

Suffolk Punch Australia

Suffolk Horse breed

SPARKS & Rare Breeds Survival Trust Equine Breeders Seminar

Introduction

In October 2018 The RBST Equine Breeders Seminar was held at Stallion AI Services with 11 out of 12 rare equine breed societies and some of their breeders. At this seminar Dr Andy Dell gave a power point presentation on SPARKS – a computer-based breed analysis system.

SPARKS – Selecting the Optimum pairing of Sire and Dam for the Maintenance of Genetic Diversity.*

<https://suffolkpunchaustralia.com> thanks Dr Andy Dell for permission to show his Powerpoint presentation.

[RBST-Equine-Breeders-Seminar \(2\)](#)

The Spring 2021 issue of the Suffolk Horse Magazine offers a two-page article by Linda Trotman, titled : ‘**SPARKS: A TOOLBOX**’, reproduced with permission from the Rare Breeds Survival Trust magazine ‘**The Ark**’.

Thanks are due to Linda and ASPA has adapted/paraphrased her excellent article title to draw attention to the wealth of SPARKS information which has been on this website for two years or so. It’s also moving to a new spot on the Website Menu, where hopefully it will be more visible, more easily found and accessed.

There is an extraordinary wealth of information, and is so useful in understanding the core concepts of subjects such as:

- The Problems of Small Populations
- Genetic Diversity
- Loss of Genetic Diversity – THE RISKS
- Core Concepts
 - Inbreeding
 - Mean Kinship
 - Effective Population Size
- Estimated Inbreeding in Pedigrees
- Inbreeding Depression
- Inbreeding in Other Equine Breeds
- Kinship Coefficient
- Kinship
- Mean Kinship
- Managing Mean Kinship
- Population Size
- Effective Population Size
- The Problems of Small Populations
- Problems of Unbalanced Sex Ratio
- The Extinction Vortex
- The 50/500 Rule
- Choices for Managing Pedigreed Populations
- Choosing Mates
- Methods of Breeding to Minimise Mean Kinship
- What Will Minimising Mean Kinship Do?
- Factors to Consider When Selecting Matings
- SPARKS as a Breeding Tool
- What's Wrong with Random Mating?
- Looking for Practical Solutions
- Factors to Consider with Selecting Matings
 - Breeder's Data Sheets - Cleveland Bay Horse Society examples
- Obstacles to Compliant Matings
- Breed from as Many Males as Possible
- Breed from as Many Females as Possible
 - SPARKS DATA SHEETS 2018
 - SPARKS COMPLIANCE
- Monitoring Changing Inbreeding
- The Future
- Breeding for the Future of Rare Breeds
- Encouraging Breeding From Animals of Low Mean Kinship
- Breeding for The Future of Rare Equine Breeds

The Preface of the 2018 Suffolk Horse Society Stud Book revealed SPARKS would be available to breeders in 2019.

‘For the first time, in 2019 Mare owners will be able to avail themselves of information provided by the SPARKS breed advisory database which is being promoted by the Rare Breeds Survival Trust. Mare owners only have to submit their mares' names to the Society's office and they will receive back a printout from the SPARKS system showing which stallions will provide good genetic diversity and other stallions which, if used, would promote inbreeding.

‘Stallion selection is entirely up to the mare owner and stallion conformation is just as important as genetic diversity, but the SPARKS system does provide useful information to feed the decision process.’