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Highest and best use in multifunctional agricultural market

The original toxic asset: contaminated land

Market value of a going concern





PINZ PRESIDENT'S REPORT



Ian Campbell PINZ President

I am pleased to be able to report to you current activities undertaken from the beginning of this year.

As you may be aware, current economic data still points towards a slow but fragile improvement in market conditions, with further improvement expected during 2010. However for those who may be aware of discussion around tax reform will be concerned to hear of the potential targeting upon the property sector. A recent report designed to broaden the current tax base for future tax reform has been presented to central Government for consideration. The recommendations which include taxing property ownership would, if adopted, severely impact upon present values and future investment in our sector.

As a background, the Victoria University of Wellington Tax Working Group released its report to Government in January this year. The report recommended sweeping changes to current taxation policy that collectively, seeks to impart a broader, fairer and sustainable tax system than what is currently in place. Being one of many reports concerning New Zealand's future planned deficits, the Tax Working Group report has recommended aligning and reducing top personal, company and trust tax rates. This would in part be funded by a potential increase in GST to 15%. However, in order to preserve the current tax revenue level received by the crown, the report then recommends applying a capital gains tax and introducing a broad low rate land tax on all land ownership. The report also recommended removing tax depreciation for buildings and removing current depreciation loadings for new plant and equipment. Evidence suggests that the absence of a form of capital gains tax in New Zealand has, over time, encouraged ownership

in capital appreciating assets, particularly property. Since the 1990s a trend towards residential property investment has occurred. Transferring net rental losses like loss attributing qualifying companies (LAQC) has contributed to a loss in tax revenue. For instance, in 2008 the loss in tax revenue amounted to \$150 million. When quantifying the scale of residential investment property alone, statistics indicate a national investment at around \$213 billion, nearly five times the size of the NZX. Accordingly the Crown will view residential property investment as a very large pool with the potential of harvesting additional tax revenue.

The Government has since indicated deferring any introduction of Capital Gains Tax and Land Tax but will focus on stemming tax rental losses and tax depreciation. Accordingly, as an Institute we are anxious to ensure that there is enough time to debate these changes and for our members and the public to consider the impacts. What is concerning is the impact upon current and future residential property supply and investment. Accordingly any announcements prior to this year's budget in May will be closely monitored.

I was delighted to be able to host a nine-person delegation from the Ministry of Finance of Vietnam lead by the Vice-Minister Mr Tran Van Hieu in January with other senior institute members, our Chief Executive David Clark and Valuer-General Neil Sullivan. We were pleased that the Ministry of Finance was able to spend two days reviewing how we currently manage and implement valuation standards within New Zealand including valuer training, registration, land rating and public works compensation.

With this year's joint API/PINZ 2010 conference to be held in Perth on 21 to 23 April, the International Property Conference will provide those members who will be attending, some global content to what will be one of the highpoints for this year. The Perth organising committee led by API President David Moore (WA Division) assisted by conference organisers EECW, have procured an exceptional line up of

speakers, tours and events. I understand that a number of our New Zealand members will be attending this year with some competitive air fares promoted by Air New Zealand. If you are able to attend this year in Perth you will not be disappointed and I look forward to seeing you there.

Of interest to all members this year we will be promoting over 100 years of Valuation in New Zealand including the centennial of the Real Estate Valuers Association of Auckland founded in 1910. The Auckland association later amalgamated with other valuer based associations to eventually form the New Zealand Institute of Valuers in 1938. With the support of our organising committee chaired by life member lain Gribble, this year will mark a period of education and promotion of over 100 years of valuation. As a national event, one of the aims is to heighten awareness and benefits in using a registered valuer. Current plans will include celebrating the 2010 milestone through a number of national and local events. Members are also invited to use the distinctive 100 year logo on all communications. A signature event will be held on 17 & 18 June 2010.

Finally with all branch AGMs and reappointment of committees now occurring, on behalf of the Board, we extend our thanks to all who have contributed their time last year and to those who again offer their time for branch activities. As this is a commemorative year for valuation in New Zealand as well as 10 years since formation of our Institute, please join with me in celebrating what we have achieved together. Thank you for your support.

Should any reader wish to seek further information on any matter contained in this article, then please make contact with National Office or contact any one of the independent professional members of the Property Institute of New Zealand using the institute's website at www.property.org.nz.

Ian Campbell President

Property Institute of New Zealand



Highest and best use decision-making in a multifunctional agricultural land market

Abstract

The transition in the use of agricultural land as primarily a factor of production towards a multifunctional environment where alternative uses of agricultural land, such as for lifestyle purposes are evident, complicates agricultural land valuations. Competing end users have different interpretations of the factors that determine value. The continued use of familiar conventional farming attributes when valuing farms where lifestyle motivations are present, and the omission of less measurable characteristics, implies that the market sales comparison method cannot be executed accurately.

This paper takes a closer look at the choice of "highest and best use" (HBU) in agricultural land valuation practice in the presence of alternative land uses. This is done through a critical overview of the relevant valuation literature, with specific reference to the concepts of HBU and market value and problems associated with the application of these terms within the valuation context. The need for deferring the decision of a HBU, together with the use of a multiple perspective approach to inform the choice of a HBU are discussed as ways to deal with uncertainties and complexities associated with the valuation of agricultural land where alternative uses are present. Additional and improved information in valuation reports, complemented with comprehensive analysis will also assist in better decision-making by the users of these reports.

Introduction

Traditionally agricultural land was predominantly valued for its productive capacity. Accordingly, in their application of the market sales comparison approach to agricultural land, valuers supposed farmers to be the "typical" buyers of such properties and relied on a set of attributes related to agricultural production as the primary determinants of an agricultural property's highest and best use (HBU) and market value. These characteristics were measurable and related to the property's incomegenerating capacity.

The rural land market has been undergoing complex supply and demand driven changes – there has been a transition in the use of agricultural

land primarily for production towards a multifunctional environment where alternative uses of land, such as for lifestyle purposes, are evident (Brandt and Vejre, 2004: 11, Holmes, 2006: 142, Roberson, 1997:114, Mundy and Kinnard, 1998:207, Maybery et al., 2005:59, Green et al., 2005:1). These buyers often focus on a wider range of attributes not necessarily related to the production attributes of the land for income purposes, but associated more with satisfaction derived from the property, such as the appreciation of aesthetic beauty, game viewing and outdoor recreation activities (Hendy, 1998:145, Painter, 2004: 112, Holmes, 2006: 142, 158, Maybery et al., 2005:59-60, Pope, 1985:81-85, Prag, 1995a:5, 12).

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For this reason the multifunctional nature of agricultural land suggests a proliferation of uses, from which the HBU with respective characteristics need to be identified. These range from consumptive uses to amenity uses, with a spectrum of other uses in between. In this multifunctional agricultural landscape, the value of land does not only represent its agricultural potential, but other values as well. This creates a measurement problem for agricultural land valuers, as the characteristics valued by lifestyle buyers are more intangible and subjective, making agricultural land valuations more complex and uncertain.

Multiple uses of land and the characteristics associated with each use blur the choice of a HBU and typical buyer. Valuers feel more comfortable using familiar and factual information in the determination of market value than focusing on subjective human mental processes, even though market value is the product of these mental processes. This is aggravated by time and fee constraints for conducting valuations. The continued use of familiar conventional farming attributes by valuers when valuing farms where lifestyle motivations are present, and the omission of less measurable characteristics, implies that the market sales comparison method cannot be executed accurately.

Herein lays a fundamental theoretical issue – the choice of a specific HBU implies certain characteristics that complement this chosen HBU. The transition from an agricultural land market that was predominantly production-oriented towards a multifunctional landscape with numerous alternative uses complicates the valuation process as uncertainty regarding the motives of buyers and

the use of specific properties increase. The presence of alternative uses makes agricultural land valuations more demanding, as it implies different interpretations of the same farm, emphasising different attributes of the property and priorities of buyers, instead of the obvious choice of farming as the HBU (by default) and the concomitant use of typical characteristics related to agricultural production. Every use application has its own "set" of value-bearing characteristics, which vary for different types of uses.

The choice of one use as the highest and best is embedded in the valuation principle that a property can have only one market value at a specific point in time. This is problematic in a multifunctional environment with competing end users which have different interpretations of the factors that determine value. For this reason the choice of the HBU on agricultural properties that maximises satisfaction or utility is challenging. The term "highest and best use" has been the subject of much criticism in valuation literature, as it can be applied as the use that maximises income (production purposes) or uniquely personal satisfactions. Several problems with the current situation necessitate the need for a different approach in the valuation of farms bought for lifestyle purposes. Valuation theory states that valuers need to assess buyer motivations and be able to think like "typical" buyers.

Valuers' familiarity with agricultural production as the HBU of farms and their unfamiliarity with other types of buyers obstructs thorough investigations into alternative uses of land before the decision of a specific HBU is made.

Literature overview

The market sales comparison (direct comparison) method is universally accepted as the most appropriate method to determine the market value of properties, because it reflects actual market behaviour and incorporates influences of both sides of the market (buyers and sellers) (Boykin and Ring, 1993:146, Jonker, 1984:79, Ellenberger, 1983:85-85, The South African Property Education Trust, 2004:35). The income capitalisation method is still commonly used in the valuation of income-generating components of farming businesses, such as guest houses and restaurants (Guiling et al., 2007:4). It has also been proposed as at least a supplementary method to determine the value of rural properties that are profit-based (Eves, 2005). This method is, however, inadequate for farm valuations where non-agricultural factors, such as lifestyle motivations, are dominant.

The market sales comparison method is based on the principle that a buyer will not pay more for a specific property than the price (which is a proxy for value) for which s/he can obtain a comparable substitute property that will fulfill the same objective (American Institute of Real Estate Appraisers, 1987:312, Sando, 1973:222, Vandell, 1982:256, The South African Property Education Trust, 2004:30-32, 35, Boykin, 2001:73, American Institute of Real Estate Appraisers, 1992:367, Ellenberger, 2007:7-1).

The concepts of HBU and market value form the basis of the market sales comparison method. Valuers must first and foremost decide on the HBU of the subject property. The use envisaged for a property





determines its value. This, in turn, is influenced by the characteristics of the property (Ellenberger, 1983:29, Smith, 2004:42, Reynolds and Regalato, 2002:82, Ellenberger, 2007:7-7). For this reason the HBU of a property is critical, as it guides the valuer through the valuation processes by identifying a specific use for a property, which provides direction on the choice of reasonable comparable properties with similar uses. characteristics and benefits for evidence of market value (Roberson, 1997:118, Lennhoff and Parli, 2004:45, Sando, 1973:222). It also implies a selection of certain value-bearing attributes of the property as perceived by the "typical buyer" (Ling and Archer, 2005:190).

Earlier definitions of HBU and market value, with their associated problems

In general the HBU is defined as that use of vacant land or an improved property that is reasonably likely and legal and is physically, legally and financially possible, which can be properly supported and results in the highest land value (Lennhoff and Parli, 2004:46, American Institute of Real Estate Appraisers, 1987:42, Lennhoff and Elgie, 1995:275, Thair, 1988:190-191). Market value is the highest price estimated in terms of money which a property will bring if exposed for sale in the open market allowing reasonable time to find a purchaser who buys with knowledge of all uses to which it is adapted and for which it is capable of being used (Albritton, 1980, American Institute of Real Estate Appraisers and Society of real estate appraisers, 1981). These concepts have their roots in traditional classical economics, where humans are perceived as rational economic beings who attempt to

maximise their utility or income (Grissom, 1983:50).

Over the years the definitions of HBU and market value have been subjected to various revisions because of criticisms of these terms being poorly constructed, confusing, vague and contradictory (Grissom and Crocker, 1994:86, Wolverton, 2004:318); Lennholf, 2004:48; Thair, 1988:193; Vandell, 1982:257).

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The theoretical assumptions of perfect competition and complete information, underpinned by rational human thought, eroded the base of traditional market value theory (Ratcliff, 1972b, Reenstierna, 1985:116, Ratcliff, 1975:486, Grissom, 1983:50-51, Fraser, 1991:35, Campbell, 1969:631). There are seldom many similar transactions from which market value can easily be calculated, the thought processes of buyers and sellers cannot simply be replicated, while limited knowledge makes it difficult for involved parties to make well informed decisions (Kummerow, 2002:407-408, Fraser, 1991:37). Valuations based on a single maximisation criterion are an oversimplification of reality that do not resemble actual decision-making processes (Whipple, 1962:181-183).

At the same time the market value definition assumes a perfect market from which a single "true" value could easily and accurately be determined, while people are depicted as rational

beings who make optimal decisions (Reenstierna, 1985:126, Fraser, 1991:37, Collins, 1965:541-542, Ross, 1969:952). It creates the perception that market value can accurately and confidently be determined without any uncertainty or market imperfections. In reality these decisions are complex and subjective, and often not made by relying on a single maximisation criterion based on economic considerations alone, as HBU suggests, but comes about as an interaction of many factors, of which profit makes out only one part (Grissom, 1985:218, Dotzour et al., 1990:27, 29). These assumptions are highly theoretical and unrealistic, which make them difficult to apply in practice (Huck, 1965:196). Despite persistent criticism and efforts to create more user-friendly definitions, these continued to be highly theoretical, impractical and unrealistic (Lennhoff and Parli, 2004:45, Dotzour et al., 1990:17).

In time the emphasis of HBU shifted from being the use that provides the highest net income over a period of time, to the use resulting in the highest present land value (Ellenberger, 1983:74, Grissom, 1983:51, Rabianski, 2007). These were, however, not necessarily the same (Huck, 1965:195, Webb, 1980:58). Profit relates to the income-generating capacity of the land (production oriented), while satisfaction relates to the use or enjoyment derived from a property (Huck, 1965:191). This gave the definition of HBU a binary approach where both the highest income and/or highest satisfaction could be investigated (Thair, 1988:198).

Involved parties have many motivations for buying agricultural land, which can range from wanting to maximise profit to wanting to maximise satisfaction, which is a less tangible non-economic use (Adams and Mundy, 1991:41, Pope, 1985:81, 85,



Thair, 1988:191). However, each different use has a specific set of value attributes related to it. Valuation of a property from each of these angles would result in different values (productive or consumptive) and valuers would need to establish the comparable features of each. Valuation theory, however, dictates that a property can have only one market value at a specific point in time (Holstein, 2003:37). This matches the Law of One Price (LOOP) used in theories of international trade (Chen and Lee, 2008:123, Goodwin et al., 1990:682). However, the LOOP only holds for homogeneous goods, although no two parcels of land can ever be identical (Spreen et al., 2007:408).

Most probable selling price and most probable use

While earlier definitions of market value concentrated on it as the *highest* price which a property could sell for in the open market, later definitions forwarded in the 1960s proposed that market value should be the *most probable selling price* of such a property (MPP) (Miles, 1980:540, Babe, 1969:637, Grissom and Crocker, 1994:94). The market value of a property would then be the most probable selling price in the market, instead of the highest price that can be achieved (Grissom, 1983:50, 55, Smith, 1986).

As with market value, the term HBU could be replaced with *most probable use* (MPU), which represents the most likely use among alternatives. HBU focuses on the maximum and optimum use, while MPU looks at most likely use within a range of possible uses (Grissom and Crocker, 1994:86, Abson, 1989, Wilson, 1995), which will not necessarily be the optimal or maximum use, because

of market imperfections in the land market (Roberson, 1997:116-117, Thair, 1988:195). The MPU implies the existence of alternative uses with different markets and probable buyers, thereby creating room for multiple and diverging perspectives regarding the best use of a property and thereby also acknowledging the uncertainty surrounding the choice of a single "best" use in valuations (Grissom and Crocker, 1994:87). It provides flexibility in valuations by stressing that the use of a property is determined by a range of factors, including non-economic ones, which could complicate decision making (Thair, 1988:196).

A range of values could statistically be equated to a distribution of potential selling prices, which implies the use of measures of central tendency, such as the mean, mode and modus. The mean relates to the expected price, the mode correlates with the most probable price and the median is the middle price (50 per cent probability that the value is higher or lower than this price) (Colwell, 1979:58). Similarly, the MPU can accommodate multiple uses by treating each use as a separate valuation "stream", until a decision on the use with the highest possibility of being realised is made (Thair, 1988:190, 192). It also allows for the valuation of special purpose properties, which sometimes need to be analysed on the basis of two highest and best uses, such as the continuation of the existing HBU and the conversion to an alternative HBU (American Institute of Real Estate Appraisers, 1992:293). In this way more information is provided on different uses and special cases such as multi-purpose and interim-use properties.

MPU does not assume that the use that yields the highest income is necessarily the use that yields the greatest value. It focuses on the highest land value to

be realised in money or amenity terms and emphasises the most likely and possible use for the most probable buyer (Grissom, 1983:52, Thair, 1988:191, Kummerow, 2002:407).

The use of statistics has advantages and disadvantages. Even though statistical analysis provides essential and additional information in valuations, it does not provide a quick solution for valuation problems and a focus on human behaviour, as well as buyer, seller and property characteristics remains important (Reenstierna, 1985:118). Arguments have arisen that valuers are first and foremost valuers, not statisticians and that there is no substitute for a valuer's experience and judgment to choose comparable sales and estimate market value (Ratcliff, 1972a:486, Reynolds, 1995:85).

Acquiring data for rigorous statistical analysis is a cumbersome, expensive and timely process that few valuers can afford if they want to be competitive, while utilisation of statistics assumes that valuers have sufficient knowledge of the subject to undertake such analyses (Smith, 1995:83). Large samples are needed to allow for valuations based on confidence intervals (Holstein, 2003:37, Colwell, 1979:54, Smith, 1995:82, Reynolds, 1995:85). In reality, however, sales data are limited and often insufficient to draw meaningful statistical conclusions (Reynolds, 1995:83). In addition, sales data are seldom normally distributed and distribution measures cannot be used (Reenstierna, 1985:124, Reynolds, 1995:83, The South African Property Education Trust, 2004:91, Isakson, 2001:428). At the same time, the transactions involving special cases are difficult to include in statistical inference (Reenstierna, 1985:125, Kummerow, 2002:411). Small, diverse markets (such

as the agricultural land market) are not well suited to statistical analysis, because probabilities are difficult to estimate, ranges are large and high levels of uncertainty abound (Kummerow, 2002:409-411. Holstein. 2003:40. Thair. 1988:194-196, Isakson, 2001:424).

Another problem with the use of statistics is that it implies that market value is one value within a possible range of random variables, which is evenly distributed if often repeated (The South African Property Education Trust, 2004:83, Reynolds, 1995:82). No repetition occurs in valuation: a valuer is asked to provide one value (although, if a large number of valuers estimated the value of the same property, a normal distribution for the property's value would arise) (Reynolds, 1995:82-83).

The most important contribution of the MPP and MPU is their recognition of complexity and uncertainty surrounding the choice of a single land use and market value (Whipple, 1990:17, 24, Boyd, 1992:87). In contrast to the traditional definition of market value that suggests that there is one "true" value that could

be determined as a point estimate, the MPP and MPU admit that more than one price and use is possible, but that a valuer is estimating the use and price that would most likely be attained in the open market (Reenstierna, 1985:116, Colwell, 1979:54, Smith, 1995, Thair, 1988:192, Ratcliff, 1975:486).

The choice of an HBU in a multifunctional agricultural land market

There are a number of ways to deal with the choice of a HBU and associated uncertainties in a multifunctional agricultural land market. These are discussed below.

Postponing the decision of an HBU

Valuation practices require an early choice of the HBU for a property in order to guide the valuation process: a valuer must first and foremost decide on the HBU, and most of the valuation work is done after this decision has been made. With transitional properties where the

HBU is not clear-cut, the opposite modus operandi might be more beneficial: to postpone the decision of the HBU until an investigation of the market has been done and more information has been gathered, after which the valuer would be better equipped to determine with which "lenses" to look at a property and choose the HBU. This corresponds with the approach forwarded in complexity theory, which states that when dealing with complex issues, decision making (i.e. choice of HBU) must be delayed until more information is collected.

The use of multiple perspectives

The decision of an HBU on agricultural land where alternative uses are possible involves uncertainty and valuers need to make this decision with limited information at their disposal (Ribeiro et al., 1995:183). For this reason, the ability to view the farm and its attributes from different perspectives (e.g. production and lifestyle perspectives) and acquisition of more information regarding farm trends, attributes valued by buyers and types of buyers in the market will assist valuers in



making informed decisions regarding an HBU (Hall et al., 2005:279).

In a complex system characterised by uncertainty, where components interact with each other to create an outcome that cannot be separated into its respective parts, the use of multiple perspectives becomes relevant to provide unique insight from different angles, which cannot be obtained in isolation (Linstone and Mitroff, 1994:108). Instead of choosing an HBU for agricultural property, where alternative uses are present early in the valuation process, valuers should admit that these valuations are complex, with increased uncertainty, necessitating in-depth analysis of agricultural properties and meaningful investigations of alternative use options in order to provide clients with the best possible information (Vasquez et al., 2002:70).

Because of their heterogeneous nature, rural properties need a wide-ranging HBU analysis. If the choice of the HBU for a property is postponed until more information on buyer behaviour and preferences, as well as property

characteristics are available and different perspectives are investigated, a more informed decision can be made.

The provision of relevant additional information

The compound nature of rural land is an indication that valuers need to gather more information and do more research

> ... the use of multiple perspectives becomes relevant to provide unique insight from different angles, which cannot be obtained in isolation ...

on alternative uses to understand markets better (Jonker, 1984:125, Ellenberger, 1983:91, Woods, 1969:598-600). A substantial amount of valuation literature is dedicated to the improvement of valuations by the inclusion of more and better information to provide insight into the thought processes of buyers

and sellers through in-depth research and analysis (Holstein, 2003:37, Swenson, 2005:28).

More complex valuations, such as in a multifunctional land market where alternative uses for agricultural properties are present, need to be researched better for accuracy (Mazengarb, 1942:228. McAloon, 1986:313), For this reason valuers have to broaden their investigations to reflect actual market conditions (Boyd, 1992:85, Connolly, 1993:486, Coombs, 1956:115) and even outliers need to be mentioned if occurring under open market conditions (Fraser, 1991:36). Valuers provide an informed opinion of market value which must be substantiated and transparent (Albritton, 1980:205, Ratcliff, 1972a:524-525, Vandell, 1982:266). Informative and comprehendible valuation reports assist clients in understanding the market better and improve their decision making, while increasing the reliability and accuracy of valuations (Reenstierna, 1985:115).

The use of graphs to indicate several uses and the probabilities of each being realised has been suggested to improve





the quality of valuation reports and provide more information to the client on the different use options of a property in an easily understandable manner (Boyd, 1992, Boyd, 1990). However, this is data-intensive and valuers need to know the types of buyers and probability of a certain use being realised. This could arguably be done for residential property, but would be extremely difficult to do for agricultural properties. Valuers could also include an estimate of the accuracy of their valuations (Miles, 1980:540, Hill, 1990:234-235, 240).

Spending more time on research could have cost implications for valuers who already face time and fee constraints. The benefit of additional information by improving the product for clients to enhance decision making, however, outweighs the cost of collecting this additional information, and valuers are obliged to provide as much information in their valuation reports as possible (Vandell, 1988:349). Valuations remain opinions of the market value of properties and valuers' experience and judgment play important roles. The provision of more information would lead to better understanding of their opinion of market value (Falconer, 1971:613).

Conclusion

This paper looks at the decision of an HBU in multifunctional agricultural land markets. The presence of alternative uses complicates the valuation process, as the presence of two (or more) competing end users blurs the decision of an HBU. This complexity creates uncertainty and makes valuations of such properties more demanding.

The concepts of HBU and market value form the basis of the market sales comparison method. The literature regarding HBU and market value bears testimony to the struggle valuers have in practically applying the concepts of HBU and market value. These concepts have been criticised as being too theoretical and unrealistic. The fundamental criticism against definitions of HBU and market value stems from their neo-classical assumptions of operating within a perfectly competitive market with perfect information and rational decision-making. Over the years the definition of HBU has changed from being the use that is most profitable (corresponding with the highest net income generated on the property), to the use that provides the highest present land value. The terms most probable use and most probable

selling price alluded to the presence of alternative land uses by depicting the HBU as the most likely use among alternatives. However, valuation theory states that there can only be one market value for a property at a specific point in time, which provides valuers of agricultural properties in a multifunctional land market with very little manoeuvring space. These concepts have been defined and redefined, but provide little guidance as to the way properties with alternative uses should be valued.

An agricultural property where the HBU is uncertain due to the presence of alternative uses represents a complex system and should be investigated from different dimensions, levels and perspectives in order to gain insight into the forces at work. At the same time the customary modus operandi of choosing an HBU early on in the valuation process should be postponed until more information is gathered in order to make an informed decision. The valuation of agricultural properties where alternative uses are present necessitates in-depth analysis of alternative use options. This will increase accuracy and provide essential additional information for clients of valuation reports for improved decisionmaking.

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