

Chemical Warfare in Vietnam

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Scheduled Caste political alliance was forged during the last by-election and it was to secure one MLA seat in the district as well as ensure the defeat of several prominent Congressmen, including H N Bahuguna himself.

41 These estimates of support are all

estimates of the opinions of the candidates interviewed as well as several leaders of various campus political organisations.

42 *Northern India Patrika*, September 15, 1969, p 3.

43 *Northern India Patrika*, September 27, 1969, p 3.

44 *Northern India Patrika*, September 28, 1969, p 4.

45 *Northern India Patrika*, September 27, 1969, p 4.

46 *Northern India Patrika*, December 4, 1969, p 3.

47 Interview with union president on February 3, 1970.

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Navroz Mody

The effects of "advanced" techniques of warfare on people and their natural environment is documented in detail. Quite apart from the slow torture inflicted by napalm, gases which are called "irritants" by the US Army often have fatal consequences for their victims, many of whom are innocent civilians.

Defoliant spraying kills vegetation as well as animals and its side-effects include deformed babies. Long-term changes in soil and weather conditions are not yet known.

ONE of the most disturbing aspects of the war in Indo-China is the little-publicised chemical warfare waged by the US. The Geneva protocol and the Hague Convention of 1907 both ban the use of chemicals and gases of the types used in Indo-China. The US insists, however, that the ban does not apply since the agents it employs are non-lethal and are not used against the civilian population.¹ Scientific and circumstantial evidence of the short-run effects of chemical warfare contradict the American argument, and it has been urgently pointed out by many scientists (including Dr Meselson of Harvard who was appointed by the American Association for the Advancement of Science to study the effects of the chemical war in South Vietnam) that the long-term effects seem to promise an irreversible devastation of the region's ecology. The US government responded by claiming that the long-term effects were unknown and that it looked forward to the end of the war before any analysis could be made. That is like a doctor prescribing death for a patient in order to arrest the disease.

The chemical agents the US is known to have used in Vietnam are napalm, gases (CN, CS, DM) and herbicides. Of all the weapons in the US arsenal, the most feared is napalm. Its horror lies not in its capacity to inflict death, but in the agony of those who survive the initial bombing. The igniting substance used in napalm is white phosphorous, described by a French physician, A Behar: "Phosphorous has the particularity that inside the wound or burn, it burns slowly. On occasion this slow combustion lasts up to fifteen days."²

The method employed in napalm

bombing is — as the *Washington Post* (March 13, 1965) points out — "Pilots are given a square mile on a map and told to hit every hamlet within the area". Areas known to be under NLF control are declared "free fire zones", i.e., anything that moves becomes a target.³ This tactic is meant to persuade the civilians that the US "refugee camps" may be less hazardous than their own homes.

In 1968 the US Defence Department revealed the quantity of napalm used in Vietnam: 1963: 2,181 tons; 1964: 1,777 tons; 1965: 17,000 tons; 1966: 54,000 tons; and in 1968, it was estimated that the Air Force alone dropped more than 100,000 tonnes. (This does not include figures for Laos and Cambodia).

Of the gaseous agents employed, CN has been in extensive use around the world for many years. But the US characterisation of CS and DM solely as "irritants" or "harassing" agents is contradicted by its own Army Field Manual 3-10 which warns that: "DM alone is not approved for use in riot control, or as disperser, in any operation where deaths are not acceptable." (emphasis added.) Besides the inherently lethal effect of the gas, the Defence Department has said that the gas was being used to flush out "the enemy" from bunkers, caves, tunnels, etc, prior to B-52 raids. Of course, it is hard pressed to explain how civilian men, women and children will remain immune to the gases and invulnerable to the air-raids. In such uses it cannot be argued that even the CN and CS are used merely as "irritants".

Alje Venneme, a Dutch doctor heading the Canadian medical mission to

Vietnam, 1964-1968, has provided ample evidence of deaths caused to his patients by CS. He explains the particular vulnerability of the Vietnamese to the gas: "The Americans try to force the NLF soldiers out of their tunnels with CS. This causes vomiting, and tear gas in the tunnels works like pulmonary poison — the more so with the Vietnamese because half of them have tuberculosis. They get pulmonary edema which kills them. I treated a little boy who had been sitting in a tunnel, but I could not save him. His sister I was able to save, but her lungs will remain severely damaged. Only if they can get out of the tunnel within 30 seconds will they be safe."⁴

The use of herbicides in Vietnam dates back to 1961. Since then the programme called Operation Ranch Hand brandishing its motto, "Only We Can Prevent Forests", has launched a progressively intensified campaign to destroy forests, plantations and farm land to deprive the NLF of food and shelter. Han Swyter, a former aide to McNamara, testifying before the Foreign Relations Committee (December 2, 1969) revealed that since 1962, 100 million pounds of herbicides had been used over 4 million acres in Vietnam (figures for use over Laos, Cambodia and Thailand are not known).

Of the three types of herbicides used — orange/purple-phenoxy-acetic acids (2, 4-D and 2, 4, 5-T), blue-cacodylic acid, white-pilcoram — the first two have been banned totally in the US since January 1, 1970. The Biogenetics Research Labs Inc reported to the State Department that offspring of animals fed 2, 4, 5-T showed 100 per cent birth defects and 2, 4-D requires

further studies. A Japan Science Council report says that to date nearly 1,000 peasants and 13,000 livestock have been killed as a direct result of herbicide poisoning.⁵ A more macabre result of the herbicides is the enormous number of deformed children born since 1967 in areas of the most intense "defoliant" spraying.⁶

These dramatic horrors are only the immediately perceptible ones. The anticipated horrors will be more discreet but far more devastating.⁷ Farmlands are expected to remain sterile for at least fifty years. The effect on forests and plantations is expected to be either permanent or last several centuries. The poisoned top soil from this area through various forms of erosion will be carried for hundreds of miles around and

no one really knows the effect of all this on other plant and animal life in South-East Asia, or how the changes in ecology and weather conditions would effect the rest of Asia. In fact the better part of the South Vietnamese rural economy, affecting almost one-third of its population now living in the concentration-camp conditions of the "refugee" camps will require capital that no post-war government is likely to have access to. In addition, the social dislocation of a rural population forced to urbanise overnight promises a traumatic future for Vietnam in peacetime. Only sections of American business have something to be optimistic about. As *Business Week* so often points out, behind every bayonet is a businessman, and the availabi-

lity of "pacified" rural Vietnamese as cheap industrial labour will be a great attraction for US investments after the war.

NOTES

- 1 *US Army Manual* (FM-27.10) para 37.
- 2 Quoted in Neilands, "Chemical War in Vietnam", *Asian Survey* Vol 10, No 111.
- 3 For further documentation see Frank Harvey, "Airwar Vietnam", Bantam, 1967.
- 4 *Guardian*, New York, January 3, 1970.
- 5 *I F Stones Weekly*, December 15, 1969.
- 6 US National Cancer Institute Report, *Scientific Research*, November 10, 1969.
- 7 Seymour Hersh, "Chemical and Biological Warfare", Bobbs Merrill, New York, 1968.

Doing without a Food Policy?

H Laxminarayan

At the National Development Council meeting in Delhi, the Chief Ministers took decisions on food policy for the Rabi season that once again went against the recommendations of the Agricultural Prices Commission.

As usual, with a good crop the tendency is to refuse to lower the procurement prices and to liberalise the food zones. Yet there is an excellent economic case, this article argues, for scaling down the prices of foodgrains and for retaining the zonal system as a necessary evil for some time to come.

THE Chief Ministers who had assembled in Delhi for a meeting of the National Development Council met on March 22 to consider the Agricultural Prices Commission's Report for Rabi Foodgrains for 1970-71. This meeting took a number of decisions on the recommendations of the Agricultural Prices Commission. Though some of these decisions were not technically sound and went against what the public expected, there were not many surprises in them either. Even last year, the Chief Ministers had not accepted the recommendations of the Agricultural Prices Commission in such matters as fixation of foodgrain prices. Similarly, except for keeping out Maharashtra and Gujarat from the wheat zone, they had expanded the wheat zone so as to include Madhya Pradesh, West Bengal (excluding Calcutta), Bihar and Rajasthan. Nevertheless it would be useful for us to consider the implications of some of these decisions.

In their Report on Rabi Foodgrains for 1970-71, the Agricultural Prices Commission suggested that there should be a reduction in the procurement

price of Mexican and indigenous common white wheat from Rs 76 to Rs 72 per quintal. The price of the indigenous red variety should be maintained at last year's level of Rs 66. The Chief Ministers turned down this suggestion and recommended that last year's procurement price of Rs 76 a quintal should be maintained. They did not bother to have a critical look at the fact that, in the last five years the issue price of wheat had more than doubled from Rs 37.51 to Rs 78 per quintal. By refusing to bring down the wheat prices even marginally as recommended by a technical body, they seem to have given greater importance to non-technical factors. There are many dangers in keeping foodgrain prices high and if this game goes on for long we may do irreparable damage to our economy from the long-term point of view for the following reasons:

(1) If procurement prices are kept high the choice will be between food subsidy or selling foodgrains at high prices. Both alternatives are equally undesirable. It would be difficult to withdraw the food subsidy if farmers

are used to it for too long. A continued food subsidy will mean encouraging the growth of inefficient agriculture. Similarly, high foodgrain prices not only go against the interests of the consumer but also against the development of the economy in desired directions.

(2) Normally, whenever subsidies are given on agricultural commodities they are either input-oriented or output-oriented. But in India we have input subsidies (while fixing fertiliser prices) and also output subsidy (in fixing foodgrain prices) side by side with numerous other concessions, such as the unwillingness to mobilise resources fully from the agricultural sector for economic development and keeping taxes on the agricultural sector at a low level.

(3) We have a situation where the relationship between the supply of foodgrains and demand for foodgrains is not taken into account while fixing foodgrain prices. While agricultural production, particularly output of wheat, has increased substantially in the past few years, agricultural prices have more than kept pace although one