Generally, infections in swine intensive farms are conditioned and result from interactions among organisms, animals, environment, feeding and breeding systems; yet, they are also supported by opportunistic organisms such as mycoplasma, bacteria, protozoa, viruses and yeast acting singly or associated. Their control with specific vaccines has been often unsatisfactory; the involved factors have no microbial origin and the agents are numerous. A different prophylaxis relying on factors such as vessel transport, inactivation, feeding and housing was adopted. The animal specific natural resistance was also strengthened (Mayr et al., 1979a, b; 1979b). The preliminary results of laboratory and field trials were not encouraging (POLIF) of the kind previously given to calves was used (Galassi, 1979; Galassi et al., 1979, 1981).

**Materials and Techniques:** 1. POLIF, an emulsion consisting of: a) Purified and inactive N. T. 10^6 /ml per acid indol negative of Escherichia coli from a 5,10^5 bacteria/1 ml suspension; b)Incomplete Freund's adjuvant (IFA). 2. Laboratory and infection studies: a) Albino mice, Swiss, of 22 to 25 g; b) Albino guinea pigs, Fb-Ring strain, of 450 to 500 g; c) Pregnant sows and piglets of different age, of Landrace x Large White crossbreed. In safety tests rodents had 2.0 ml POLIF/kg i. p. e. c. or i. v. sows and piglets 1.0 ml/25 kg i. p. e. c. and 1.0 ml/3.5 kg i. v. respectively. In efficacy tests sows had 5.0 ml POLIF i. p. e. c. at 60 and 100 days pregnancy. Piglets were given 1.0 ml/25 kg i. p. e. c. and 1.0 ml/3.5 kg i. v. respectively. All piglets over 4-week age had 2 injections of 2.0 ml i. m. with a 10-day interval in between.

**Techniques:** a) Ordinary haemagglutination and *Haemolytic activity* of the serum in the rabbits was determined electrophoretically.

**RESULTS:** 1. The safety tests on lab rodents were positive and a 1:10 dilution of the injection spot was used. In sows and piglets, besides the said granniness, a rise in temperature and anorexia rarely occurred 24 hrs post infection. 2. The efficacy of POLIF in laboratory was evaluated indirectly as the experimental infection with opportunistic agents is of a hard fulfillment. Clinically, topical and general reactions previously reported under safety tests were seen: haematological tests had negligible changes in the haemoplasma rate and in red corpuscle elements. An increase in leukocytes of POLIF-treated pigs occurred too. It was seen after both POLIF injections with a peak after 12 hrs and ended within 3 days. The relation mono-polynucleates (in controls being 2:2) after POLIF treatment differed markedly. 12 hrs after the 1st treatment the relation had mean values of 3.4.

**Conclusions:** Prophylaxis is not always possible with specific vaccines. Infections from opportunistic agents can be easily controlled with stimulants of the paramount resistance. POLIF mobilizes the specific natural defenses of animals increases leucocyte number and circulating interleukin modifies the leukocyte formula. Though the modalities which regulate these phenomena are still unanswered, nevertheless they are useful in field practice. In problem-herds POLIF greatly reduces losses.


(*) Research work carried out with a grant of the CNR, F.F. IDEA. Contract No. 81.00045.61; partial results.