Welcome to the IBI Survey of Biochar Businesses

The International Biochar Initiative (IBI) is conducting this survey to collect data on activities related to the commercial production, distribution and marketing of biochar and biochar-related products and services. In recent years, there has been strong growth in biochar enterprise but little documentation of trends in markets, technologies and other aspects of business operations. IBI will be using the data collected in this survey to highlight the worldwide breadth of biochar commercial activity—to look at trends in geography, feedstocks, technology, financing, and utilization.

The survey is directed towards three biochar business entities: 1) biochar production and/or sales; 2) biochar production equipment manufacturers; and 3) other biochar-related enterprises. You will be directed to the appropriate survey questions based on your corresponding role in the biochar sector.

NOTE: IBI recognizes that biochar enterprises need to protect their intellectual property as part of their business models and to maintain their competitive edge. To this end, IBI will not share any information on any individual business or on any individual questions (other than basic business information such as website and location) collected in this survey. Only data that is aggregated to show overall trends in the biochar industry will be shared. If you have any concerns prior to completing a survey please contact us at info@biochar-international.org.

This survey contains up to 25 multiple-choice questions (depending on your business type) and should take about 20 minutes to complete. The deadline for input is September 6, 2013.

Instructions: Please do not hit "enter" while filling out the survey as it may interrupt the survey. Rather, use the “tab” button or your mouse to move to each subsequent question and response, and then hit the “Next” button to navigate to the next page of the survey. Make sure that you click "Submit" when you have completed the survey in full.
In this section we request contact information and ask about the area of your biochar enterprise—based on your response you will be directed to the appropriate survey questions.

*Note that items marked with an * indicate required fields.*

1. Please fill in your contact information.
   - **First Name** *
   - **Last Name** *
   - **Title**
   - **Business Name** *
   - **Street Address**
   - **City/District/Village** *
   - **State/Province/Region** *
   - **Postal Code**
   - **Country** *
   - **Email Address** *
   - **Website URL**
2. Please fill in your contact information.

First Name *

Last Name *

Title

Business Name *

Street Address

City/District/Village * State/Province/Region * Postal Code

Country *

Email Address *

Website URL

3. In which of the following sectors does your business operate? Please check all that apply. *

- Biochar production and/or sales
- Biochar production equipment manufacturer
- Other biochar-related enterprise

BIOCHAR PRODUCTION AND/OR SALES

Page description:
In what year was your business founded? *

4. What is/are the primary product/service(s) your business offers? Check all that apply. *

- biochar
- compost
- charcoal for fuel
- horticulture
- tree care
- environmental restoration
- other: please describe

5. How many full-time staff does your business employ? *

6. How many part-time staff does your business employ? *
7. In what year did your business begin offering biochar for sale?

- <2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013

8. What percentage of your employees is involved in the biochar-related aspects of your business? *

- 0-20%
- 21-40%
- 41-60%
- 61-80%
- 81-100%

9. Do you operate the biochar production equipment, or contract production to a third party? *

- operate internally
- contract to 3rd party
10. What feedstocks are used to produce your biochar? Please check all that apply. *

- [ ] Woody biomass – softwoods (conifers, monocots)
- [ ] Rice hulls or straw
- [ ] Cereal (non-maize) straws
- [ ] Sugar cane bagasse or trash
- [ ] Coconut coir, hulls or shells
- [ ] Bamboo
- [ ] Woody biomass – hardwoods
- [ ] Maize (corn) cobs or stover
- [ ] Animal manure
- [ ] Food waste
- [ ] Biosolids (sewage sludge)
- [ ] Other plant residue: please list
- [ ] Other animal residue: please list

Do you offer a pure biochar and/or a blended product? Check all that apply. *

- [ ] pure
- [ ] blend
- [ ] both
11. If you offer a blend, what ingredients are added? *

☐ compost/compost tea
☐ kelp meal/seaweed
☐ sawdust/wood dust
☐ peat
☐ clay/other minerals
☐ mycorrhizal fungi
☐ soil micro-organisms
☐ other: please list ____________________________
☐ N/A

12. Please provide your product brand name, if applicable?

______________________________

13. Are you currently selling biochar or biochar products? *

☐ yes
☐ no

14. If you are selling biochar, do you plan on testing your biochar to the IBI Biochar Standards? *

☐ yes
☐ no
15. Do you plan to apply for *IBI Biochar Certification* (for more information, please see: [http://www.biochar-international.org/certification](http://www.biochar-international.org/certification))? *

- yes
- no

Do you sell biochar through retail and/or wholesale outlets? Check all that apply. *

- retail
- wholesale
- both retail and wholesale
- N/A

16. For your primary product, what is the price in US Dollars per Unit offered?

US Dollars
17. What is the approximate volume of biochar sales in units in the past 12 months? [Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

Units sold in last 12 months
18. For your biochar-related business, what is the approximate increase (or decrease) in revenue you have experienced in the last 12 months as compared to the previous 12 months?

[Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

- < -50%
- -50 to -25%
- -25 to 0%
- 0 to 25%
- 25 to 50%
- 50 to 75%
- 75 to 100%
- > 100%

19. What are your approximate annual gross revenues for the biochar-related aspects of your business in US Dollars?

[Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

US Dollars

20. What are the approximate operating expenses for the biochar-related aspects of your business in US Dollars? e.g., wages, equipment, feedstock procurement, marketing, distribution, etc.

[Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

US Dollars
21. How have you financed the start-up expenses of the biochar-related aspects of your business? *

- business loan from traditional financial institution e.g., bank
- investment from angel investor or venture capital firm
- personal capital
- loan from family/friends
- grant from private or public source
- other: please describe

- N/A

22. Please rank your agreement with the following statement. Sales of my biochar-related product will increase in the next 12 months. *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
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23. What barriers do you see to the expansion of your business?

- regulatory
- technological
- financing/access to credit
- lack of market awareness of biochar benefits
- lack of access to carbon offset markets
- other: please list
24. Please provide any additional comments here. In particular, please comment on how IBI could help your business grow.


BIOCHAR PRODUCTION EQUIPMENT MANUFACTURER

Page description:
In this section we ask you specific information about your business manufacturing and/or selling biochar production equipment including size and scope of the business, types of technologies you offer for sale, volume of transactions, and business outlook. NOTE: IBI will not share any information on any individual business or on any individual questions (other than basic business information such as website and location) collected in this survey. Only data that is aggregated to show overall trends in the biochar industry will be shared.

25. In what year was your business founded? *


26. What is the primary product/service your business offers?

☐ cookstoves
☐ biochar production technology – small-scale e.g., household
☐ biochar production technology – mid- to large-scale e.g., farm or industrial operation
☐ energy production technology – small-scale e.g., household
☐ energy production technology – mid-scale e.g., farm
☐ energy production technology – large-scale e.g., industrial operation
☐ other: please describe
27. How many full-time staff does your business employ? *

28. How many part-time staff does your business employ? *

29. In what year did your business begin offering biochar production equipment for sale?

   <2000
   2001
   2002
   2003
   2004
   2005
   2006
   2007
   2008
   2009
   2010
   2011
   2012
   2013

30. What percentage of your employees is involved in the biochar-related aspects of your business? *

   ○ 0-20%
   ○ 21-40%
   ○ 41-60%
   ○ 61-80%
   ○ 81-100%
31. What type of biochar production equipment does your business manufacture? *

- Batch retort pyrolysis kiln
- Continuous pyrolysis kiln
- Cook stove – top-lit updraft gasifier (TLUD)
- Cook stove – Anila, or annular retort design
- Small gasifier, including TLUD units not used as cook stoves such as ovens
- Larger gasifier
- Traditional pit, mound, or brick kiln
- Other: Please describe

32. Is your biochar production equipment a batch process or a continuous process? *

- Batch
- Continuous

If your biochar production equipment uses a batch process, what is the capacity?

Approximately how many kilograms (1 kg = 2.2 pounds) of biomass feedstock are processed per batch?

[kgs/batch]
If your biochar production equipment uses a batch process, how many batches can be processed per day?

- 1
- 2
- 3 or more

If your biochar production equipment uses a continuous process, what is the capacity?

Approximately how many kilograms of biomass feedstock are processed per hour?

33. At what percent of your production capacity is your equipment operating?

- 0 to 25%
- 25 to 50%
- 50 to 75%
- 75 to 100%
- N/A
34. If your equipment has the capacity to capture energy from the pyrolysis/gasification process, how can it be utilized?  
   *Check all that apply.*
   - [ ] Cooking
   - [ ] Drying food, fuel, feedstock or crops
   - [ ] Space heating
   - [ ] Combined heat and power (CHP)
   - [ ] Electricity generation - internal combustion engine
   - [ ] Electricity generation - thermo-electric generator
   - [ ] Syngas collection, cleanup and storage
   - [ ] Bio-oil collection and refining
   - [ ] Other: Please describe

35. Are you currently selling biochar production equipment? *
   - [ ] yes
   - [ ] no

36. What is the approximate sale price for a unit of your equipment in US Dollars?
   [ ] US Dollars per Unit

37. How many units have you sold in the last 12 months?
   [ ] Units
38. How have you financed the start-up expenses of the biochar-related aspects of your business? *

- business loan from traditional financial institution e.g., bank
- investment from angel investor or venture capital firm
- personal capital
- loan from family/friends
- grant from private or public source
- other: please describe [ ]
- N/A

39. For your biochar-related business, what is the approximate increase (or decrease) in revenue you have experienced in the last 12 months as compared to the previous 12 months? [Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

- < -50%
- -50 to -25%
- -25 to 0%
- 0 to 25%
- 25 to 50%
- 50 to 75%
- 75 to 100%
- > 100%
40. What are your approximate annual gross revenues for the biochar-related aspects of your business in US Dollars?
[Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

US Dollars

41. What are the approximate operating expenses for the biochar-related aspects of your business in US Dollars? e.g., wages, equipment, feedstock procurement, marketing, distribution, etc.
[Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

US Dollars

42. Please rank your agreement with the following statement.
Sales of my biochar-related product will increase in the next 12 months. *

Strongly disagree | Disagree | Neutral | Agree | Strongly agree

43. What barriers do you see to the expansion of your business?

- regulatory
- technological
- financing/access to credit
- lack of market awareness of biochar benefits
- lack of access to carbon offset markets
- other: please list


44. Please provide any additional comments here. In particular, please comment on how IBI could help your business grow.

OTHER BIOCHAR-RELATED ENTERPRISE

**Page description:**
In this section we ask you specific information about your business offering products and/or services related to the biochar industry including size and scope of the business, products and/or services you offer, volume of transactions, and business outlook.

NOTE: IBI will not share any information on any individual business or on any individual questions (other than basic business information such as website and location) collected in this survey. Only data that is aggregated to show overall trends in the biochar industry will be shared.

45. In what year was your business founded? *

46. What is the primary product/service your business offers?

- [ ] cookstoves
- [ ] consulting – sustainable agriculture/rural development
- [ ] consulting – engineering
- [ ] consulting – bioenergy
- [ ] accessory equipment (dryers, processors, etc.)
- [ ] materials testing (soil laboratory, etc.)
- [ ] other: please describe
47. How many full-time staff does your business employ? *

[Blank field]

48. How many part-time staff does your business employ? *

[Blank field]

49. In what year did your business begin offering products or services related to biochar for sale?

- <2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013

50. What percentage of your employees is involved in the biochar-related aspects of your business? *

- 0-20%
- 21-40%
- 41-60%
- 61-80%
- 81-100%
51. What product or service do you offer in the biochar space?

- consulting – biochar project design
- consulting – engineering
- consulting – marketing
- consulting – legal
- laboratory analytical testing
- accessory equipment (dryers, processors, etc.)
- others

52. How much have sales from products/services you offer in the biochar industry increased your revenues in the past 12 months? *

[Note: all financial information will be kept strictly confidential and only shared in aggregated form.]

- 0 to 25%
- 25 to 50%
- 50 to 75%
- 75 to 100%
- > 100%

53. Please rank your agreement with the following statement.

Sales of my biochar-related product will increase in the next 12 months. *

<table>
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</tbody>
</table>
54. What barriers do you see to the expansion of your business?

- regulatory
- technological
- financing/access to credit
- lack of market awareness of biochar benefits
- lack of access to carbon offset markets
- other: please list

55. Please provide any additional comments here. In particular, please comment on how IBI could help your business grow.

Thank You!

IBI THANKS YOU FOR YOUR TIME!
WE WILL COMPILE AND ANALYZE SURVEY RESULTS AND SHARE THEM WITH YOU, IBI’S MEMBERSHIP AND THE GLOBAL BIOCHAR COMMUNITY.