There have been abundant research published about the effects of sub-lethal doses of Formaldehyde in cattle, pigs, sheep, goats, and monkeys, with the purpose to find the sterilization of this species. (Ker & Bass, Cameron & Foster; Chiquoine; Gueritz; Parizek and others authors.

The experiment was carried out at the Posto de Suinocultura de Itapeva, of the Instituto de Zootecnia, Sao Paulo, Brazil.

The purpose of the experiment was to find a new method to castrate piglets free of the side effects associated with the usual methods.

It was studied the effects of an intratesticular injection, using a formula containing Formaldehyde in equal parts with an oil solution with additives.

Two assays were conducted. The first one was designed to observe the alterations of the spermiogenic tissue. The finality of the second one was to verify the performance test of the animals.

Twenty four piglets of the Wessex Saddleback breed were utilized from 7 to 126 days of age.

Experimental procedure was in randomized blocks with three treatments and eight replications. The following treatments were considered:
castrated with Formaldehyde, castrated surgically and non castrated.

Conclusions:
After 126 days the following general conclusions were obtained:
1 - There was a reduction in the weight of the testicles of 70%, 30% and 50% when injected respectively with 0.50 mg, 0.100 mg and 0.200 mg of the formula per kilo of live weight.
2 - The dose of 0.50 mg in animals 7 days old, presented six months later in histologic preparations total spermiogenesis.
3 - Piglets 21 days old dosed with 0.200 mg per kilo of live weight eliminated their dead testicles 15 days after the injection, the wound in the scrotum healing immediately after.
4 - Collateral undesirable effects were observed with doses above 0.200 mg/kg up to the age of 56 days.
5 - In the second assay the statistics shows no significant differences between the various parameters measured such as: weight gain, feed intake, feed/gain and carcass characteristics.
6 - Castrated animals with intra-testicular injection demonstrated similar performance to non castrated.

Selected references: