HISTORY OF DEVELOPMENT OF JP STOČARSKO VETERINARSKI CENTAR „ VELIKA PLANA" AS NATIONAL CRIOPRESERVATION PROGRAM

JP Stočarsko veterinarski centar „ Velika Plana" is founded at 14. July 1957. Aim of this foundation was genetically improvement in cattle breeding, improvement of reproductive results and prevention of sex deceases. Especially, Serbia had problem with Trichomoniasis in 50ˢ of last century. Experience had show us that every bull in natural breeding was infected with Trichomonas spp. in period 1953-1954, so introduction of artificial insemination in that cattle population and foundation of artificial insemination (AI) center was necessary.

In that period, fresh semen was used, kept on 5 C° and had to be used in 48 hours after collection. For semen conservation, milk and egg yolk extender were used with antibiotics addition. This way of semen processing had more problems as following:

- Semen packaging consist of 5 doses
- Semen transport on long distance was not possible
- Semen usage was constrained
- Semen dispersal was present
- There was no planed insemination in all region in country
- Conception rate was low
- High possibility of semen contamination

At the beginning, AI center had only three Simmental bulls (HERKULES, K□BI, and GRAL) and since that period bull's number, semen production and number of inseminated cows and heifers permanently increased as we can see in Table 1.

Table 1.

Year	Bull's number	Number of inseminated cows and heifers
1957	3	3.600
1960	30	60.000
1967	40	120.000

Since 1. April 1968 Stočarsko veterinarski centar introduced new technology of semen conservation (semen freezing) in liquid nitrogen, first like pellet, and thereafter like mini tubs and mini straws. With this new technology of semen conservation, artificial insemination got closer to our farmers and during 1968, number of inseminated cow and heifers reached 150.000. After this year, their numbers also increase as we can see in Table 2.

Table 2.

Year	Bull's number	Number of inseminated cows and heifers
1969	50	204.200
1970	55	250.000
1974	55	335.000
1997	80	400.000
2004	90	414.000

During 90's number increased and in 1997, the same reached 400.000. In 2004 number of insemination reached maximum (414.000).

CAPACITY:

- Performance test station for 240 calves all categories
- 110 active bulls
- Semen depot with 2.500.000 doses bull semen
- Bull semen production over 350.000 doses per year
- Bull semen delivering over 350.000 doses per year
- Liquid nitrogen delivering over 200.000 kg per year
- 100 active boars
- Boar semen delivering over 50.000 doses per year

TECHNICAL EQUIPMENT:

- Laboratory and equipments for bull semen quality estimation, processing and cryopreservation

- Laboratory and equipments for boar semen quality estimation and processing

- Vehicles for semen and liquid nitrogen delivering

- Depot with equipment for bull and boar semen keeping

- Equipment for all accompanying semen production procedures

- Stock of liquid nitrogen

A.I. CENTER PROGRAM:

- Annual semen delivering   350.000

- Number of pregnant cows and heifers   300.000

- Number of bulls in center   40-60

- Number of bull's fathers   10

- Number of bull's mothers   400

- Number of calves per bull-father   10

- Performance test of bulls   30

- Biological test of bulls   15

- Progeny test of bulls on meat   10

- Progeny test of bulls on milk   10

- Average semen production per bull   20.000

COOPERATION:

- Ministry of Agriculture, Trade, Forestry and Water Management

- Agriculture Faculty- Belgrade

- Veterinary Faculty- Belgrade

- Agriculture Faculty- Novi Sad

- Institute for Animal Husbandry Belgrade- Zemun

INTERNACIONAL COOPERATION:

- Besamungsverein Neustadt a. d. Aisch, Germany

- Minitube, Tiefenbach, Germany

- Besamungstation Landshut, Germany

- Besamungstation Hohenzell, Austria

STANDARD:

SRPS ISO 9001:2008

By this standard are determined procedures relating to:

- Semen production

- Semen storage

- Semen delivering

- Biosecurity measurements in A.I. Center

- Facility disinfection

- The System of leading and keeping data