Difference Between Mixed breed and Cross breed

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**Key Difference - Mixed breed vs Cross breed**

Breeding refers to the process of sexual reproduction taking place between parent organisms of male and female types to produce offspring at an intraspecies level. This ensures the continuity of the species in successive generations. Mixed breeding and cross breeding are two breeding processes which take place between organisms of the same species. Mixed breeding refers to a cross between three or more organisms, and it is not a definite process which is planned and performed intentionally. Cross breeding refers to a cross between two specific organisms of the same species which is done intentionally to produce offsprings with better characteristics and vigour. The key difference between a mixed breed and the cross breed is the number of species involved in the breeding process. **Mixed breed is performed with three or more organisms whereas a Cross breed is produced by crossing two organisms of the same species.**

**What is Mixed breed?**

In the context of breeding, a mixed breed is the development of a domesticated animal which is considered as a descendent from a different breed of organisms belonging to the same species. Mixed breed often occurs without the involvement of humans. Mixed breed dog is the best example that could be provided for mixed breed domesticated animals. By definition, a mixed breed dog is a dog that does not belong to a specific recognized breed and is not developed through supervised and recorded intentional breeding. Mixed bred dogs are referred by many names such as a mongrel or mutt. When compared to pure bred dogs, mixed bred dogs are less susceptible to health issues related to genetics.
Figure 01: Mixed breed

Mongrels develop a higher number of variations. Due to uncontrolled breeding, they may evolve to develop average characteristics. This is known as landrace which is related to animal breeding that is modified and improved through the adaptation of the animal to its particular natural habitat. Alaskan husky is an example of this phenomenon.

Mixed breed dogs could be classified into few types. *Canis lupus familiaris* originally referred to the wild dogs of India that has evolved through nonselective breeding. They are commonly known as the generic pariah dog. The DNA analysis performed on these dogs has identified that they consist of a gene pool more ancient when compared with the modern dogs. Another type of mixed breed is functional breeds. It is commonly referred as purposely bred dogs. They are not developed through pure bred ancestors but selected on different characteristics such as performance on a particular task, etc.

**What is Cross breed?**

Crossbreed species are bred intentionally to create cross species. This is mainly done between organisms of two pure bred species, varieties or populations. The resulting offspring from a cross breed is often referred to as a designer crossbreed. Cross bred species are created to introduce beneficial traits to of parent traits to the hybrid organism resulting from the hybrid cross. Crossbreeding is mainly done to maintain health and viability of organisms. This also results in the reduction of the gene pool of the parent breed.
Cross breeding of dogs is a common application done in domestic environments to produce cross offsprings. A well-known example is the cross breeding between Labrador and the poodle to produce [Labradoodle](#).

**What are the Similarities Between Mixed breed and Cross breed?**

- Both breeds produce hybrid varieties.
- Both breeding patterns introduce beneficial characteristics to the offspring.
- Both breeding patterns take place under natural conditions.
- Both breeding patterns take place between organisms of the same species.
What is the Difference Between Mixed breed and Cross breed?

<table>
<thead>
<tr>
<th>Mixed breed vs Cross breed</th>
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<tbody>
<tr>
<td>Mixed breed is the breeding pattern that produces offspring that does not belong to a specific recognized breed and is not developed through supervised and recorded intentional breeding.</td>
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<tr>
<td>Number of involved organisms</td>
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<td>More than two organisms of the same species are involved in the mixed breeding.</td>
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<td>Intentional breeding</td>
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<td>Mixed breeding does not take place intentionally.</td>
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Summary - Mixed breed vs Cross breed

Breeding takes place under natural conditions between organisms, and it ensures the survival of the species. Cross breeding and mixed breeding introduce new genetic combinations to organisms of the same species. This will alter the parent genetic composition and result in the introduction of new characters to that particular species. These characters will enhance the quality of life of the resulting offspring while adding favorable characters to these new organisms.

Reference:


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