

The CHF incidence peak coincided each year with increased numbers of this tick species.

Anti-epidemic and prophylactic campaign measures against CHF were chiefly directed to coordinated sanitary-preventive measures including application of tick repellents and organized individual and collective inspection. During the epidemic seasons of 1968 and 1969, 131,000 and 46,000 persons, respectively, were investigated during daily inspection of farmsteads.

Sanitary instructive work was everywhere performed among farm workers. Tick repellents (chiefly DETA) were broadly recommended.

From 1966–1969, 1,267 cattle of collective farms were treated with 1% chlorophos solution. Follow-

ing treatment, the tick infestation index was 3–4 times lower than in control farms. Cattle were treated by veterinary and disinfection teams. Pastures and cattle were treated simultaneously. A total of 2,600 hectares was treated with chlorophos using helicopters and orchard sprayers. After pasture treatment, tick numbers were much lower on cattle than in control areas (0.3 ticks per head). During the epidemic season, field camps, bases, rest localities, and pioneer camps were regularly treated with 2% chlorophos.

Regular prophylactic measures gave positive results of decreased tick-contact frequency and reduced CHF incidence, and also restricted the distribution of CHF infection in this region.

Study of CHF in Belaya Kalitva Region of Rostov Oblast (1963-1969)

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CHF was studied in 1963 in Belaya Kalitva region owing to detection of 9 CHF patients. Eight of the 9 patients were associated with animal handling (milkmaids) and attached ticks were found on them.

From 1963–1969, the annual CHF incidence of 112 patients was 9 (1963), 17 (1964), 19 (1965), 20 (1966), 23 (1967), 21 (1968), and 3 (1969).

Most patients were recorded in 1967–1968; chiefly during the spring-summer period. The 1st cases usually appeared in the 2nd half of May and the last in late August.

From investigating the reasons for CHF appearance in Belaya Kalitva region, it was found that persons handling cattle and having contact with ticks were most frequently infected. Certain improved prophylactic measures caused a change in the professional composition of patients (Fig. 11).

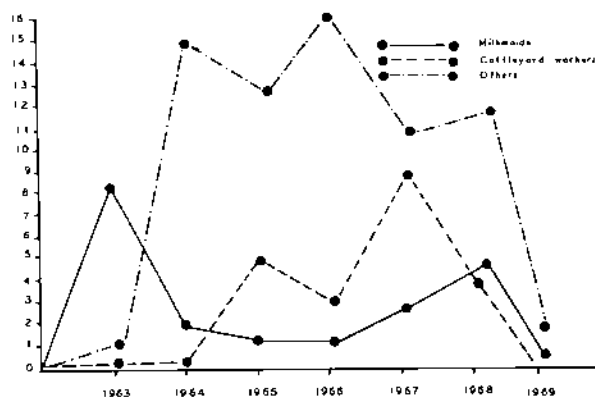


FIG. 11.— Professional distribution of CHF patients (1963-1969).

In 1969, 3 CHF cases were recorded (1 milkmaid, 1 worker, 1 pensioner).

CHF infection dynamics corresponded to tick numbers and could be judged by the frequency of tick-contact. The contact frequency between persons and ticks was calculated at medical centers and during farm inspections.

In 1968 and 1969, 445 and 95 persons, respectively, were recorded to have contact with ticks. The much lower tick numbers in 1969 apparently caused less contact frequency and CHF incidence. Severe frosts and dust storms in the 1968-1969 winter probably affected the viability of CHF vectors.

The 7-year study in epidemic foci allowed us to improve the system of prophylactic measures. Medical workers were trained every year in CHF epidemiology, the clinical picture, and prophylactic measures. Farms were inspected to detect CHF patients and persons having contact with ticks. Everyone in contact was registered and submitted to a 10-day medical observation. Individual prophylactic measures, particularly body and clothing inspection, were also recommended.

1. The CHF infection rate depended directly on vector numbers.

2. Tick numbers were influenced by climatic conditions.

3. A series of prophylactic measures against CHF caused a change in the professional composition of patients. The 7-year investigation of prophylactic measures against CHF showed the need for different prophylactic measures for persons who are mostly menaced by CHF.