

We are witnessing an unbelievable event in our own lifetimes. Suddenly, within a span of a few days, the whole world has been forced into a stupor, into terror, into isolation, and the world soon became suspiciously untouchable. A tiny invisible thread packed in a small invisible protein dot has been able to create terror in the hearts of the most powerful men and nations. It posed a threat that no military could fight. It doesn't differentiate between continents, nations, borders, colour, caste, breed, creed, age or gender, but it knows precisely how to infect humans. It is present everywhere — and, pretty much like the Almighty — all pervasive. It waded its way through continents with ease and has bull-dozed the world. In short: The tiny invisible thread called 'coronavirus' has brought mankind to its knees. Is it evil? It can't be, because according to scientists, it has no life; the coronavirus is a small, lifeless 'non-living' particle.

The fundamental characteristics of life are metabolism and self-sustaining replication. Viruses do not satisfy both criteria and are therefore categorised as non-living; so, by this definition, viruses truly are dead chemical molecules. It is interesting, however, that these 'dead molecules' have developed their own design to be able to dictate lives. In fact, they have the propensity to threaten life!

But *why* do viruses interfere with life? The answer: They want to multiply by using the host cell's nucleic acids for their replication. They are parasitic in nature. Viruses are tiny threads of deoxyribonucleic acid (DNA) or ribonucleic acids (RNA). Interestingly, there is no life without DNA or RNA; but these independent DNA or RNA virus particles (virions) are considered non-living.

Viruses infect all forms of living things but they are very specific to organisms, although there sometimes are a narrow range of potential host organisms. For example, a virus that infects bats may also infect humans — but not any other forms of life such as cows, dogs, insects or bacteria. Each virus has a character of its own. Each species of virus appears to have evolved very specific mechanisms to gain entry only through specified molecular routes into organisms.

The severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) gains entry only through eyes, nose or mouth — not through skin or any other route. The virus has specific receptors to which it binds to gain entry into the organism and find its way into cells and start multiplying. After multiplying, the viruses find their way back out and infect others. Only God knows how they developed such a highly evolved mechanism and ironically still be called as 'dead' chemical blobs!

Generally, RNA viruses multiply by gaining entry into cytoplasm of host cells whereas DNA viruses target the nuclei of cells. Interestingly, viruses continue to multiply in the host cells without killing the host organisms, at least until they exploit the host completely. A virus's life cycle is indeed fascinating — but can it really be called a 'life cycle' if it's a non-living particle?

SARS-CoV-2 causes the disease COVID-19. The World Health Organisation (WHO) declared it as a pandemic that could be prevented mainly by reducing human-to-human contact and by enforcing social distancing. The world responded with lockdowns, curfews, social distancing and restrictions on social life. Offices and markets were closed. Road, rail, air and water transport were halted. 'Normal life' was severely disrupted. Manufacturing, trade, and sales ground to a halt. Essential activities related to food and healthcare were exempted from the lockdown and a few governments also exempted agricultural operations. Millions of people around the world lost their employment, savings and livelihood.

The textile industry has been the worst hit. Demand for fabrics and apparel crashed, created a cascading effect on the upstream supply chains and value chains; the prices of raw cotton and yarn crashed, and stocks piled up in consuming countries. Under the current predicament of low prices for cotton and low demand for textiles, with better prices for food crops, will farmers be motivated to choose cotton over food crops? Different countries have reacted in different ways, especially depending on whether they were net importers of food or if there was government-assured support for cotton.

I invited articles from researchers across the world. Almost everyone responded with excellent analytical reports on the current status in their respective countries; staff of the ICAC, Bremen Cotton Exchange and FAO have offered their global perspectives. The articles provide a comprehensive coverage on the global impact of COVID-19 on the cotton sector.

We are chronicling our times. We are recording history. We are documenting our experiences today so some day, we will be able to recollect in posterity how we survived the pandemic — some bruised, some badly hurt and none unscathed.

-Keshav R Kranthi