

## **A Revisitation of the Guittard's Potion to Combat Nymphomania in Dairy Cows, Without Resorting to Hormonal Treatments.**

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**Abstract:** *In this study I want to demonstrate how it is possible to dominate Nymphomania in cows, without resorting to hormonal remedies, since I am persuaded that hormonal influence on safe or momentarily unsafe cows, cause to temporary nymphomania, does not deserve hormonal treatments, as these substances may drive into blood and thus into milk. I have revisited a very ancient recipe, by a French veterinary of XIX century, investigating on the chemical constituents of the plant the French Doctor used to employ, to abate the secondary effect this plant itself may cause in the animal: a sort of rebellion and aggressiveness that may be confused with an aphrodisiacal response.*

**Keywords:** *Dairy cows, nymphomania, Guittard's potion, Atropamine, Bellaridine, Scopolamine.*

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### **I. Background**

Nymphomania in cattle is determined by genetics, environmental factors, physiological factors, health and previous experience, e.g., bulls of dairy breeds are generally more sexually active than those of the beef breeds. New herd members attract greater sexual attention. Therefore, their introduction to a breeding group can be a useful means of stimulating sluggish bulls (1)

Increased sexual behavior occurs mainly in high-producing dairy cows that are 4–6 yr old and have had 1–3 calves. These cows usually mount other cows excessively, act like bulls, and have a significant decrease in milk production. In most cases nymphomania is associated with follicular cysts, and treatment with luteinizing hormone or chorionic gonadotropin is useful. Hormonal treatment is, on my modest opinion, always to avoid and drive away absolutely, since hormones are retrievable in milk.

The female becomes hyperactive when oestrus begins and the number of indiscriminate agonistic interactions and mounting attempts increase (2) A subjective measure of the intensity of oestrus from how 'excitable' a cow seems to be, can be designated as strong, medium or weak. Relative differences between breeds, ages and individuals can be fairly accurately rated (3) Female sexual behaviour depends on 'the circulating endocrine balance', controlled by ovarian secretions, primarily oestrogen (1) As cows become sexually receptive they may mount or be mounted by other cows, sniff males or become involved in mock fighting. Cows are receptive for approximately a day (1)

Mounting causes an immobilisation reflex (rigid stance) in the oestrous females that are being mounted (4). Nymphomania may be combated in dairy cows, without resorting to hormonal remedies, even if the 'the circulating endocrine balance' in blood is mandatory to be determined in order to evaluate if the phenomenon is ongoing or recurrent. Jean Pierre Guittard (Journal de Lyon, 1879) had invented a special potion to antagonize nymphomaniac behaviours in cows, prescribing the following recipe:

I ounce avoirdupois (corresponding to about 2 grams) of Atropa Belladonna semen (Bella dama, Belladone, Deadly night shade) and XV ounces avoirdupois (corresponding to 30 grams) of Valeriana radix pulvis to incorporate in

Formula num 1: Mayonnaise (q.s.)

or in

Formula num 2: kaolin+pectin of quince (q.s.) to give to the cow before the mounting..

He described even that when the cow was too much skittish, it was better to give half a load of the potion before the coupling and the remnant after the coupling.

The patron of a cattle farm had asked to me to loose a dramatic problem about two cows belonging to his stock raising: two dairy cows (A and B) which fell in nymphomaniac excesses during oestrus and/or during the changes of season: he gave the same Guittard's potion to each of everyone of his cows, but he noticed odd behaviours in one of the two Cases.

They used to mount one another and to be mounted acting as bulls or sniff males, howbeit subject B was more aggressive and was recalcitrant when subject A attempted to mount her. Guittard's potion has been given to the two cases, according to the two different prescriptions: that is using mayonnaise as vehicle or kaolin+ pectin of quince and this second formula reveals a gradual release of the alkaloid, noticeable in the major duration of the action of sedating both the cows.

Sexual behaviours changed radically, respect to all the precedent mock fighting manifestations of the two subjects, when attacks of nymphomania overwhelmed them. But the great difference stayed in the fact that Case B, after to be mounted by the bull, tried anyway to search Case A for having coupling, as she were not satisfied sufficiently by the coupling with male.

## **II. Materials and Methods**

For all these reasons it has been necessary to study deeply the very chemical composition of *Atropa belladonna* semen tincture and compare it with tinctures of the same herb, albeit containing the extract of other parts of the plants. Since I felt I needed to investigate upon the exact chemical composition of *Atropa belladonna* parts (that is leaves, root and seeds), I have discovered that objectively manifold botanists describe the approximate percentages of the multiple alkaloids present in the plant. Hyoscine (yclept scopolamine), Atropine, Atropamine and Bellaridine. Now, it is well-known that Atropine is chiefly an antagonist of acetylcholine with regards to muscarinic receptors and so it acts principally as spasmolytic. Atropamine is recommended for its antisialagogue and antiftysmagogue effect, meanwhile Bellaridine is welcome as painkiller.

Finally Hyoscine (Scopolamine) is to be considered an antagonist of serotonin and has been used for centuries to induce distortions of consciousness rendering the subject which takes it prone to persuasion for sexual purposes: Mandrake is the forefather of all herbs containing this alkaloid and has been always considered a potent aphrodisiac agent, but moreover ancient Arabs used it to induce madness in prisoners and enemies, Mexican shamans used to smoke leaves of herbs containing scopolamine to divine future and formulate predictions, Aztecs used to employ herbs rich in scopolamine in magic rituals and Delphi's oracles used it to hypnotize unfortunates who went to the Temple to attempt to know their fate but even the very first inhabitants of Gran Canaria used plants containing scopolamine to deaden and anaesthetize colonizers to persuade to escape from their island. It is notorious that Dr Josef Mengele experimented scopolamine in Nazi extermination camps as a truth drug for interrogatories and afterwards many Intelligence agencies used this alkaloid as truth drug in 50s and 60s (for instance the Project MKULTRA, that was the code name given to an illegal program of experiments on human subjects, designed and undertaken by the United States Central Intelligence Agency) but in 70s the employ of scopolamine with this main purpose was definitively abandoned.

Seeds of belladonna contain large percentages of scopolamine, and that lets guess why the immobilisation reflex (idest the rigid stance) in the oestrous female that is being mounted, as Albright (4) asserts, is defeated and the cow becomes placid and less rigid, during coupling after having taken the Guittard's potion.

Leaves of *Bella dama* do not present a very huge percentage of scopolamine (respect to root and seeds) even if they actually do in minimal part, and for this reason, leaves of *Belladonna* are preferable to seeds, in order to prepare a revisited the Guittard's potion, to abate nymphomania in cattle, eliminating the uninhibitedness, responsible of the aggressiveness of the rebellious and intractable cases.

The most important sake, for my purpose, has been to find the way to extract scopolamine from *Atropa* leaves in order to eliminate the chemical constituent that could be reputed the disinhibiting component in the drug itself, so that the interference and synergy of the anti-aphrodisiac effect (attributed to the alkaloids atropine, bellaridine and atropamine) and the aphrodisiac effect (due to the presence of the scopolamine) could be totally exorcised.

He et al (5) had disclosed the method to achieve this goal and I have had the chance to reproduce this separations of the alkaloids on a large scale, idest by obtaining several grams of tincture of *Bella dama* leaves deprived of scopolamine, in order to prepare the revisited Guittard's potion to give to Case B of the two dairy cows, to eliminate drastically her aggressiveness during and after mounting.

The AA (5) refer that to isolate atropine and scopolamine from *Solanaceae* spp., three different elution modes have to be applied in pH-zone-refining counter-current chromatography. These separations were performed with a two-phase solvent system composed of ethyl acetate/n-butanol/water (4:1:5 v/v) with 0.50% triethylamine in the organic phase and 0.15% hydrochloric acid in the aqueous phase. As a result, the best separation was obtained by counter-rotation and dual-mode elution procedure. In this new separation mode, the mobile phase and stationary phase were exchanged when the rotation direction was reversed. The two purified alkaloids (purity over 98% as determined by HPLC), identified by ESI-MS, H-NMR and C-NMR were fully available.

Actually, I used in my laboratory, grounded leaves of *Belladonna* in high quantity and have the separations made by diluting the scrapings in the triphasic solution, obtaining:

- I) A mix where atropine, atropamine and bellaridine were retrievable
- II) Another mix where the sole scopolamine hydrochloride was retrievable.

I treated cow A by the sole solution I, meanwhile I treated cow B by the two solutions I and II, in order to abate her aggressiveness and waywardness, by giving her the disinhibiting agent, apt to minimize the rigid stance before and during the mounting.

The two cows were closed in a paddock together with two bulls having the same age, the same tonnage and degree of libido.

### **III. Results**

While in prior experiences, the two cows were accustomed to have coupling with the bulls, and, after the bulls were removed from the paddock, as I referred before, it was noticeable that Case B ran after Case A, and, whenever Case A desired to mount Case B, this latter fought and kicked neurasthenically.

I gave contemporarily the Guittard's potion to the two cows, before coupling, notwithstanding I gave mix I and II to Case B, while I gave only mix I to

Case A. Afterwards the bulls were removed, as in the precedent experiences.

It was remarkable that

Case B crouched down, after the mounting and stared at Case A, as she were astonished and sedated.

Case A was quite calm and ambulated in the enclosure, with no sign of hysteria and did not approach Case B.

### **IV. Conclusions**

As I thought scopolamine is the sole responsible of disinhibition in the animal, and since Belladonna is considered since immemorial times the best remedy to defeat nymphomania in cows, it is better to avoid to give to the cows the tincture of Belladonna seeds, but a revisited potion made of tincture of Belladonna leaves, deprived of scopolamine.

It is interesting how cows feel better and calm after coupling, and if the experiences are repeated, the same behaviour may be observed.

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