

MANAGEMENT AND COST CONSIDERATIONS FOR OWNERS OF HORSE BUSINESSES

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Many people are involved in a variety of horse activities, ranging from owning a horse to operating a business catering to horse owners. Horse ownership or the desire of horse ownership generally results in the demand by consumers for services related to horses. Most horse-based businesses are established as for-profit entities. Horse-based businesses may include riding lessons, horse training, boarding facility, broodmare operation, farrier or a number of other services sought by people in the equine industry. The focus of this publication will be the cost of operating a horse boarding facility and/or broodmare operation with the intent of marketing the offspring.

An individual with the desire to operate a horse boarding facility or broodmare operation for profit should consider the following questions:

- What is the demand for a horse-based business in a given location?
- Is the demand for pasture boarding, stall boarding or other equine services?
- Where can land be purchased for pasture or to construct a facility?
- What size facilities are appropriate?
- Will additional labor be hired?
- What services will be provided?
- How will clientele be acquired?
- How will services be marketed?
- How much should be charged for boarding or other services?

EQUINE BUSINESSES

Cost and Considerations for an Equine Business

There are several costs associated with operating an equine business. Some costs are directly related to production of each animal while some costs may vary based on the size of the operation. Costs for a broodmare operation include:

- Market value of the broodmare.
- Facilities to house the horses.
- Breeding expenses.
- Bedding.
- Feed.
- Health program.
- Farrier.
- Equipment.
- Transportation.
- Waste management.

Similarly, costs for a boarding facility include:

- Facilities to house the horses.
- Bedding.
- Feed.
- Equipment.
- Transportation.
- Waste management.

Market value: The market value of broodmares can vary greatly. The value of a horse is dependent on breed, pedigree (selective breeding and desired traits), build or conformation, and ability to perform both in an athletic or reproductive capacity. For the purpose of a broodmare operation, the focus is the reproductive capacity even though the athletic ability remains an integral part of the valuation. Specific breeding programs, desirable conformation, desirable physical traits with justified performance, and the ability of an animal to perform a desired task can increase the animal's value.

Facilities: Equine operations require well-maintained facilities. Operators should consider the cost of constructing a facility to house animals and their offspring as well as the maintenance of the facility and the grounds surrounding the facility. Land purchase should also be considered in the cost evaluation. It may be desirable for some operations to have a considerable quantity of pasture available while other operations may find this less important. Land acquisition in suitable areas may be difficult or costly, so a thorough evaluation of the required land resources and associated costs should be conducted prior to establishment of a business. The use of pasture will require a sufficient fence (wooden, high tensile, woven wire, fixed knot wire, etc.), which includes initial purchase costs as well as maintenance costs. Additionally, operators should consider costs associated with construction and maintenance of working/training facilities and hay/feed storage. Lastly, it is integral that property taxes or rent, insurance, and interest on money should be considered to account for all costs.

Breeding expenses: The evaluation of breeding expenses is similar to the market value of the broodmare. These expenses will be dependent on the stud's breed, pedigree, build or conformation, and ability to perform. Animals with proven performance in their respective areas will often demand a higher breeding fee as well.

Bedding: Bedding is another cost that can vary depending on the type of facilities and how the

animals are housed. However, this is an item that operations should consider when evaluating the costs and returns to the business. Bedding alternatives may include wood shavings, wood pellets, peat moss or straw.

Feed and Water: Feed costs can vary based on the management system being utilized. Pasture and forage are generally the preferred source of nutrients. However, horses in late gestation and lactation that are kept on pasture may need more than pasture to meet their nutritional needs.

Alternatively, horses housed in a barn with no pasture intake will need hay or an alternate forage source and, in some instances, may require supplementation with concentrates (grain) to meet nutritional needs. Horses must consume at least 1 percent of their body weight in forage per day for a healthy digestive system. Non-lactating horses can often be maintained at a forage intake level of 2-2.5 percent of body weight in forage daily while horses in gestation or lactation have a higher nutrient demand.

Horses should have free access to clean, fresh water daily. A horse's daily water needs will increase during lactation. Additionally, water needs can vary based on ambient temperature, activity level and overall health status.

Health program: Health care is a vital component to keeping horses healthy. Preventative health care is generally a good option to manage health care costs. Health care should include deworming based on fecal egg count, medicines to treat minor wounds, vaccinations, and Coggins test (checks for Equine Infectious Anemia (EIA) antibodies in the blood). Other health care costs and veterinary expenses can and will occur. These other costs may include emergency care and humane end of life.

Farrier: Horse hoof care is also important. Hoof care can either be performed by the operation or a farrier can be hired for hoof trimming and/or shoeing. Horses generally need their hooves trimmed about every eight weeks. In addition to trimming the hooves, shoes can be put on the horse. Ultimately, shoeing versus trimming depends on owner preference, hoof health, climate and environment, along with type and location of activity.

Equipment: The cost of equipment can vary greatly. Common equipment needed includes equipment for grooming, feeding, cleaning and riding. Tack may include saddles, stirrups, bridles, halters, reins and bits, while grooming, feeding and cleaning equipment may include brushes, buckets, water systems and a pitchfork. The aforementioned equipment is for general care and equine maintenance. Other specialized equipment may be needed for breeding operations. It is important to remember that some equipment may require repairs and maintenance with associated costs.

Transportation: Transportation costs should also be a consideration for equine operations. These costs may include ownership of a truck and trailer as

well as visits to the veterinary office and potentially a breeding facility.

Waste Management: Waste management is a cost consideration for equine businesses. A 1,000-pound horse produces on average 51 pounds of raw waste a day in the form of manure and urine. Management of equine waste is different for animals housed in a barn relative to animals on pasture. The degree of management necessary for pasture is dependent on the stocking density. In Tennessee, typically a stocking rate of one horse per 2-2.5 acres is recommended. The denser the stocking rate then the more intense pasture management is necessary. Alternatively, increased management is necessary for barn/stall-kept animals. Waste disposal alternatives include on-farm pasture spreading/application, composting and contracting a waste hauler.

Other expenses: Other costs may be incurred in equine businesses that are not outlined in this publication.

Budgeting Basics

Equine business ownership can be expensive. Therefore, cost and revenue management is important. Thus, it is important to create a budget to account for all costs associated with owning a business to determine if one can afford to establish and operate a viable business.

An in-depth discussion is necessary for budgeting purposes. Costs that should be considered include variable costs and fixed costs.

Variable costs are expenses that change based on production (i.e., the number of horses produced or boarded). Variable costs in equine production include feed, supplements, veterinary/health care, farrier services, bedding and some other discretionary items.

Fixed costs are expenses that do not change based on level of activity or production. For example, assume that fixed costs are \$20,000 per year and this cost is spread across two horses. Thus, the fixed costs per horse per year is \$10,000 ($\$20,000/2 \text{ horses} = \$10,000$). Alternatively, if fixed costs remain the same and the costs are attributed to four horses, then the fixed cost per horse per year is \$5,000 ($\$20,000/4 \text{ horses} = \$5,000$). Examples of fixed costs are the purchase price of the horse, land, barn/facility to house horses, tack, fencing, truck, trailer, interest expense, repairs and maintenance on buildings and fencing, insurance, rent, and utilities. These costs can be rather large and can account for a large portion of the total annual cost of owning a business. Even if land is owned prior to starting an equine business, it is important to include a cost for the property utilized by the business.

Depreciation is a way to allocate the fixed cost of items that have a useful life of more than one year, i.e., the horse, barn, tack, fencing, truck and trailer. It is used to account for the reduction in value of the asset due to wear and tear over time. For example, if fixed costs are \$20,000 and the asset has a useful

life of five years and has a salvage value of \$2,000 at the end of the five years, then the annual cost using straight line depreciation for the fixed asset is $(\$20,000 - \$2,000) / 5 = \$3,600$ per year.

Similarly, business owners should consider interest costs. Interest costs represent an opportunity cost on purchased items such as land and equipment. An opportunity cost is the cost of forgoing one alternative to pursue the current action. Interest costs are actually realized when money is borrowed. However, when money is not borrowed and assets are utilized, then an opportunity cost is incurred and that is calculated through an interest expense. For instance, a landowner has the option of using land for an equine business or the landowner can rent the land to someone else. Thus, a business owner has a choice between alternatives and the interest expense represents the cost of choosing one alternative over another.

Many businesses try to achieve “economies of scale” when producing a good relative to fixed costs. An example of economies of scale is in relation to how much of the fixed costs are attributed to a single unit of production. In the case of horses, if fixed costs are \$20,000 a year and there are 10 horses, then \$2,000 ($\$20,000 / 10 \text{ horses} = \$2,000$) of fixed cost is attributed to each horse. Alternatively, if fixed costs remain the same and there are 20 horses, then the fixed cost per horse would be \$1,000 ($\$20,000 / 20 \text{ horses} = \$1,000$).

Broodmare Operation Marketing Offspring

One example of an equine business is a broodmare operation. In this business, producers breed mares with the intention of marketing the offspring. This business requires significant research and market analysis. It is imperative for horse breeders to possess a comprehensive understanding of the market they are in and what the demand is for their product. Incorrect market information can be just as bad as, or worse than, having no market information. Thus, horse breeders and potential horse breeders are encouraged to evaluate the market for horses and determine the breed and skill set desired by potential horse owners in the marketing area. The evaluation of this market includes the potential market outside the immediate living/business area as many horses are marketed to owners outside the home state. Additionally, new entrants to the industry are cautioned about using horse values from well-established operations, as values based on reputation and industry connections can be difficult to establish and may not be reasonable for a start-up business.

Table 1 contains example costs and revenue from a broodmare operation breeding four mares and marketing four foals per year. Nothing guarantees a 100 percent foaling rate, but that rate will be used in the example. The sale price of yearling horses can vary based on breed, pedigree and initial training, but can be rather high with a very desirable pedigree. The budget in table 1 assumes four

yearlings are marketed at \$10,000 per head while it is assumed mares have a reproductive life of seven years for total yearly revenue of \$41,143 while total yearly cost is expected to be \$54,909 resulting in a negative return to management and risk of \$13,766 per year.

Variable costs are calculated to be \$33,517 per year. Feed cost and health cost are generally the largest expenses associated with horse ownership. Table 2 and table 3 provide a breakdown of health costs for a complete yearly health program for mares and their offspring respectively. However, breeding and marketing expenses tend to be the primary source of expenditures for broodmare operations, with breeding expenses totaling \$4,860 and marketing expenses totaling \$6,240 in this budget example. A detailed breakdown of breeding and marketing expenditures per animal is presented in tables 4 and 5, respectively. Utilities also can be a rather large operating cost that is easily overlooked. Thus, utility costs are presented in table 6.

Fixed costs contribute about 39 percent of the total cost (\$21,392) and this is largely due to the capital investment necessary for a broodmare operation (table 7) as it relates to the horses, land, facilities and equipment. The majority of fixed costs stem from annual depreciation of assets (\$11,919) while opportunity cost (interest) (\$6,278) is the second largest contributor to fixed costs.

Boarding Facility

There are opportunities in the equine industry to create a for-profit operation without having ownership of the horses. One of these opportunities is through boarding facilities. Horses are often boarded by horse owners in facilities owned and operated by other individuals. Boarding facilities provide services to horse owners who otherwise may not be able to provide everything necessary for the horse. Many horse owners use boarding facilities because they do not have the time to feed and care for their horse every day or because they do not have land and a barn.

Boarding operations may provide full board, partial board and/or pasture board, and each of these types of boarding can look vastly different from one boarding facility to the next. Full board is the most expensive type of board and generally includes an individual barn stall, daily feeding and watering, waste removal and bedding, daily turnout for exercise, and potentially other services. Partial board often includes many of the same services as full board but it may only include care on weekdays, which results in the owner providing care on the weekends. Pasture board is exactly as it sounds. Horses are boarded on pasture, and hay and/or concentrate is provided as needed. Pasture board is generally the least expensive board. There are boarding facilities that require the horse owner to purchase their own bedding, feed and other items as well as providing veterinary and farrier care. For

more specific cost and management considerations, please refer to previous sections.

Table 8 presents the estimated annual costs and returns to operating a boarding facility with 25 horses on full board. The annual revenue is estimated to be \$120,000, while total annual cost is estimated to be \$105,294, which results in a return to management and risk of \$14,706. Variable costs make up 71 percent of the total cost of operating an equine boarding facility in this example. Aside from labor costs, feed costs are the largest variable expense for the operation (table 9). The third largest cost of such an operation is generally utilities, presented in table 10.

Table 11 details the fixed costs associated with depreciation and interest with operating an equine boarding facility. Annual depreciation accounts for a little over 50 percent (\$15,499) of total fixed costs while the annual interest cost (opportunity cost) accounts for about 34 percent (\$10,571) of total fixed costs. The cost of developing and constructing a boarding facility can be large depending on the elaborateness of the barn and the amenities included; thus, fixed costs will vary considerably from operation to operation. Potential boarding operators are encouraged to evaluate facilities closely to determine the need for certain amenities. Boarding fees also can have a wide range. In general, boarding fees are higher the closer the boarding facility is located to an urban center. The services offered and the quality of service should also be used in determining an appropriate fee level.

Some boarding facilities also provide horse leasing. Though horse leasing is not included in the budget, operators of boarding facilities may want to consider the service of leasing horses to customers. Leasing horses can be a method of generating additional income while also providing the horse owner (often the owner of the boarding facility) the opportunity to continue providing care for the animal.

CONCLUSION

The decision to participate in an equine-based business requires extensive research and evaluation to make an informed decision. Potential industry participants are encouraged to evaluate the costs and returns of equine-based businesses before entering the market and expending significant quantities of capital.

This publication is a guide to help people understand the costs and returns that should be considered when evaluating equine businesses. The budgets provided in this publication are presented as a guide for the cost and revenue streams that should be considered and are not representative of all operations, as each operation will have unique costs and returns. Therefore, potential industry

participants are encouraged to use these budgets as a starting point to help develop their own individual budget. For assistance developing budgets or other economic plans, contact your county Extension office.

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Table 1. Annual Cost and Returns of Operating a Broodmare Operation^{a*}

	Quantity	Unit	Price	Group Total
REVENUE				
Sale of offspring	4	head	\$10,000.00	\$40,000.00
Sale of mares ^b	0.57	head	\$2,000.00	\$1,142.86
Total Revenue				\$41,142.86
VARIABLE COSTS				
Hay	7	ton	\$200.00	\$1,400.00
Concentrate ^c	3.6	ton	\$300.00	\$1,080.00
Salt/mineral ^d	8	block	\$16.00	\$128.00
Pasture maintenance ^e	3.00	acre/mare	\$130.00	\$1,560.00
General health (mares) ^f	4	mare	\$940.00	\$3,760.00
General health (foals)	4	foal	\$662.00	\$2,648.00
Breeding expenses	4	mare	\$1,215.00	\$4,860.00
Bedding ^g	4	mare	\$780.00	\$3,120.00
Fence repair	\$3,600	percent	5.0%	\$180.00
Barn repair	\$30,000	percent	2.0%	\$600.00
Machinery maintenance	\$58,750	percent	1.5%	\$881.25
Waste disposal ^h	4	tons/mare	\$20.00	\$320.00
Utilities				\$6,120.00
Insurance on mares	\$16,000	percent	2%	\$320.00
Hired labor	0	hours	\$10.00	\$0.00
Marketing fees	4	yearling	\$1,560.00	\$6,240.00
Breed association membership	1	annual	\$100.00	\$100.00
Registration	4	foal	\$50.00	\$200.00
Other	0	head/month		\$0.00
Total Variable Cost				\$33,517.25
FIXED COSTS				
Annual depreciation of capital assets ⁱ				\$11,919.05
Annual interest on investment ^j				\$6,277.50
Insurance: casualty and liability	\$98,750	percent	1.5%	\$1,481.25
Property taxes	\$81,600	rate/\$100	\$0.63	\$514.08
Operator labor	100	hours/mare	\$12.00	\$1,200.00
Total Fixed Cost				\$21,391.88
Total Cost				\$54,909.13
Return to Management and Risk				-\$13,766.27

^a Operation with four mares producing one foal a year for each mare.

^b Mares are assumed to have a useful life of seven years. In a four-mare operation, this would mean an average marketing rate of 0.57 head per year.

^c Most horses needs for maintenance can be achieved with only forage, but lactating horses often need supplementation.

^d Only needed if forage test determines mineral needs are not met by forage intake alone.

^e Includes weed control, mowing, fertilizer, lime and seed.

^f Farrier costs are included in general health cost.

^g Bedding alternatives include shavings, wood pellets, peat moss and straw.

^h Waste is assumed to be composted and spread across available pasture.

ⁱ Depreciation is calculated using straight line depreciation.

^j Annual interest on investment is calculated using simple interest over the useful life of the asset.

* Table adapted from Burdine et al. 2006.

Table 2. Annual Health Care and Veterinary Costs for Broodmares*

	Quantity	Unit	Price	Total
Fecal Egg Count	2	tests	\$16.00	\$32.00
Deworming^a	2	doses	\$16.00	\$32.00
Vaccination				
EWE, WN, EHV, EIV, tetanus, rabies	1	doses	\$50.00	\$50.00
EWE, WN, EHV, EIV, tetanus booster	1	doses	\$30.00	\$30.00
Pneumabort EHV ^b	3	doses	\$18.00	\$54.00
PHF	1	doses	\$20.00	\$20.00
Strangles	1	doses	\$20.00	\$20.00
Veterinary Visits				
Basic Health Exam	1	tests	\$20.00	\$20.00
Travel Fee	1	trips	\$40.00	\$40.00
Farrier	9	trims	\$65.00	\$585.00
EIA/Coggins	1	tests	\$27.00	\$27.00
Health Certificates	1	cert	\$30.00	\$30.00
Total health cost per mare				\$940.00

^a Deworming should be based on results from fecal egg count.

^b Administered during 5th, 7th and 9th months of pregnancy.

[#]Timing of vaccinations: www.aaep.org/custdocs/adultvaccinationchart.pdf.

* Table adapted from Burdine et al. 2006.

Table 3. Annual Health Care and Veterinary Costs for Foals/Weanlings^{a*}

	Quantity	Unit	Price	Total
Fecal Egg Count	2	tests	\$16.00	\$32.00
Deworming^b	2	doses	\$16.00	\$32.00
Vaccination				
EWE, WN, EHV, EIV, tetanus ^{c#}	3	doses	\$40.00	\$120.00
Rabies ^{d#}	2	doses	\$4.00	\$8.00
Botulism ^{e#}	3	doses	\$30.00	\$90.00
PHF ^{f#}	2	doses	\$20.00	\$40.00
Strangles ^{c#}	3	doses	\$20.00	\$60.00
Veterinary Visits	3	doses		
Basic Health Exam	1	tests	\$20.00	\$20.00
Travel Fee	1	trips	\$40.00	\$40.00
Farrier	3	trims	\$65.00	\$195.00
EIA/Coggins	1	tests	\$27.00	\$27.00
Health Certificates	1	cert	\$30.00	\$30.00
Total health cost per foal/weanling				\$662.00

^a Foals and weanlings less than 12 months of age.

^b Deworming should be based on results from fecal egg count.

^c First dose at 4 to 6 months of age. Second dose 4 to 6 weeks after first dose. Third dose at 10 to 12 months of age.

^d First dose at 6 months of age. Second dose 4 to 6 weeks after first dose.

^e First dose at 2 to 3 months of age. Second dose 4 weeks after first dose. Third dose at 4 weeks after second dose.

^f First dose at 5 months of age. Second dose 3 to 4 weeks after first dose.

*Timing of vaccinations: www.aaep.org/custdocs/FoalVaccinationChart.pdf.

* Table adapted from Burdine et al. 2006.

Table 4. Broodmare Breeding Costs*

	Quantity	Unit	Price	Total
Pre-breeding exam	1	exam/mare	\$30.00	\$30.00
Ovulation check	1	exam/mare	\$40.00	\$40.00
Breeding fee	1	breeding/mare	\$1,000.00	\$1,000.00
Pregnancy check	1	exam/mare	\$50.00	\$50.00
Pregnancy follow up	2	exam/mare	\$40.00	\$80.00
Breeding and foaling supplies	1	supplies/mare	\$15.00	\$15.00
Total Breeding Cost per Head				\$1,215.00

* Table adapted from Burdine et al. 2006.

Table 5. Cost of Marketing and Selling Offspring from Broodmare Operation*

	Quantity	Unit	Price	Total
Advertising	12	month	\$30.00	\$360.00
Consignment ^a	1	yearlings	\$0.00	\$0.00
Fitting/Training	60	days/head	\$20.00	\$1,200.00
Transportation ^a	0	miles	\$1.40	\$0.00
Sales Commission ^a	\$0.00	yearling sales	5%	\$0.00
Pre sale radiographs ^b	1	yearlings	\$0.00	\$0.00
Pre sale endoscopy ^b	1	yearlings	\$0.00	\$0.00
Pre sale health papers ^b	1	yearlings	\$0.00	\$0.00
Total Marketing Cost				\$1,560.00

^a Onsite private treaty sales assumed; thus, no consignment fee, transportation or sales commission.

^b Highly variable, consult a local veterinarian for cost estimate.

* Table adapted from Burdine et al. 2006.

Table 6. Annual Utility Expenses Associated with Horse Ownership on Owned Land*

	Average Monthly Bill	Percent to Horses ^a	Annual Total
Water	\$60.00	100%	\$720.00
Electricity	\$120.00	100%	\$1,440.00
Phone	\$140.00	40%	\$672.00
Gas	\$0.00	100%	\$0.00
Internet	\$60.00	40%	\$288.00
Fuel (gasoline, diesel)	\$250.00	100%	\$3,000.00
Total Utilities			\$6,120.00

^a Estimates of the overall cost attributed to horse ownership.

* Table adapted from Burdine et al. 2006.

Table 7. Broodmare Operation Costs*

	Quantity	Unit	Purchase Price/Unit	Salvage Value/Unit	Total Purchase Price	Total Salvage Value	Allocated to Business Enterprise ^a						
							Percent	Purchase Price	Salvage Value	Useful Life (years) ^b	Interest Rate	Annual Depreciation ^c	Annual Interest on Investment ^d
Horses	4	head	\$4,000	\$2,000	\$16,000	\$8,000	100%	\$16,000	\$8,000	7	5%	\$1,142.86	\$600.00
Tack/Barn equipment	4	head	\$2,500	\$0	\$10,000	\$0	100%	\$10,000	\$0	3	5%	\$3,333.33	\$250.00
Barn	1	each	\$30,000	\$0	\$30,000	\$0	100%	\$30,000	\$0	20	5%	\$1,500.00	\$750.00
Land	12	acres	\$4,000	\$4,000	\$48,000	\$48,000	100%	\$48,000	\$48,000	39	5%	\$0.00	\$2,400.00
Fencing	0.6	miles	\$6,000	\$0	\$3,600	\$0	100%	\$3,600	\$0	7	5%	\$514.29	\$90.00
Truck	1	each	\$35,000	\$15,000	\$35,000	\$15,000	25%	\$8,750	\$3,750	5	5%	\$1,000.00	\$312.50
Trailer	1	each	\$20,000	\$5,000	\$20,000	\$5,000	100%	\$20,000	\$5,000	5	5%	\$3,000.00	\$625.00
Tractor	1	each	\$30,000	\$20,000	\$30,000	\$20,000	100%	\$30,000	\$20,000	7	5%	\$1,428.57	\$1,250.00
Total					\$192,600	\$96,000		\$166,350	\$84,750			\$11,919.05	\$6,277.50

^a Estimates of the overall cost of an asset attributed to the equine business enterprise.

^b Based on IRS depreciation, depletion and amortization. www.irs.gov/publications/p225/ch07.html#en_US_2015_publink1000177268

^c Annual depreciation is calculated using straight line depreciation, e.g., $(\$16,000 - \$8,000)/7$ years = \$1,142.86 per year is the annual depreciation charge for the horse business.

^d Annual interest on investment is calculated using simple interest over the useful life of the asset, e.g., $((\$16,000 + \$8,000)/2) \times 0.05 = \600 per year interest on investment for the horse business.

* Table adapted from Burdine et al. 2006.

Table 8. Annual Cost and Returns to Operating an Equine Boarding Facility*

	Quantity	Unit	Price	Group Total
REVENUE				
Full board fees ^a	25	head/month	\$400.00	\$120,000.00
Partial board fees	0	head/month	\$250.00	\$0.00
Pasture board fees	0	head/month	\$150.00	\$0.00
Total Revenue				\$120,000.00
VARIABLE COSTS				
Hay ^{bc}	110	ton	\$150.00	\$16,500.00
Concentrate	0	ton	\$300.00	\$0.00
Salt/mineral ^d	50	block	\$16.00	\$800.00
Pasture Maintenance ^e	1.00	acre/horse	\$130.00	\$3,250.00
Bedding ^f	25.00	horse	\$780.00	\$19,500.00
Fence repair	\$7,200	percent	5.0%	\$360.00
Barn repair	\$100,000	percent	2.0%	\$2,000.00
Machinery maintenance	\$58,750	percent	1.5%	\$881.25
Waste disposal ^g	25	tons/horse	\$20.00	\$500.00
Utilities				\$10,800.00
Hired labor	80	hours/horse	\$10.00	\$20,000.00
Other	0	head/month		\$0.00
Total Variable Cost				\$74,591.25
FIXED COSTS				
Annual depreciation of capital assets ^h				\$15,498.81
Annual interest on investment ⁱ				\$10,570.63
Insurance: casualty and liability	\$181,875	percent	1.5%	\$2,728.13
Property taxes	\$207,200	rate/\$100	\$0.63	\$1,305.36
Operator labor	50	hours/horse	\$12.00	\$600.00
Total Fixed Cost				\$30,702.92
Total Cost				\$105,294.17
Return to Management and Risk				\$14,705.83

^a Full board costs may range from \$350 to \$1,200 per month.

^b Most horses needs for maintenance can be achieved with only forage.

^c It is assumed horses are fed at 2 percent of body weight (1,200 lbs mature body weight)

^d Only needed if forage test determines mineral needs are not met by forage intake alone.

^e Includes weed control, mowing, fertilizer, lime and seed.

^f Bedding alternatives include shavings, wood pellets, peat moss and straw.

^g Waste is assumed to be composted and spread across available pasture.

^h Depreciation is calculated using straight line depreciation.

ⁱ Annual interest on investment is calculated using simple interest over the useful life of the asset.

* Table adapted from Burdine et al. 2006.

Table 9. Annual Feed Costs for an Equine Boarding Facility^a*

	Quantity	Unit	Price	Total
FULL BOARD^b	25	horses		
Hay	4.4	ton/horse	\$200.00	\$880.00
Concentrate	0	ton/horse	\$300.00	\$0.00
Salt/mineral	2	block	\$16.00	\$32.00
			Feed cost	\$22,800.00
PARTIAL BOARD^c	0	horses		
Hay	0	ton/horse	\$200.00	\$0.00
Concentrate	0	ton/horse	\$300.00	\$0.00
Salt/mineral	0	block	\$16.00	\$0.00
			Feed cost	\$0.00
PASTURE BOARD^d	0	horses		
Hay	0	ton/horse	\$200.00	\$0.00
Concentrate	0	ton/horse	\$300.00	\$0.00
Salt/mineral	0	block	\$16.00	\$0.00
			Feed cost	\$0.00
Total Feed Cost				\$22,800.00

^a Boarding operations may provide full, partial, and/or pasture board, and each type of boarding can look vastly different from one boarding facility to the next.

^b Generally includes barn stall, daily feeding and watering, waste removal, and bedding, daily turnout for exercise, and other services.

^c Often includes many of the same services as full board, but it may require owner to perform services on weekends. May require separate feed purchase.

^d Boarded on pasture with hay provided as needed.

* Table adapted from Burdine et al. 2006.

Table 10. Annual Utility Expenses Associated with Equine Boarding Facility^{*}

	Average Monthly Bill	Percent Cost to Horses ^a	Annual Total
Water	\$200.00	100%	\$2,400.00
Electricity	\$200.00	100%	\$2,400.00
Phone	\$140.00	100%	\$1,680.00
Gas	\$0.00	100%	\$0.00
Internet	\$60.00	100%	\$720.00
Fuel (gasoline, diesel)	\$300.00	100%	\$3,600.00
Total Utilities			\$10,800.00

^a The percent of the overall cost attributed to horses.

* Table adapted from Burdine et al. 2006.

Table 11. Equine Boarding Facility Costs*

	Quantity	Unit	Purchase Price/Unit	Salvage Value/Unit	Total Purchase Price	Total Salvage Value	Allocated to Business Enterprise ^a		Useful Life (years) ^b	Interest Rate	Annual Depreciation ^c	Annual Interest on Investment ^d	
							Percent	Purchase Price					Salvage Value
Tack/Barn equipment	25	per head	\$125	\$0	\$3,125	\$0	100%	\$3,125	\$0	3	5%	\$1,041.67	\$78.13
Barn	1	each	\$100,000	\$0	\$100,000	\$0	100%	\$100,000	\$0	20	5%	\$5,000.00	\$2,500.00
Land	25	acres	\$4,000	\$4,000	\$100,000	\$100,000	100%	\$100,000	\$100,000	39	5%	\$0.00	\$5,000.00
Fencing	1.2	miles	\$6,000	\$0	\$7,200	\$0	100%	\$7,200	\$0	7	5%	\$1,028.57	\$180.00
Truck	1	each	\$35,000	\$15,000	\$35,000	\$15,000	25%	\$8,750	\$3,750	5	5%	\$1,000.00	\$312.50
Trailer	1	each	\$20,000	\$5,000	\$20,000	\$5,000	100%	\$20,000	\$5,000	5	5%	\$3,000.00	\$625.00
Tractor	1	each	\$30,000	\$20,000	\$30,000	\$20,000	100%	\$30,000	\$20,000	7	5%	\$1,428.57	\$1,250.00
Other			\$20,000	\$5,000	\$0	\$0	100%	\$20,000	\$0	5	5%	\$3,000.00	\$625.00
Total					\$295,325	\$140,000		\$289,075	\$128,750			\$15,498.81	\$10,570.63

^a The percent of the overall cost of an asset attributed to equine business enterprise.

^b Based on IRS depreciation, depletion, and amortization. www.irs.gov/publications/p225/ch07.html#en_US_2015_publink1000177268

^c Annual depreciation is calculated using straight line depreciation, e.g., $(\$3,125 - \$0)/3 \text{ years} = \$1,041.67$ per year is the annual depreciation charge for the horse business.

^d Annual interest on investment is calculated using simple interest over the useful life of the asset, e.g., $((\$3,125 + \$0)/2) \times 0.05 = \$78.13$ per year interest on investment for the horse business.

* Table adapted from Burdine et al. 2006.



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