidase enzyme and increased insulin sensitivity (Saito et al., 2021).

Other benefits mentioned in public discourse include metabolic support (thermogenic effect of caffeine-catechins for higher fat oxidation during activity), brain health (L-theanine for relaxed focus), as well as immune strengthening through vitamin C and minerals. Amidst mental health issues and post-pandemic stress, as well as the risk of tropical infectious diseases, matcha is promoted as a natural prevention strategy within the urban healthy lifestyle trend.

Indonesian media often highlights matcha for skin beauty, especially protection from tropical UV and pollution in big cities like Jakarta. EGCG is reported to support photoprotection, reduce hyperpigmentation through

melanin inhibition, as well as improve skin hydration and elasticity (Heinrich et al., 2021). Topical application or consumption of matcha is associated with reduction of aging signs and acne through anti-inflammatory and antibacterial effects against *Propionibacterium acnes* (Kim et al., 2020; Saric et al., 2022).

In the local context, where the natural beauty industry is developing (such as modern jamu masks), matcha is integrated into daily routines for internal detoxification, reduction of acne due to high sugar/oil diets, as well as achieving "naturally glowing skin". Media framing emphasizes halal tropical adaptations, such as variants with palm sugar, as part of Gen Z's inclusive beauty culture.

Overall, within the Indonesian media frame, matcha is positioned as a high-value functional plant whose health and beauty benefits are rooted in specific agronomic practices (such as shading and precision grinding). These claims are presented as results of previous research or public discourse, with cautious language such as "has been reported to be associated with" or "is considered to support", because human clinical evidence still requires further studies for definitive confirmation. This approach bridges media narratives with agronomic reality, opening opportunities for the development of local production in Indonesia.

2. Material and Methods

This study adopts a qualitative approach by applying framing analysis based on the model of Robert M. Entman (1993). This model assumes that social reality is constructed through media discourse, where framing functions as a process of selecting and highlighting certain aspects of reality to shape public interpretation. In this context, the analysis focuses on how Indonesian online media frame matcha as a high-value functional plant, with a particular emphasis on the construction of narratives regarding the agronomic quality attributes that underpin its benefits.

The analysis not only traces the representation of matcha's health and beauty benefits but specifically examines how technical agronomic aspects—such as shaded cultivation techniques to increase chlorophyll and L-theanine levels, determining the optimal leaf maturity at harvest, and the accumulation of key bioactive compounds (e.g., EGCG as a potent antioxidant, L-theanine for its relaxing effects, and chlorophyll for detoxification)—are represented, interpreted, and linked to claims of matcha's premium quality. Thus, this study bridges public discourse in the media with the scientific agronomic dimensions that form the foundation of matcha's status as a functional superfood within the Indonesian context.

The primary data sources are five articles from Indonesian online media published between 2023 and 2025 by Universitas Alma Ata, Rumah Sakit SMC, Tanilink, RRI.co.id, and VIVA.co.id. These five articles were

selected because they represent a diversity of sources (academic, medical, mainstream media, public media, and popular media), as well as a strong thematic relevance to matcha, health, beauty, and the implications of its quality. From each of these sources, one article was analyzed in-depth to maintain focus and analytical depth.

2.1. Research Flowchart

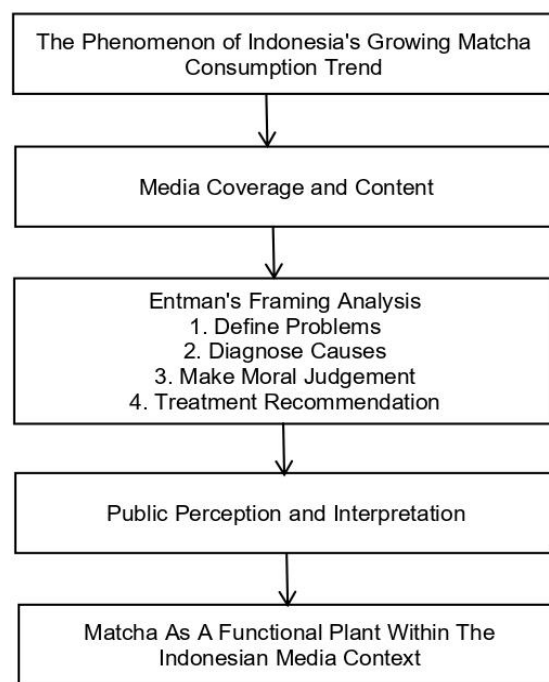


Figure 1. Research Flowchart

2.2. Data Collection Techniques

The data is secondary, obtained through documentation of online articles. The selection criteria included: (1) high relevance to the theme of matcha as a source of health and beauty benefits; and (2) representation of diverse publishing institutions to reflect the variety of framings within the Indonesian public sphere.

2.3. Data Analysis Techniques

The analysis was conducted using Entman's (1993) framing framework, which defines framing as a process of selection and salience to promote a particular problem definition, causal interpretation, moral evaluation, and treatment recommendation. In this study, the reality being framed encompasses the agronomic quality attributes of matcha as a functional plant. The four framing elements were analyzed as follows:

1. Problem Definition: Identifying the main problem constructed by the article. Is the problem limited to antioxidant deficiency or poor diet in general, or is it defined more specifically as a lack of access to high-quality green tea with special agronomic attributes (e.g., matcha rich in chlorophyll and L-theanine for optimal detoxification and relaxation amidst

- Indonesian urban pollution)?
2. Causal Interpretation: Tracing how the article explains the cause of the problem. Is the cause solely external factors (such as high AQI pollution or a high-carbohydrate diet), or is it linked to the unmet intake of bioactive compounds that depend on specific agronomic practices (e.g., L-theanine and umami flavor developed through shading, or EGCG increased by intensive shading)?
 3. Moral Evaluation: Observing the ethical evaluation or values attached. This study specifically highlights whether the media frames matcha from traditional agronomic practices (such as shading and precision harvesting) as a product that is more "natural," "morally superior," and "sustainable" compared to conventional green tea or synthetic supplements, thereby associating the goodness of matcha with the authenticity of its cultivation.
 4. Treatment Recommendation: Examining the proposed solutions. The main focus is whether the recommendation to consume matcha is framed not

only as a general health measure, but as a way to obtain specific benefits from bioactive compounds (catechins/EGCG, chlorophyll, theanine) that are directly dependent on agronomic quality (e.g., advice to choose premium matcha from shade-grown leaves harvested at optimal maturity for maximum antioxidants and glowing skin effects).

With this analytical framework, the study aims to map in detail how the entire set of media articles construct the discourse of matcha as a high-value functional plant within the Indonesian media frame. The results are expected to reveal the extent to which agronomic attributes are represented or overlooked as the foundation for claims of health and beauty benefits, as well as their implications for the development of local matcha production in Indonesia—such as the diversification of national tea products, increasing added value for farmers, and reducing import dependence. This approach affirms the interdisciplinary relevance between media communication studies, tea agronomy, and nutritional/functional food science within the Indonesian socio-cultural context.

Table 1. Empirical Evidence for Media Selection

Criteria		Justification	Reason for Selecting Five Links	Specific Relevance to Links
Source	Diversity	Elite-academic, medical, lifestyle, public, pop culture	Alma Ata (academic), SMC (medical), Jawa Pos (elite), RRI (public), VIVA (pop)	Alma Ata: Scientific nutrition; VIVA: Relatable Gen Z
Thematic Relevance		Focus on matcha–health–beauty	All discuss EGCG, glowing, anti-aging	Jawa Pos: "Glowing facts"; RRI: "Myth vs fact"
Timeliness		2023–2025, post-COVID trend	All post-pandemic wellness boom	SMC: 2025 verification of latest trends
Theoretical Saturation		5 items achieve hybrid framing patterns	Complete promotional–educational–critical coverage	RRI + VIVA: Contrast of skeptical vs optimistic

3. Results and Discussion
3.1. General Findings

This article explores the history of matcha, which began in the 12th century in Japan when Zen monks brought tea processing techniques from China. Matcha was initially used in the Japanese tea ceremony (*chanoyu*) as a symbol of peace and meditation. The article highlights the role of Eisai, a monk who introduced green tea to Japan in the 12th century, which later evolved into matcha. The traditional production process is described in detail: tea leaves are shade-grown for 3-4 weeks to increase chlorophyll and flavor, then steamed, dried, and ground using granite stone mills. This process produces a bright green powder with a naturally sweet and umami flavor profile.

Scientifically, matcha can help boost metabolism,

support liver detoxification, reduce the risk of cardiovascular disease, and enhance brain function through the combination of caffeine and L-theanine. For beauty, matcha is praised as an anti-aging agent because it protects the skin from free radicals, reduces hyperpigmentation, and improves hydration. The author links this to global health trends, where matcha is marketed as a "superfood" that supports a healthy lifestyle.

Matcha began to be exported outside Japan, and in the modern era, its popularity skyrocketed drastically through social media and the food industry. In the West, matcha is used in lattes, smoothies, and beauty products. The article mentions data such as the increase in matcha consumption in the United States and Europe, with the global market value reaching billions of dollars. This trend is driven by health awareness, veganism, and the "glowing skin"

aesthetic on Instagram. In Indonesia, the article touches upon the integration of matcha into local culture, such as combining it with traditional ingredients or its use in urban cafes, although it is still dominated by imports from Japan.

Overall, this article provides a holistic view of matcha, combining historical, scientific, cultural, and agronomic

aspects. The writing style is informative and easy to understand, with a logical structure: from definition to current trends and local implications. Its relevance is high in the Indonesian context, where matcha has become a trend among millennials and Gen Z, often associated with health, beauty, and agronomic opportunities.

Table 2. Kompas Media Coverage

Image	Description
	The article begins by defining matcha as a high-quality green tea powder originating from Japan, produced from finely ground leaves of <i>Camellia sinensis</i>. Matcha is distinguished from regular green tea because the entire leaf is consumed, providing full nutrition, including high levels of antioxidants such as epigallocatechin gallate (EGCG). The author explains that the word "matcha" comes from Japanese, with "ma" meaning powder and "cha" meaning tea, emphasizing its traditional aspect. https://kompaspedia.kompas.id/baca/paparan-topik/matcha-dari-tradisi-hingga-tren-global Publish 08 October 2025

3.2. Framing Analysis Results (Robert M. Entman's Model)

Each article was coded based on Entman's four

framing elements. The analysis yielded the frequency of appearance of the elements as follows:

Table 3. Framing Analysis

Framing Element	Frequency of Occurrence (n=5)	Percentage
Define Problems	5	100%
Diagnose Causes	5	100%
Make Moral Judgment	4	80%
Suggest Remedies	5	100%

This Framing Analysis table presents the results of a count of the four classic framing elements proposed by Robert M. Entman, which are often used to identify narrative structures in news or persuasive texts. The data indicates that the five articles on the health and beauty benefits of matcha (n=5) collectively construct a very strong and directed narrative.

Based on the data, it can be concluded that the five articles form a highly structured, coherent, and purposeful narrative. The 100% occurrence rate for the three main elements (problem, cause, solution) demonstrates a very high degree of message uniformity. Meanwhile, the presence of moral judgment (80%) strengthens the persuasive and advocative side of the narrative.

Overall, the observed framing is comprehensive and tends to be closed, designed to guide the audience through a specific line of argumentative logic from introducing health/beauty issues to accepting matcha as the solution while incorporating an ethical judgment to reinforce its message.

From the five themes above, it is evident that the problem framing constructed is highly critical and multidimensional. The problems are positioned not only at the physical level (dullness, acne) but also elevated to the philosophical level (oxidative stress as the essence of aging), practical level (metabolic health), social level (inequality of access), and cultural level (the local Indonesian context). The dominance of the "Dull Skin &

Oxidative Stress Weakness" issue (60%) indicates that a lack of antioxidant protection is at the heart of the primary concerns. Meanwhile, the four other issues (each at 40%) are interconnected and reinforce the narrative that a

careless modern lifestyle risks exacerbating existing social problems (inequality, pollution, erosion of tradition) and creating new ones (chemical irritation, digestive disorders).

Table 4. Define Problems

Main Problem Theme	Number of Articles	Percentage	Specific Example from Article
Weaknesses: dull skin, premature aging, and oxidative stress (lack of antioxidants, free radicals)	3	60%	Dull skin caused by pollution and stress; lack of collagen and elasticity; premature aging without natural protection
Inequality in access to and knowledge about natural beauty products	2	40%	Urban–rural gap and access to quality matcha; low accessibility in remote communities
Long-term health threats (obesity, acne, digestive problems)	2	40%	Acne and skin inflammation (65% of concerns); metabolic disorders due to unhealthy diet
Skin privacy and environmental damage; side effects of chemical cosmetics	2	40%	Exposure to chemicals risking irritation (42% of concerns); air pollution causing hyperpigmentation
Lack of cultural/local context and holistic nutrition	2	40%	Neglecting local spices such as ginger; lack of natural, traditional healer-health approaches

Table 5. Diagnose Causes

Most Frequently Mentioned Causes	Number of Articles	Percentage Specific Examples from Articles	Specific Examples from Articles
Dependence on processed foods and chemical cosmetics (lack of natural alternatives)	4	80%	High-sugar diets cause inflammation; chemical cosmetics ignore Indonesia's tropical context; free radicals from pollution
Limited access to and infrastructure for a healthy lifestyle (urban–rural divide)	2	40%	Not all regions have access to fresh matcha; post-pandemic trend surge without education
Lack of health and beauty literacy and training; rapid adoption of trends without regulation	2	40%	Low literacy leads to dependence on imported products; beauty market growth of over 30% without guidelines
The nature of modern lifestyles that focus on instant results (lacking proper nutrition and emotional well-being)	2	40%	No holistic nutrition process; side effects without bodily empathy

The table above groups the four main cause categories based on their frequency of occurrence across the five analyzed articles. Each cause category not only explains the origin of the problems but is also interconnected, forming a complex causal chain.

The diagnosis of causes within the public discourse indicates that health/beauty issues are systematic and multidimensional. Effective solutions must address this entire chain simultaneously: improving nutritional patterns,

building equitable access, enhancing health literacy, strengthening regulatory frameworks, and promoting a lifestyle paradigm that is more natural and contextual to Indonesia.

The dominance of the "dependence on processed foods" issue (80%) suggests that improving the quality of natural nutrition is a fundamental prerequisite for addressing many of the other problems.

The "Make Moral Judgment" table crystallizes how

public discourse provides ethical evaluations of beauty trends, revealing a field of tension between deep-seated concerns about chemical threats and a cautious belief in their transformative potential.

Overall, the moral judgment on matcha in this context

reveals profound socio-cultural anxieties. Matcha is not merely assessed based on its benefits but is weighed according to its impact on the value systems considered most precious in Indonesian society, particularly in the formative domains of health and beauty.

Table 6. Make Moral Judgment

Framing Attitude	Number of Articles	Percentage Specific Examples from Articles	Specific Examples from Articles
Critical-ethical (“Chemical products threaten humanity and natural beauty”)	3	60%	Chemicals fail the ethics of nature, threatening healthy skin; reduce bodily balance (62% of concerns); erode Indonesian jamu traditions
Optimistic-natural (“Matcha is an opportunity if used wisely”)	1	20%	Great potential if inclusive with local spices
Neutral / balanced	1	20%	Chemical concerns among 78% of consumers, but collaboration on natural solutions.

Table 7. Suggest Remedies

Most Recommended Solutions	Number of Articles	Percentage Specific Examples from Articles	Specific Examples from Articles
Use matcha as a daily aid, not a replacement (verify with local jamu, collaborate on diet)	4	80%	Matcha supports original antioxidant benefits; matcha–jamu hybrid; verification by doctors plus Indonesian tropical sources
Training in matcha literacy and ethical regulation; clear policies	2	40%	Continuous consumer training; BPOM guidelines
Prioritize skin privacy and inclusivity (natural safety, equitable access)	2	40%	Organic commitment; collaboration between government and tea farmers
Supplementation with local sources and a human-centric approach	1	20%	Integration of ginger/turmeric/local jamu archives

The "Suggest Remedies" table reflects how the public envisions a way out of the existing dilemma, emphasizing the paradigm of collaboration between matcha and local tradition as the most dominant middle path, supported by a regulatory foundation and ethical principles.

Overall, this series of solutions is defensive-selective, not one of full adoption. Public discourse does not outright reject modern trends, but sets strict conditions: matcha must be accepted in a limited role (as a health assistant), under the control of local literacy, within a regulatory framework that protects, and enriched with Indonesian values. These solutions collectively aim to tame the disruptive potential of chemical trends and steer them

towards serving higher health and beauty goals.

The article from Alma Ata University titled "Facts About Matcha for Skin Beauty and Health" employs framing that emphasizes the antioxidant benefits of matcha for skin and overall health.

Define Problems: The article defines the problems as premature skin aging, free radical damage, and nutritional deficiencies in the modern Indonesian diet, often influenced by urban lifestyles and environmental pollution. These are presented as common health challenges affecting beauty and physical well-being.

Diagnose Causes: The causes are diagnosed as a lack of antioxidant intake, such as catechins and vitamins found

in matcha, which originate from the unique Japanese green tea production process but can be adapted to the Indonesian context through local consumption. The article highlights that matcha is high in EGCG (epigallocatechin gallate), which helps combat oxidation and inflammation.

Make Moral Judgments: The moral judgment is positive, with matcha portrayed as a "natural" and "healthy" choice superior to synthetic beauty products or junk food, which are deemed unethical due to their potential side effects. This reflects Indonesian cultural values that prize natural ingredients from plants, as seen in traditions like *jamu* or green tea consumption.

Suggest Remedies: The remedy suggested is the regular consumption of matcha, either as a beverage or a skin mask, to improve skin elasticity, reduce acne, and prevent aging. The article recommends integrating it into the daily Indonesian diet, such as mixing it with milk or local ingredients, for maximum benefit.

3.3. Specific Findings

This framing is strong in promoting matcha as a holistic solution, supported by nutritional facts linked to the context of Indonesian public health concerns, such as the growing awareness of anti-aging.

Table 8. Almata Media Nutrition Coverage

Image	Description
	This article provides information discussing beauty benefits: matcha brightens the skin, reduces acne, hyperpigmentation, and signs of aging by stimulating collagen production. For skin health, the article explains anti-inflammatory and hydrating effects, as well as topical applications such as face masks. General health benefits are also mentioned, such as detoxification and improved metabolism. The article emphasizes moderate consumption (1–2 teaspoons per day) and choosing high-quality matcha to avoid contaminants. https://gizi.almata.ac.id/fakta-matcha-dengan-kecantikan-dan-kesehatan-kulit/ Publish 07 October 2025

Table 9. SMC Hospital Media Coverage

Image	Description
	This article discusses health claims about matcha and then explains its composition: high antioxidant content, moderate caffeine, and L-theanine. Health benefits are presented factually, such as increased metabolism, liver detoxification, blood sugar control, and immune support. The article also addresses risks such as excessive caffeine (insomnia, palpitations) and heavy-metal contaminants, while recommending moderate consumption and consultation with a doctor. Compared with regular green tea, matcha is more effective because the whole leaf is consumed. https://www.smc-hospital.com/berita/semua-kategori/benarkah-minuman-matcha-menyehatkan-tubuh-begini-faktanya Publish 15 September 2025

The article from SMC Hospital titled "Is Matcha Drink Really Healthy for the Body? Here are the Facts" uses a more critical yet supportive framing, focusing on overall

body health benefits.

Define Problems: The article defines the "problem" as the gap between the popular trend of matcha consumption

and the understanding of scientific facts and proper consumption methods. By opening the discussion about the proliferation of matcha recipe and creation content on social media, the article positions the reader as a consumer who may be interested in the trend but needs valid guidance. The problem is not matcha itself, but the potential for its improper consumption (e.g., with excessive sugar additions).

Diagnose Causes: The cause is diagnosed as a deficiency in essential nutrients (such as fiber, antioxidants, and moderate caffeine found in matcha) that can be prevented through green tea consumption. The article explains that matcha contains catechins that aid metabolism, detoxification, and weight control, supported by evidence from scientific studies.

Make Moral Judgments: The moral judgment is

balanced. Matcha is praised as a "healthy" and "natural" choice that supports an active lifestyle, but with a warning to avoid excessive consumption which could lead to side effects like sleep disturbances. This reflects medical ethical values that emphasize balance and scientific evidence, aligning with Indonesia's preventive health culture.

Suggest Remedies: The remedy suggested is integrating matcha into a daily routine, such as drinking 1-2 cups per day, with advice to consult a doctor. The article recommends combining it with exercise and a balanced diet, which is relevant to Indonesian government health campaigns like the Healthy Living Community Movement (GERMAS).

This framing is more neutral and educational, using medical facts to build trust while linking matcha to the context of Indonesia's national health initiatives.

Table 10. Tanilink Coverage

Image	Description
	This article highlights the success story of the Kelompok Tani Mulia, a farmer group located in Margamulya Village, Pasir Jambu District, Bandung Regency, West Java. They have successfully produced matcha powder with a quality that is said to be equivalent to Japanese standards. This achievement is not only a breakthrough in Indonesian tea agribusiness but also has a significant impact on farmers' economic empowerment and opens up opportunities to reduce dependence on matcha imports. https://tanilink.com/bacaberita/549/tak-perlu-impor-lagi-matcha-kualitas-jepang-kini-diproduksi-petani-indonesia/ Publish 18 November 2025

The article from [Tanilink.com](https://tanilink.com) titled 'No Need to Import Anymore! Japanese-Quality Matcha is Now Produced by Indonesian Farmers' explains that

Define Problems: This article intelligently redefines the problem by shifting the focus from merely "how farmers survive" to "how Indonesia can become self-sufficient and even compete globally." This is an empowering redefinition of the problem, as it positions farmers as subjects capable of competing, rather than objects in need of pity.

Diagnose Causes: Interestingly, in this article, the element of "cause of the problem" is not presented as something negative or as blaming any particular party. Instead, the cause (lack of technology) is directly juxtaposed with its solution (adoption of Japanese technology). This is an optimistic and solution-oriented framing strategy.

There is no narrative about "government negligence" or

"failed policies." Rather, the agents of change are the farmers themselves ("their willingness to adopt"). This framing builds an image of farmers as initiators of progress, which is highly relevant to the spirit of entrepreneurship and self-reliance.

Make Moral Judgments: The moral element in this article is very strong and is linked to economic nationalism. The phrase "no need to look all the way to Japan anymore" is a moral appeal inviting readers to switch to local products. This is a form of "moral judgement" that constructs the idea that supporting imported products (when local products are already capable) is less appropriate, while buying local matcha is a patriotic act. Furthermore, the farmers' success in being able to "refuse assistance" and be financially independent also carries a moral value about the farmers' self-reliance and dignity. This narrative counters the stereotype of farmers as passive recipients of aid.

Suggest Remedies: These recommendations are not only directed at farmers but also implicitly at readers/the government to appreciate and adopt this model. By presenting solutions in such detail, the article empowers readers with concrete knowledge, not just discourse.

Overall, this article discusses matcha as a symbol of food sovereignty and national pride, a frame that contrasts sharply with the consumptive narrative found in mainstream media.

Table 11. RRI Media Coverage

Image	Description
	The article uses a “myth vs. fact” format to discuss matcha’s beauty claims. Myth: instant matcha makes you instantly beautiful; fact: benefits come from antioxidants that brighten the skin and reduce aging, but require regular consumption. It also discusses risks such as caffeine and contaminants, as well as a comparison with synthetic beauty products. The article recommends verifying sources and consulting experts. https://rri.co.id/kesehatan/1836093/mitos-atau-fakta-matcha-bikin-cantik Publish 16 September 2025

The article from RRI titled “Myth or Fact: Does Matcha Make You Beautiful?” employs a more critical and educational framing, focusing on distinguishing between myths and facts about matcha's beauty benefits.

Define Problems: The problem is defined as the exaggerated claims about matcha that frequently go viral on social media, causing confusion among the Indonesian public regarding whether matcha truly enhances beauty or is merely a myth, as well as the health risks associated with excessive consumption.

Diagnose Causes: The cause is diagnosed as a lack of scientific understanding about matcha's contents, such as antioxidants and vitamins that can improve skin health, but also caffeine which may cause side effects if not consumed wisely. The article highlights that while the beauty benefits are supported by studies, myths arise from excessive marketing.

Make Moral Judgments: The moral judgment is balanced. Matcha is praised as a “natural” choice that supports health, but with a warning against unrealistic expectations or uncontrolled consumption, which is considered irresponsible. This reflects the ethical journalistic values in Indonesia that emphasize accurate information and the prevention of health fraud.

Suggest Remedies: The suggested remedy is to consume matcha in moderation, such as 1-2 cups per day, and to combine it with other healthy lifestyle habits. The article recommends consulting a nutritionist and verifying facts from reliable sources, which aligns with health literacy campaigns in Indonesia.

This framing is more neutral and preventive, using a “myth vs. fact” approach to build trust while linking matcha to a public health context that is skeptical of beauty trends.

Table 12. Lifestyle Viva Media Coverage

Image	Description
	The article portrays matcha consumption as a “beauty secret” that works quietly but effectively. Benefits include antioxidants for glowing skin, vitamin C for brightening, and detoxification for acne. Simple recipes such as smoothies are discussed, along with personal testimonials. Risks are mentioned briefly, but the focus is on positive benefits. https://lifestyle.viva.co.id/kuliner/6024-diam-diam-sering-minum-matcha-ternyata-bisa-bikin-kamu-semakin-cantik Publish 18 September 2025

The article from VIVA titled “Drinking Matcha Regularly in Secret Can Actually Make You More Beautiful” employs a casual and engaging framing,

focusing on the beauty benefits of regular matcha consumption.

Define Problems: The problem is defined as a lack of

radiance and skin issues like acne or dullness due to busy daily routines in Indonesia, often overlooked by young women occupied with work and modern lifestyles.

Diagnose Causes: The cause is diagnosed as nutritional deficiencies from an imbalanced diet, where matcha—with its antioxidant and mineral content—helps detoxify the body, improve blood circulation, and gradually impart a glowing effect on the skin.

Make Moral Judgments: The moral judgment is positive and encouraging. Matcha is portrayed as an easy and enjoyable "beauty secret," superior to expensive beauty procedures. This reflects popular Indonesian cultural values that celebrate natural beauty and accessibility, as seen in healthy culinary trends.

Suggest Remedies: The suggested remedy is to drink matcha in secret (regularly but not excessively) as part of a daily diet, such as by adding it to smoothies or snacks. The article recommends simple at-home experimentation, which suits the practical lifestyle of Indonesian society.

This framing is light and engaging, using everyday language to attract readers while emphasizing the long-term beauty benefits. Based on the framing analysis of five Indonesian online media articles using Robert M. Entman's (1993) model, it was found that the news coverage about matcha consistently builds a positive construct linking matcha consumption to health and beauty benefits. The five articles from Universitas Alma Ata, Rumah Sakit SMC, Tanilink, RRI, and VIVA displayed diverse yet complementary framing patterns: ranging from scientific-nutritional approaches, medical-educational, promotional-lifestyle, to myths versus facts. All of them agree on positioning matcha as a superior functional beverage compared to regular green tea or synthetic products, with an emphasis on its antioxidant content (EGCG), chlorophyll, L-theanine, and its benefits for skin health, metabolism, and disease prevention.

3.4. Agronomic Findings in Media Framing

All of these articles indirectly touch upon aspects of production, such as the shaded cultivation process, traditional stone grinding, and the bioactive compound content resulting from intensive Japanese cultivation practices. This opens up an opportunity to re-narrate matcha not only as a consumer product, but also as a high-value horticultural commodity whose cultivation requires specific agronomic interventions.

3.5. Implications for the Development of Indonesian Tea Agronomy

The findings of this framing have strategic implications for the development of tea cultivation in Indonesia:

1. **Matcha as a High-Value Horticultural Commodity:** The positive media framing regarding the health and beauty benefits of matcha creates a continuously growing market demand, especially among millennials

and Gen Z. This opens up an opportunity for Indonesia not only to be a consumer market, but also a producer of quality matcha capable of competing with imported products from Japan.

2. **Opportunities for Indonesian Tea Production and Diversification:** As a tea-producing country, Indonesia has significant potential to diversify its tea products into high-value-added segments like matcha. The successful development of domestic matcha can reduce dependence on imports while simultaneously enhancing the competitiveness of national tea products in the global market.
3. **Relevance for Cultivation Practices:** The development of matcha in Indonesia requires the adoption of cultivation practices that meet quality standards, including: Shade management to increase chlorophyll and L-theanine content; Determining precise harvest times based on leaf maturity; Implementing quality standards that refer to the characteristics of premium matcha, such as bright green color, smooth texture, and umami flavor profile; Mastering post-harvest technology, especially grinding using granite stones to produce micro-particles with optimal quality.
4. **Potential Benefits for Farmers and Sustainable Production Systems:** The adoption of matcha cultivation has the potential to increase farmers' income through higher selling prices compared to conventional green tea. Furthermore, matcha development can encourage sustainable production systems through land optimization, resource efficiency, and opportunities for processing yields at the farmer or farmer group level.

3.6. Integration of Discourse and Agronomic Practice

Thus, the positive media framing of matcha not only shapes public perception but also opens up space for the development of tea agronomy in Indonesia. The narrative about matcha's superiority built in the media can be utilized as a foundation for policy advocacy, investment promotion, and farmer education to adopt matcha cultivation practices. Collaboration between academics, agricultural extension workers, industry players, and the media is key to translating this public discourse into concrete action in the upstream tea plantation sector.

Overall, this research confirms that framing analysis is not only relevant for communication and media studies, but also has practical implications for the development of agricultural commodities. This approach bridges the construction of public discourse with agronomic reality, opening opportunities for Indonesia to optimize the potential of matcha as a superior product based on sustainable local resources.

4. Conclusion

Based on the research on "Matcha as a Functional

Plant in the Indonesian Media Frame," and connecting it with the agronomic implications and development of tea cultivation in Indonesia, it can be concluded that:

Matcha as a functional plant holds significant potential for development in Indonesia, both in terms of public health, the beauty industry, and as a strategic economic commodity that empowers local farmers. A framing analysis of five Indonesian media articles reveals a paradoxical reality: while mainstream media actively build awareness of matcha consumption with health and beauty claims, Indonesian farmers have quietly been producing

matcha of quality comparable to Japan's without the wider public's knowledge.

Bridging these two realities is both a challenge and an opportunity. If the narrative of local farmers' production can be integrated into health and lifestyle coverage in mainstream media, a holistic matcha ecosystem can be formed: health-conscious and discerning urban consumers can channel their demand towards high-quality local products, farmers receive recognition and economic incentives, and Indonesia can reduce its dependence on imports while building pride in its national products.

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