FOTOSELECT®

OBJECTIVE NON-LINEAR CONFORMATIONAL ANALYSIS

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- In a retrospective study done in 2009, 90% of all 2-and 3 year old Gr1 winners on a mile or longer were rated Gr1 by FotoSelect® -

What is objective non-linear conformation analysis?

Objective

Conformation analysis is the examination of a horse's shape in attempt to forecast racing and breeding potential. For centuries, conformation analysis has been conducted with the naked eye. We have learned a lot about correct conformation from years of study by history's top horsemen. However, the human brain can become distracted and influenced by its surroundings and environment. The horse being examined can also be distracted, standing incorrectly, or held improperly. As a result, traditional conformation analysis can become subjective, and dependent on the influences of the environment. However, FotoSelect® is based on a specific protocol and a photograph. It contains algorithms for known errors that the human eye may not detect or compensate for. It is an objective analysis that allows the horseman to make a better more informed decision.

Non Linear

The human brain also has difficulty predicting complex growth patterns. This is especially true for horses as they grow in a disjointed fashion. Not only do different bones grow at different rates, but also these rates have been found to be neither linear nor exponential. Our team has created algorithms that predict the growth of a horse based on the normative of over 20,000 case histories. This allows the system to predict what a horse will look like at 3 years old when he or she is only 7 months of age. Additionally, it allows our clients to constantly monitor the growth of their horse compared to the normative average. This allows the horsemen to promptly identify latent illness or other factors that are affecting the horse and address potentially damaging issues more efficiently.

Application of FotoSelect®

FotoSelect® evaluates the horse's bone structure and body proportions and calculates indexes based on proprietary algorithms. The indexes are a powerful tool to help the horseman gain a more complete understanding of his horse.

FotoSelect® is also able to identify 'look-a-likes', i.e. recognize horses in the database that are showing high degree of conformational similarities with the analyzed horse. This helps verify a high system score, and also allows the system to identify the small number of horses with high potential whose conformation significantly deviates from what is normally would expected from a top performer.

Conformational analysis is able to provide substantial benefits for anyone looking to systematically target their efforts and resources towards horses that have the required characteristics to perform at a top level.

It is important to remember that FotoSelect® is not, nor was it designed to be, a replacement for traditional conformational analysis. Instead, it is a tool designed to give the horseman more information and make more accurate decisions. This information can be applicable in many scenarios: Homebred Management, Selection, Training and Racing, and Breeding.

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Homebred Management

FotoSelect® is a useful aid for managing a homebred band of any size. In this application, we regularly take three analyses before the horse enters a sale or training program. As a result, FotoSelect® can compare the horse's growth to our internal models. This provides two advantages to the client. First, it allows the horseman to get an in depth understanding of each individual's horse growth, and allows our veterinarians to highlight abnormalities which may be cause for further investigation. Secondly, taking three analyses allows the FotoSelect® program to take into account previous growth records when calculating a final rating. This increases the program's accuracy and ensures that the horseman gets the best information to make the best decision for the horse.

Additionally, FotoSelect® allows a client with a population of any size to gain a complex understanding of the overall herd. Because FotoSelect® produces a consistently replicable and quantitative score for each horse, our clients are able to examine their stock on an advanced level. Our clients are able to identify trends in their farms breeding and development, see if any environmental factors are consistently impacting the conformation of their horses, and run analytics to forecast the conformational traits of their horses in future years. This dimension of FotoSelect® not only provides a foundation to enact organization-wide strategies, but also gives our clients the ability to detect, identify, and address herd-wide issues with greater alacrity than their competition.

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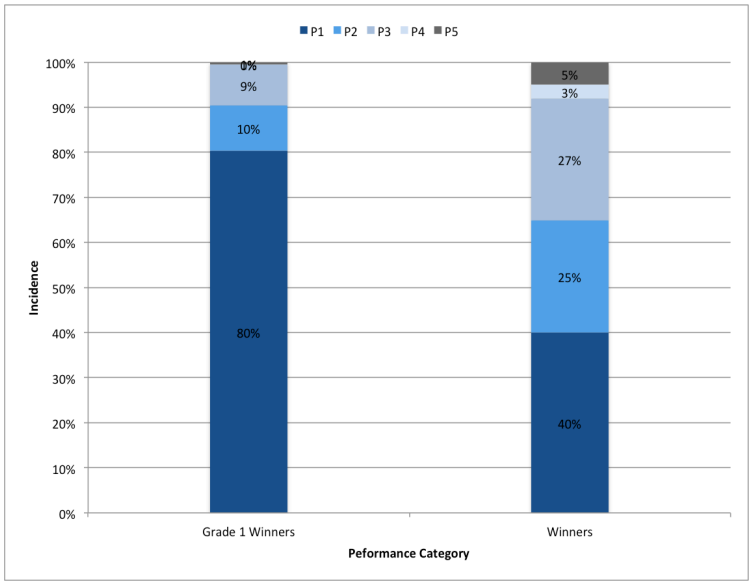
Selection

FotoSelect® is also a useful tool in identifying correct horses for purchases at the sales. On average between 75-90% of Grade 1 winners in a given year are rated in the program's highest category (called a P1 rating). At select sales, P1 ratings are seen in about 30% of the population. At general sales, the population incidence of the highest rating can be as low 5%.

The chart below illustrates the distribution of FotoSelect® ratings in horses who have won at the graded level versus winners at the allowance and claiming level. The incidence of horses rated P1 is significantly higher in horses that perform at graded level as compared to horses who win at lower levels.

Figure 1: Incidence of FotoSelect® ratings in different performance categories:



In addition to providing information about a horse's racing potential, FotoSelect® can also provide our clients with information regarding a prospect's breeding potential. This information can be imperative for making successful purchasing decisions. For instance, a large portion of a filly's value is directly tied to her future breeding potential. FotoSelect® can identify fillies with the correct conformational traits for breeding, allowing our clients to make more accurate appraisals, and ensuring confidence that their sale-topping purchase will pay dividends in the breeding shed.

Training and Racing

FotoSelect® also has internal models that show different conformational traits are more efficient over different distances and surfaces. As a result, FotoSelect® is able to provide the trainer or breeder with more information with which to more efficiently manage their racing careers.

Just as the program can help identify injury and abnormal growth with homebreds; the sensitivity of FotoSelect® also makes it adept at identifying conformational changes that indicate injury or abnormal growth on the track. This early recognition of conformational and postural change allows trainers and racing managers to pre-empt possible injury by adjusting training protocols.

Breeding

FotoSelect® can also identify the conformational attributes of mares and stallions that impact breeding. Our research has demonstrated that the conformational attributes that lead to successful racing careers don't necessarily correlate with strong performance as a broodmare or stallion. Our clients gain a significant advantage when they are able to identify a mare with significant breeding potential that the market overlooks.

Additionally, our clients are able to avoid investing in horses in which the market overestimates breeding potential.

"The Study… indicates that ADI is a statistically significant indicator of breeding potential with 98% of statistical confidence."

Figure 2 :Distribution of ADI: Grade 1 Winning Mares vs Graded Colt Producing Mares.

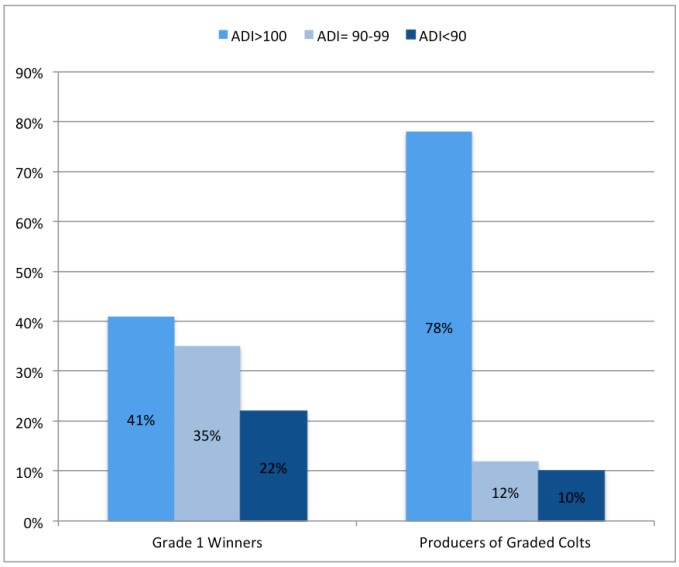


Figure 2 demonstrates that a conformational shape for racing does not correlate with the shape that is necessarily the most suitable for breeding. The graph is based off the Average Dirt Index (referred to as ADI), an internal metric created by FotoSelect®. It is evident that the incidence of ADI is considerably different between populations. The study from which Figure 1 was created was based on 157 samples that indicates that ADI is a statistically significant discriminator of breeding potential with 98% statistical confidence.

In addition to identifying the breeding potential of an individual horse, FotoSelect® can also identify if a potential mating is likely to produce capable progeny. From a detailed analysis of both the mare and stallion, FotoSelect® can identify potential weaknesses in conformation of either animal and deduce the incidence of top rated shapes the pairing will produce. This tool allows our clients to ensure that their investment in a top stud fee is likely to produce a capable progeny.

Conclusion

FotoSelect® is a unique management tool designed to aid the horseman in a variety of management scenarios. We look forward to integrating this system into your management plan, and aiding your understanding of what FotoSelect® can bring to your organization.