

Best Linear Unbiased Prediction (BLUP)

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About the Best Linear Unbiased Prediction (BLUP) Score

The Best Linear Unbiased Prediction (BLUP) plays an important role in breeding horses because the BLUP values of the parent horses impact a foal's genetic potential and innate skills.

What is BLUP?

BLUP is a genetic index for horses. BLUP values for all horses fall within a range between -100 and 100, with -100 being the lowest possible BLUP and 100 being the highest possible BLUP that a horse can reach.

A higher average BLUP of the parents will increase a foal's chance of having higher genetic potential and innate skills. The foal will not have any innate skills if the average BLUP of the parents is below 0.

What factors influence a horse's BLUP score?

The following factors influence a horse's BLUP:

- Training level in the best three skills for its breed
- Number of competitions it has won
- Horse's age

To reach a score of 100 BLUP, a horse must fully maximize training in the top three skills for its breed, win 20 competitions, and be at least 10 years of age.

Maximize a Horse's Best Linear Unbiased Prediction (BLUP) Score

BLUP values for all horses fall within a range between -100 and 100, with -100 being the lowest possible BLUP and 100 being the highest possible BLUP that a horse can reach.

1. Access the private page of the horse you intend to BLUP and register the horse in an equestrian center.
2. Once your horse is between the ages of 8 months and 1 year and 4 months, complete foal games until no more skill points can be gained.
3. Once your horse is at least 1 year and 6 months of age, maximize the hours your horse goes on forest rides each time it wakes up until it can gain no more skill points from forest rides.

Make sure to balance forest rides with daily care, food, and water to keep your horse happy and healthy.

4. After your horse can no longer gain skill points from forest rides, maximize the hours your horse goes on mountain rides each time it wakes up until it can gain no more skill points from mountain rides.

Make sure to balance mountain rides with daily care, food, and water to keep your horse happy and healthy.

5. After your horse can no longer gain skill points from mountain rides, identify your horse's best three skills for training.
 - a) Navigate to the **Characteristics** tab at the bottom of your horse's private page.
 - b) Select your horse's breed to access the directory page for that breed.
 - c) Look for the three skills marked with the highest score.

These are the best three skills for your horse's breed, ranked in order.

6. Once your horse is at least 2 years of age, train it in its best three skills until you have gained the maximum skill points allowed for those skills.

Completion of training is indicated by the meters in the Training tile on your horse's private page.

7. Once your horse is at least 5 years of age, select its competition specialty and give it the necessary tack to enter competitions.

8. Identify the type(s) of competition that target your horse's best three skills. Enter your horse into those competitions until its best three skills have gained the maximum skill points possible.
9. After your horse can no longer gain skill points in its best three skills from entering competitions, continue to enter competitions until your horse has secured 20 first-place wins.
10. To speed up the process of securing 20 first-place wins for your horse, enter filler horses into the same competitions as the horse you are trying to BLUP to force the competitions to run faster.
11. After your horse has won first place in 20 different competitions, age your horse with aging points until it turns 10 years of age, or care for it daily until it turns 10 years of age.

The BLUP indicator, found in the **Genetic** tab at the bottom of your horse's page, should display a score of 100.

Top Three Skills by Riding Horse Breed

Each horse breed has varying potential levels for each skill level that determines the amount of skill points they can gain for each skill type. Identifying the top three skills of each breed aids breeders in maximizing the best linear unbiased prediction (BLUP) score of their horse.

Table 1: Top Three Skills by Riding Horse Breed

Breed Name	Top Three Skills
Akhal-Teke	<ol style="list-style-type: none"> 1. Stamina 2. Dressage 3. Jumping
Appaloosa	<ol style="list-style-type: none"> 1. Speed 2. Gallop 3. Dressage
Arabian Horse	<ol style="list-style-type: none"> 1. Speed 2. Stamina 3. Dressage
Argentinean Criollo	<ol style="list-style-type: none"> 1. Stamina 2. Dressage 3. Speed
Barb	<ol style="list-style-type: none"> 1. Stamina 2. Speed 3. Dressage
Camargue	<ol style="list-style-type: none"> 1. Stamina 2. Dressage 3. Gallop
Curly	<ol style="list-style-type: none"> 1. Stamina 2. Trot 3. Speed
Finnish	<ol style="list-style-type: none"> 1. Trot 2. Dressage 3. Speed

Breed Name	Top Three Skills
French Trotter	<ol style="list-style-type: none">1. Trot2. Speed3. Dressage
Friesian	<ol style="list-style-type: none">1. Dressage2. Stamina3. Speed
German Saddle Horse	<ol style="list-style-type: none">1. Dressage2. Jumping3. Speed
Hanoverian	<ol style="list-style-type: none">1. Jumping2. Dressage3. Speed
Holsteiner	<ol style="list-style-type: none">1. Jumping2. Dressage3. Speed
Icelandic Horse	<ol style="list-style-type: none">1. Stamina2. Dressage3. Trot
Irish Hunter	<ol style="list-style-type: none">1. Dressage2. Stamina3. Gallop
KWPN	<ol style="list-style-type: none">1. Dressage2. Jumping3. Speed
Knabstrupper	<ol style="list-style-type: none">1. Dressage2. Trot3. Jumping
Lipizzan	<ol style="list-style-type: none">1. Dressage2. Speed3. Gallop
Mangalarga Marchador	<ol style="list-style-type: none">1. Stamina2. Dressage3. Speed
Marwari	<ol style="list-style-type: none">1. Gallop2. Stamina3. Speed

Breed Name	Top Three Skills
Misaki	<ol style="list-style-type: none"> 1. Gallop 2. Stamina 3. Speed
Morgan	<ol style="list-style-type: none"> 1. Dressage 2. Stamina 3. Jumping
Mustang	<ol style="list-style-type: none"> 1. Speed 2. Gallop 3. Stamina
Nokota	<ol style="list-style-type: none"> 1. Dressage 2. Trot 3. Jumping
Paint Horse	<ol style="list-style-type: none"> 1. Speed 2. Dressage 3. Gallop
Polish Konik	<ol style="list-style-type: none"> 1. Stamina 2. Trot 3. Gallop
Purebred Spanish Horse	<ol style="list-style-type: none"> 1. Dressage 2. Speed 3. Stamina
Quarter Horse	<ol style="list-style-type: none"> 1. Stamina 2. Dressage 3. Jumping
Selle Français	<ol style="list-style-type: none"> 1. Jumping 2. Speed 3. Dressage
Shagya Arabian	<ol style="list-style-type: none"> 1. Stamina 2. Dressage 3. Jumping
Tennessee Walker	<ol style="list-style-type: none"> 1. Trot 2. Stamina 3. Dressage
Thoroughbred	<ol style="list-style-type: none"> 1. Gallop 2. Speed 3. Dressage

Breed Name	Top Three Skills
Vanner	<ol style="list-style-type: none"> 1. Stamina 2. Dressage 3. Jumping

Tack Bonuses

Once a horse has chosen classical or western riding as its specialty, it can wear tack. A bridle, saddle, and saddle cloth are needed to compete. Polo wraps and ear bonnets will give an additional bonus.

Tack	Bonus
1* Classical Bridle	+1 in each skill
2** Classical Bridle	+2 in each skill
3*** Classical Bridle	+3 in each skill
1* Western Bridle	+1 in each skill
2** Western Bridle	+2 in each skill
3*** Western Bridle	+3 in each skill

Tack	Bonus
1* Classical Saddle	+1 in each skill
2** Classical Saddle	+2 in each skill
3*** Classical Saddle	+3 in each skill
1* Western Saddle	+1 in each skill
2** Western Saddle	+2 in each skill
3*** Western Saddle	+3 in each skill

Tack	Bonus
1* Classical Saddle Cloth	+1 in each skill
1* Western Saddle Cloth	+1 in each skill

Tack	Bonus
1* Polo Wraps	+1 in each skill

Tack	Bonus
1* Ear Bonnet	+1 in each skill

Tack	Bonus
Bell boots	<ul style="list-style-type: none"> • Speed: +6 • Dressage: +6 • Jumping: +6

Tack	Bonus
Spurs	+9 in each skill
Lunge	<ul style="list-style-type: none"> Dressage: +12 Gallop: +10 Trot: +10
Horseshoe Studs	Best skill: +12

Foal Games Schedule

A foal can begin foal games at 8 months of age through the time it reaches 1 year and 4 months of age. Different combinations of care and playtime with a foal during those months will result in varying amounts of skill points gained.

Table 2: Foal Games

Age	Care Actions
8 months	Groom, play for 1 hour, carrot, feed, play for 7.5 hours, stroke, drink, play for 1 hour, bed.
10 months	Groom, play for 1 hour, carrot, feed, play for 8 hours, stroke, drink, play for 1.5 hours, bed.
1 year	Groom, play for 1 hour, carrot, feed, play for 9 hours, stroke, drink, play for 1.5 hours, bed.
1 year and 2 months	Groom, play for 2 hours, carrot, feed, play for 9 hours, stroke, drink, play for 1.5 hours, bed.
1 year and 4 months	Groom, play for 2 hours, carrot, feed, play for 9.5 hours, stroke, drink, bed.

Register a Horse in an Equestrian Center

At six months of age, after your horse has been weaned, you must board your horse in an equestrian center so that you can put it to bed and continue caring for it. The equestrian center you choose for your horse can have an impact on your horse's care and energy levels depending on the benefits it offers.

1. Access the private page of the horse you want to board.
2. Locate the Equestrian Center tile on the horse's page and select **Register my horse**.
The equestrian center registration page displays.
3. (Optional) Use the filter options to display equestrian centers that best suit your criteria.
You can choose to board your horse in a public equestrian center or a reserved box. Equestrian center managers can choose to reserve boxes for their own horses or for other players.
4. Determine the length of stay for your horse and select the equus amount listed for the desired equestrian center and length of stay.
The private page of your horse displays. Your horse is now boarded in an equestrian center.

Equestrian Center Benefits

The benefits offered by an equestrian center impacts your horse's care. By describing the various equestrian center benefits, you can select the equestrian center that is most appropriate to your horse and maximize care for your horse.

Table 3: Equestrian Center Advantages and Amenities

Advantage	Description
Box size	<p>The bigger the box is, the more morale a horse bedded there receives when it wakes up. Equestrian centers can provide the following types of boxes:</p> <ul style="list-style-type: none"> • 1* boxes • 2** boxes • 3*** boxes
Bedding	<p>Mares will lose less energy when giving birth if the quality of their bedding is good. Equestrian centers can provide the following types of bedding:</p> <ul style="list-style-type: none"> • Straw (less prestigious) • Flax (more prestigious)
Center prestige	<p>The money you earn for the missions your horse accomplishes increases with an equestrian center's prestige.</p>
Meadow prestige	<p>The higher the meadow prestige is, the more fodder your horse will be able to eat for free when grazing.</p>
Food	<p>Equestrian centers can choose to provide fodder, oats, carrots, and mash to borders. Borders can give those food items to their horses without depleting their own inventory.</p>
Equipment	<p>Equestrian centers can choose to provide saddle cloths, saddles, bridles, ear bonnets, and polo wraps to borders. Borders can give that equipment to their horses without depleting their own inventory if the specialty of their horse matches the specialty of the equipment offered by the center.</p>
Center location	<p>Skills increase twice as fast during rides if the location of the equestrian center corresponds to the type of ride your horse goes on. Equestrian centers can occupy the following locations:</p> <ul style="list-style-type: none"> • Forest • Mountain • Beach