



International Journal on Eternal Wisdom and Contemporary Science

ISSN (Online): 3107-8184
Volume 3 • Issue 1 • June 2026 • pp 234-242

Panchagni Vidya and Genetically Modified Seeds

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Abstract:

The world today considers food crops as a commodity and focuses on maximizing their yield to increase profits. Scientists are now exploring gene modification to ‘design’ crops which withstand all types of pests and weather conditions to improve their yield. However, in the “race” to design and develop better variants of the crops, they may be unintentionally initiating long-term undesirable consequences. This paper explores one such potential impact of genetically modified crops. It investigates the issue of human infertility using the *Panchagni Vidya* framework of the Upanishads.

Keywords: *Panchagni Vidya*, Genetically Modified Seeds, Terminator Technology, Human Infertility

INTRODUCTION

Mainstream science, deeply rooted in materialism, does not accept the concept of *Atma* (innermost essence of a sentient being) and *Samsara* (the cycle of existence) which are integral concepts of most Indic philosophies. Science considers life to be a *by-product* of some biochemical reactions within the body and when the body loses its ability to perform these biochemical processes, it is called death. Since the concept of rebirth is not recognised by mainstream science, they could be unknowingly harming the humanity as highlighted in this paper.

There has been a significant global decline in the sperm count over the past five decades with studies suggesting that this trend is accelerating. The overall sperm quality and motility (swimming ability) continues to face challenges. A meta-analysis published in 2023 found that sperm count dropped by approximately 51.6% between 1973 and 2018 amongst men across all continents. [1]

While mainstream science will categorically dismiss any linkage between sperm count decline and usage of genetically modified seeds, and will reject a need to conduct any systematic study in this domain, the *Panchagni* framework (which explains the cycle of existence through five cosmic ‘fires’) challenges this presumption.

The ancient Indic texts consider food to be the integral part of the conduit through which *prana* (life force) enters the human body and takes rebirth. *Aahaar* (food) is not just a source of essential nutrients to the body but it has a sacred status. The food is offered as *Aahuti* (oblation) to *Jataraagni* in the stomach. It then gets converted into *Saptha Dhatus* - the seven fundamental bodily tissues i.e. *Rasa*-Plasma, *Raktha*-Blood, *Mamsa*-Muscle, *Meda*- Fat, *Asthi*-Bone Tissue, *Majja*- Bone Marrow and Nerve, *Shukra*-Reproductive tissue including sperm.

For example, in the *Prashnopanishad*, a disciple asks: “Venerable Sage, from where did all these living beings originate?” The response given in verse 1.14 is as follows: “Food is indeed *Prajapati*, the Creator. From food, semen (*retas*) is produced, and from *semen*, all living beings are born.” According to our *Shastras*, the soul (*Atma*) is eternal and indestructible. Its journey transcends time. The body is perishable. The *Atma* leaves one body, enters another, and continues to perform its *Karma*. This cycle of changing bodies by the soul is known as “The Ocean of *Samsara*”.

The focus of the current paper is to present the *Panchagni Vidya* framework (which finds mention in Chandogya Upanishad, Chapter 5 section 3-10 and Brihadaranyaka Upanishad, Chapter 6, Section 2) and discuss the possible implications of using genetically modified seeds using this framework.

PANCHAGINI VIDYA

A brief background:

Svetakethu, a young student after mastering his studies, comes to King Pravahana for blessings and the King asks him the following five questions:

1. Do you know what happens to the soul after death?
2. Do you know where people come from when they are reborn?
3. Are you aware of the two paths through which the soul ascends?
4. What is the reason that the yonder region (other worlds where souls rise to after death) is able to afford so many, yet not overflow?
5. Are you aware of the five fire oblations that are offered and how the fifth as fluid becomes a human?

Svetakethu is unable to answer these questions. He returns to his father and expresses his anguish. Father Gouthama was also stunned for not knowing the answers. Both go to the king and enquire about the answers. Strangely, the king says *Kshatriyas* (the section of the society whose main function is to rule and protect the country) alone have the right to profess this

knowledge and they preserved it for generations and hesitated to impart it to *Brahmins* (the section of the society whose main function is to teach and preserve sacred knowledge). However, he agreed that henceforth let *Brahmins* also know.

I will touch upon the question - why was this knowledge reserved for *Kshatriyas* – towards the end of this paper.

Basic Concepts:

Panchagni framework explains the cycle of existence in details. It reveals how different components of the universe are intricately connected in the process of rebirth. The five stages between death and birth have been wonderfully analogized with five cosmic *yagnas*.

A *yagna* is an act of worship where rituals are done in front of a sacred fire (*agni*) and oblations are offered for the sake of desired results. The six components of any *yagna* are fire (*agni*), fuel or firewood (*samith/samidha*), smoke (*dhooma*), flame (*archi*), ember/charcoal (*angaara*) and sparks of fire/scintillations (*vispulinga*). There is a *Brahmin* (*Deva*) who does the rituals where oblations are offered for desired fruits which culminates in due course. As per the *Panchagni* framework, there are five *yagnas* which are executed for the *Jivatma* (embodied soul) to be reborn.

The framework has been described in Chapter 5 of Chandogya Upanishad. The relevant *mantras* (verse 5.4.1 to 5.9.1) along with their English translation are reproduced below.

The Core Narrative:

असै वाव लोको गौतमाग्निस्तस्यादित्य एव समिद्रश्मयो धूमोऽहरर्चिश्चन्द्रमा अङ्गारा नक्षत्राणि
विस्फुलिङ्गाः ॥५.४.१॥

Verily, O, Goutama, yonder region is Fire; of that fire sun is the fuel, light of the sun is the smoke, the days are its flames, the moon is its charcoal, and the stars are its scintillations/Sparks of light. ॥5.4.1॥

तस्मिन्नोतस्मिन्नग्नौ देवाः श्रद्धां जुह्वति तस्या आहूतेः सोमो राजा सम्भवति ॥५.४.२॥

On that fire the *Devas* offer faith in oblation; therefore proceedeth the *Somaraja*. ॥5.4.2॥

पर्जन्यो वाव गौतमोग्निस्तस्य वायुरेव समिदभ्रं धूमो विद्यूदर्चिरशनिरङ्गारा ह्लादनयो
विस्फुलिङ्गाः ॥५.५.१॥

O Gauthama, *Parjanya* (rain cloud) is verily fire, wind is its fuel, the cloud is the smoke, the lightning is its flame, the thunderbolt its charcoal, and the rumbling of clouds its scintillations. ॥5.5.1॥

तस्मिन्नोतस्मिन्नग्नौ देवाः सोमं राजानम् जुह्वति तस्या आहूतेः वर्षरं संभवति ॥५.५.२॥

On that fire the *Devas* offer the *Somaraja* in oblation and therefore proceedeth the Rain. ||5.5.2||

पृथिवी वाव गौतमोग्निस्तस्याः संवत्सर एव समिदाकाशो धूमो रात्रिर्चिर्दिशोऽङ्गारा
अवान्तरदिशो विस्फुलिङ्गाः ||५.६.१||

O Gauthama, the earth is verily fire, the years are its fuel, the sky is its smoke, the night its flame, directions are its charcoal and sub directions are scintillations. ||5.6.1||

तस्मिन्नोतस्मिन्नग्नौ देवाः वर्षं जुह्वति तस्या आहूतेः अन्नं संभवति ||५.६.२||

On that fire, the *Devas* offer the rain in oblations, thence proceedeth the food (*Annam*). ||5.6.2||

पुरुषो वाव गौतमोग्निस्तस्य वागेव समित् प्राणो धूमः जिह्वार्चिश्चक्षुरङ्गाराः श्रोत्रं विस्फुलिङ्गाः
||५.७.१||

O Gauthama, man is verily fire, of that fire, speech is its fuel, breath is its smoke, the tongue is its flame, eyes are its charcoal and ears are scintillations. ||5.7.1||

तस्मिन्नोतस्मिन्नग्नौ देवाः अन्नं जुह्वति तस्या आहूतेः रेतः संभवति ||५.७.२||

On that fire, the *Devas* offer the food in oblations, thence proceedeth semen. ||5.7.2||

योषा वाव गौतमोग्निस्तस्य उपस्थ एव समिद्यदुपमन्त्रयते स धूमो योनिरचिर्यदन्तःकरोति
तेऽऽङ्गारा अभिनन्दा विस्फुलिङ्गाः ||५.८.१||

O Gauthama, woman is verily fire, the sexual organ is the fuel, when one invites is its smoke, vulva its flame, when one inserts, its the charcoal and sexual pleasure is scintillations. ||5.8.1||

तस्मिन्नोतस्मिन्नग्नौ देवाः रेतो जुह्वति तस्या आहूतेः गर्भः सम्भवति ||५.८.२||

On that fire, the *Devas* offer the semen in oblations, thence followeth foetus. ||5.8.2||

इति तु पञ्चम्यामाहूतावापः पुरुष वचसो भवन्तीति स उल्बावृतो गर्भो दश वा नव वा मासान्
अन्तः शयित्वा यवद्वाथ जायते ||५.९.१||

Thus indeed after the 5th oblation, water came to be called a human. Covered by a membrane, that foetus having slept inside for ten or nine months or the time needed, takes birth thereafter. ||5.9.1||

The following table summarises the Panchagni Vidya

Sr. No.	Agni / Fire	Samith / Firewood	Dhooma / Smoke	Archi / Flame	Angaara /Ember	Vispulinga / Spark	Aahuthi / Oblation	Sambhava / End Result
1.	Dyurloka / Upper World	Aditya / Sun	Sunlight / Rays	Day/ Time factor	Moon	Stars	Shraddha / Faith	Soma Raja
2.	Parjanya/ Indra / water bearing clouds	Vayu / Wind	Clouds	Lightening	Thunder	Rumblings of clouds	Soma Raja	Rain
3.	Prithvi/ Earth	Samvastra / Year	Akash / Sky	Ratri/ Nights	Dhisha/ Directions	Upadishas/ sub Directions	Rain	Annam/ Food from plants
4.	Purusha / Male	Vak / Power of speech	Prana / Life force	Jihwa / Tongue	Eyes	Ears	Annam/ Food from plants	Retas / Semen
5.	Stree / Woman	Genital	Invite to enter	Yoni / Vulva	Insertion	Sexual Pleasure	Semen	Foetus

Essence of Panchagni Vidya:

The essence of all the above *mantras* is simplified and compiled in section 10 of chapter 5 of Chandogya Upanishad. The gist is given below.

The individual soul is offered as an oblation into the five fires—namely heaven, cloud, earth, male, and female—and thereby assumes the five forms: soma, rain, food grains, semen, and embryo. One who knows this and worships *Brahman*, attains liberation through the path of the gods (*devayana*). One who performs only the *karmas* prescribed by the Vedas reaches the moon through the path of the ancestors (*pitryana*), enjoys happiness there as long as his merits last, and then returns to earth through cloud, and rain. One who neither performs *upasana* nor does the *karmas* goes by neither of these two paths, fails to reach heaven, and takes lowly births.

Key Takeaways pertaining to Death to Birth Cycle:

As described in *Panchagni Vidya*, after the *Atma* leaves a body, it reaches clouds, gets instilled in rain drops, falls down to earth as rain, turns into food through plants, and is consumed by a living being. It gets into the blood stream and becomes semen, and then attains a body as a foetus which takes birth after nine or ten months. *Panchagni Vidya* cites that food (through plants through rain) acts as a conduit for the soul in this journey. Disruption of this conduit by any means prevents proper execution of the fourth and fifth oblation - the transition from food to fluid (semen) to human form.

MORE REFERENCES ON FOOD IS THE CAUSE FOR *JIVATMA*'S MANIFESTATION

The examples listed below do not describe the process of manifestation of *jivatma* in as much details as Chandogya Upanishad. Nevertheless, they do illustrate the role of *Annam* (food) in the birth and sustenance of *jivatma*—a key concept in Vedantic cosmology.

Thaittiriya Upanishad:

तस्माद्वा एतस्मादात्मन आकाशः सम्भूतः । आकाशाद्वायुः ।

वायोरग्निः । अग्रेरापः । अद्भ्यः पृथिवी ।

पृथिव्या ओषधयः । ओषधीभ्योऽन्नम् । अन्नात् पुरुषः । ॥२.१॥

“From That, verily,—from This Self—is *ākāśa* (ether) born; from *ākāśa*, the air; from the air, fire; from fire, water; from water, earth; from earth, plants; from plants, food; from food, man.” ॥2.1 ॥

अन्नाद्वा प्रजाः प्रजायन्ते । अथो अन्नेनैव जीवन्ति ।

अन्नं हि भूतानां ज्येष्ठं । ॥२.२॥

“From food, verily, creatures are born. And, indeed, they live on food alone. Food is indeed the chief among all beings.” ॥2.2 ॥

Bhagavad Gita:

अन्नात् भवन्ति भूतानि । पर्जन्यात् अन्नं संभवः ॥३.१४॥

“From food come forth beings; from rain food is produced” ॥3.14 ॥

Prashopanishad:

अन्नम् वै प्रजापतिस्ततो ह वै तद्रेतस्तस्मादिमाः प्रजाः प्रजायन्त इति ॥१.१४॥

“Food, verily, is *Prajapati*. From that comes semen; from semen are all these creatures born.” ॥1.14 ॥

स प्राणंसृजत प्राणाच्छ्रद्धां खं वायुर्ज्योतिरापः पृथिवीन्द्रियं मनोऽन्नमन्नाद्वीर्यं तपो मन्त्राः कर्म लोका लोकेषु च नाम च ॥६.४॥

“He created *Prāṇa*; from *Prāṇa* faith, *Akasa*, Air, Fire, Water, Earth, senses, mind, food and from food *veeryam* (semen), penance, *mantras*, *karma* and worlds, and in the worlds name also.” ॥6.4 ॥

SOME SCIENTIFIC IDEAS AND ADVANCEMENTS

Concept Of “Life”:

According to mainstream science, life is not something that “comes from elsewhere”; instead, it is a property that emerges from within the body through the specific organization and biochemical interactions of matter. This process occurs through reproduction, where existing living cells (sperm and egg) from the parents combine to initiate a new self-sustaining biological system with material of biological origin. In biology, life is viewed as a “state of being” that arises from complex biochemical reactions, specifically the interaction of proteins, lipids, and nucleic acids (DNA/RNA). A new human life begins when two already-living gametes—the sperm and the egg—fuse at fertilization to create a single-celled zygote. This zygote does not receive “life” from the outside; it inherits the continuous, unbroken chain of living matter that has been passed down since the first living cells appeared on Earth billions of years ago.

Biotechnology:

Biotechnology combines biology with engineering and technology to solve problems like improve human health and create sustainable solutions across agriculture, medicine and industry. Biotechnological applications in medical sector focuses on developing new drugs, vaccines, and gene therapies. It enables the production of therapeutic proteins, such as synthetic insulin, and facilitates advanced diagnostic tests for detecting diseases at the molecular level. In Industrial sector applications revolves around using biological systems like enzymes and microorganisms for more efficient manufacturing processes. Environmental applications involve biological processes to treat waste and clean up polluted environments.

In agricultural sector biotechnology is extensively used for developing genetically modified (GM) crops that are resistant to pests, diseases, and environmental stress. This technology aims to increase crop yields and enhance nutritional value to combat food insecurity. Genetic engineering involves the deliberate modification of the plant’s DNA and genes.

Terminator Technology for Crops:

Terminator Technology or Genetic Use Restriction Technology is a genetic engineering technique which is used to make second-generation seeds sterile. This prevents the farmers from saving seeds to plant in the following year. Corporates who take the patent of this invention name it conveniently as Technology Protection System. The strategy behind this patent is to kill only the embryo of such a seed and leaving the other important components such as oils, proteins, carbohydrates intact.

DISCUSSION

India enforces strict restrictions on GM crops. Only one GM crop – Bt Cotton - is currently permitted for commercial cultivation, though there are many more in the pipeline like GM Mustard, GM Brinjal etc. While domestic cultivation is limited, GM foods still enter Indian market due to unregulated imports. Moreover India's institutes are "deeply engaged" in the development of GM seeds for 13 crops, including rice, wheat, potato, banana and sugarcane and it seems only a matter of time that these GM crops will replace their natural variants. [2]

There is no denying the fact that we can achieve better yields and more nutrients by using GM seeds. However, there are serious ecological and health concerns linked to GM food which includes risk to biodiversity, potential long-term health effects and threats to non-target organisms such as bees.

As mentioned in the Introduction section of this paper, there has been a noticeable decline in the sperm count in the last five decades. There seems to be a strong correlation between this decline and the usage of GM seeds. Though correlation does not imply causation, nevertheless, it calls for some focussed study to establish or to rule out any causal link between them.

If we accept the *Panchagni* framework of how *prana* or *atma* moves from one body to the next, there is a high likelihood that the usage of food which have sterile seeds also reduce fertility in human beings. Even if we reject the *Panchagni* framework and label it as just some ancient story not grounded to reality, there still exist a need to conduct long term study of impact of GM crops on human fertility.

CONCLUSION

Any scientific invention should adhere to the 'Dharmic Governance' model. While taking any decision the governments should take into consideration both the short term and the long-term well-being of the entire ecosystem. Knowledge of *Panchagni Vidya* was, therefore, reserved for *Kshatriyas*, as mentioned in one of the previous sections. Since managing the quality and quantity of food was the responsibility of the King, it was extremely important that the King understood and appreciated how different components of the universe are intricately connected to the sustenance of the humanity.

Undoubtedly, the scientific developments and innovations in the last two centuries have made a sea change in the quality of human life. However, the concerns and fear regarding usage of GM crops are not baseless. A dangerous initiative is being undertaken by mutilating the basic design and structure made and perfected by Nature over millions of years. Our myopic view of improving yield of crops has the potential to backfire in the long run.

Brief Profile of the Author:

Captain Alavandar Mohan is a civil engineering graduate from Regional Engineering College Trichy. He served in the Indian army as a short service commissioned officer. Later he constructed large scale civil engineering projects such as railways, dams, bridges etc. in India as well as abroad.

He is a learner of Samskritam and a volunteer of Samskrita Bharti, an organisation which propagates Samskritam to all. He is the President of Dakshina Tamilnadu Region. He is of the opinion that our scriptures have a lot of science in veil and it's our duty to bring the hidden Vedic knowledge to the public and scientific forums.

Statements and Declaration: I hereby declare that this manuscript is my original work and does not infringe on any rights of third parties. All sources have been duly acknowledged and cited. I used Perplexity AI for fetching peer reviewed statistics on reduction in sperm count in the last few decades. This work has not been previously published in whole or in part. I declare that I have no conflict of interest with my places of employment or anybody else in publishing this article. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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