



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-3561

Mail Stop 3561

June 4, 2009

Youval Saly  
Chief Executive Officer  
Pimi Agro CleanTech, Inc.  
1209 Orange Street  
Wilmington, Delaware 19801

**Re: Pimi Agro CleanTech, Inc.  
Registration Statement on Form S-1  
Filed May 5, 2009  
File No. 333-158986**

Dear Mr. Saly:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. Please provide the disclosure regarding director independence as required by Item 407(a) of Regulation S-K.

Registration Statement Cover Page

2. Please provide all the disclosure required by Form S-1 on the cover page. This would include indicating that the company is a smaller reporting company.

Prospectus Summary, page 4

3. Please provide the address and telephone number of the principal executive offices, as required by Item 503(b) of Regulation S-K.

Risk Factors, page 6

4. Please remove the statement that “the risks and uncertainties described below are not the only ones facing the Company. Additional risks and uncertainties not presently known to the Company or that the Company currently believes are immaterial may also impair the Company’s business operations.” All material risks should be discussed in this section. If risks are not deemed material then they should not be mentioned.
5. Please add a risk factor discussing the net losses to date. See Item 503(c)(2) of Regulation S-K.
6. It appears that all of your operations and the officers and directors are located outside of the United States. Please add a risk factor.
7. We note that your patent disclosure on page 19 does not include patents for India, Ukraine, and Belarus, which are listed on page 28 as the number three, five, and eight potato producers in the world, respectively. Please discuss this in the risk factor on the bottom of page seven.
8. Please revise the subheading for the fourth risk factor on page 9 to clearly state that there is currently no market for your common stock, as required by Item 503(c)(5) of Regulation S-K.

Management’s Discussion and Analysis, page 11

9. We believe your MD&A section could benefit from an expanded “Overview” section that offer investors an introductory understanding of Pimi Agro CleanTech, Inc. and the matters with which management is concerned primarily in evaluating the company’s financial condition and operating results. A good introduction, accordingly, might include a discussion of the following: the economic or industry-wide factors relevant to the company; a discussion of how the company earns or expects to earn revenues and income; the identity of the company’s primary business lines, location(s) of operations and principal services; and insight into material opportunities, challenges, risks, and material trends and uncertainties. To the extent known, provide insight into challenges, risks and opportunities of which management is aware and discuss any actions being taken to address the same. For a more detailed discussion of what is expected in both this subheading and the MD&A section in general, please refer to: <http://www.sec.gov/rules/interp/33-8350.htm>. See also, Item 303 of

Regulation S-K.

Plan of Operation and Financing Needs, page 11

10. We note your disclosures indicating you will require working capital in the sums of \$1.2 million in 2009 and \$1.3 million in 2010 to complete your R&D and generate sales. In addition, we note your intention to raise \$3.3 million from institutional and private investors in 2009. Please provide additional details regarding your efforts to date in raising such funds, and provide updated timing on their expected receipt, if possible.

Results of Operations for the Year Ended December 31, 2008 compared to Year Ended December 31, 2007 and to the Year Ended December 31, 2006, page 11

11. We note the discussion of the potato season timeline on page 31. Please discuss any seasonal aspects of your business that had a material effect on your financial condition or results of operation.
12. Please discuss whether you believe recent trends in your results of operations will continue. For example, you state that total net sales increased 564% from 2007 to 2008 and R&D expenses rose 61% over the same period.

Liquidity and Capital Resources, page 12

13. We note the disclosure that you will exhaust most of your liquidity subsequent to the third quarter of 2009. To the extent you have any known demands, commitments, events or uncertainties that will result or are reasonably likely to result in an increase in liquidity, please discuss. See Item 303(a)(1) of Regulation S-K.
14. Your disclosures state that you anticipate realizing material revenues in 2010 as clients begin to utilize and pay for your product and technology. Please add disclosure within this caption noting that you do not currently have regulatory approval to distribute or sell your products outside of Israel.

Business, page 14

15. We note the disclosure of your distribution plan for SpuDefender on page 34. Please disclose any existing or planned methods of distribution for each of your products or services. Please see Item 101(h)(4)(ii) of Regulation S-K.
16. We note your patent disclosure on page 19. Please disclose the duration of all patents held. Please see Item 101(h)(4)(vii) of Regulation S-K.
17. We note your discussion of SpuDefender competition on page 33. Please discuss

- the competitive business conditions and methods of competition for the each of your principal products or services. Please see Item 101(h)(4)(iv) of Regulation S-K.
18. In addition, please address how price affects competition in your market. Disclose how your products are or will be priced relative to your competitors. Please see Item 101(h)(4)(iv) of Regulation S-K.
  19. You state on page 16 that StoreGuard is designed to take care of “the entire spectrum of crop skin diseases.” Please clarify what is meant by “taking care of” and “the entire spectrum.” Does the product completely eradicate all known crop skin diseases?
  20. In several places you discuss product tests and pilot storage rooms. For example, you discuss tests conducted by Tapud Industries Ltd on page 22, a pilot storage room for McCain Food UK on page 25, a pilot storage room at Kraft Foods Ukraine on page 25, treatments for Branston Holdings LTD on page 25. You also disclose on page 16 that SeedGuard tests have shown that the product does not allow for microorganisms to develop resistant mutations and that it has been found to be effective and safe. Please disclose the results of any tests or pilot storage rooms, providing a brief summary of the data where available.
  21. Similarly, please provide the basis for many of the claims made about your principal products, such as the following:
    - “taking care of the entire spectrum of crop skin diseases,” “creating conditions that boost crop immune systems,” “may cause more stems,” “may result in a higher yield,” “may increase grower’s profits,” and “increase seed health and potency” on page 16;
    - “able prevents sprouting,” “Ensures effective disinfection,” and “Promotes new and healthy plant cell generation” on page 17;
    - “the shelf life of stored crops can be gained” on page 27; etc.
  22. Please explain the meaning of “Delivers an extra care program” in your discussion of SeedGuard on page 16.
  23. Please explain the “exemption from the requirement of tolerance” in your U.S. regulatory process discussion on page 20. Also, since your products will be used on fruits and vegetables, please clarify whether the FDA would require approval or have any oversight of your products.
  24. Please further describe the processes of applying for EU member state provisional authorizations and registering the product in each EU member state as referenced on page 20.

25. Provide a more detailed discussion of your business plan. For example, provide a clear outline of the estimated timing of obtaining each of the various regulatory approvals and the costs involved. Also clearly outline your business plan once the approvals have been received and the associated costs. Lastly, discuss the impact upon your business and your joint venture of the timing associated with obtaining regulatory approvals. For instance, you estimate that the registration process for the EPA will be six to nine months and then you will have to obtain approval of the various states where your products will be delivered. Assuming the application was filed with the EPA in April 2009 (p.20), clarify your ability reach the trigger events set forth in the joint venture agreement with Vegisafe by December 31, 2009.
26. You refer to a number of customers and partners on pages 16 and 21. To the extent you have material agreements with any material customers, please file as exhibits.
27. In your business section, please disclose the milestones for annual sales for your joint venture with Vegisafe LLC, as referenced on page 22. Furthermore, please describe the Joint Venture “trigger events.”
28. You state on page 22 that you have “come to an understanding” with Solvay that it will produce your products. Please explain this understanding, describing the material terms of any agreement. Furthermore, please file your agreement with Solvay as an exhibit.
29. Please clarify your discussion of Strauss Elite Ltd on page 22. You state that Strauss Elite “has been using our products and technologies” and that “management understands that they will continue to do so.” Please explain the type and extent of Strauss Elite’s use of your products and technologies and provide the basis for management’s understanding that Strauss Elite will continue to use the products and services, describing the material terms of any agreement, written or verbal. Please file any written agreement as an exhibit.
30. We note that page 23 contains one photograph but the caption refers to two separate locations and dates. Please revise.
31. We note the disclosure in the tables on page 30 that include sales potential for your products. Please provide the basis for your projections. We direct your attention to Item 10(b) of Regulation S-K for the Commission’s policy on projections. We may have further comment.
32. You state in the third paragraph on page 33 that “none of the alternatives presented to the potato storage-related industries have shown significant positive results to replace CIPC.” Please provide the basis for this statement and disclose whether your product has shown “significant positive results to replace CIPC.” If

so, please include a brief summary of any data that is the basis of that conclusion. Also, provide the basis for management's opinion that "the recognition and acceptance of our SpuDefender product by the industry, and its regulatory approval, will cause the regulator to ban CIPC in the coming years or at least to reduce further its MRL which would make its use ineffective" or remove.

33. Please further disclose the nature of the technologies referred to in the last bullet on page 33.
34. We note references to US companies, such as Wal-Mart and McDonalds that have been contacted by your joint venture. Please remove references to such companies unless you have entered into agreements with these companies.

Management, page 35

35. Please clarify the five-year business experience of your directors as required by Item 401(e) of Regulation S-K. In particular:
  - Please further disclose Mr. Alon Carmel's business activities since leaving Spark Networks in 2005.
  - Please clarify the dates for which Mr. Youval Saly served as CEO of High-Tech Lipids LTD.
  - You state that "Previously" Mr. Doron Shorrer was chairman or deputy chairman of several companies. Please disclose the dates during which he served, if he has served those companies within the last five years.
  - Please clarify the date when Mr. Rami Treger founded Sano Trans.
36. Disclose the amount and percent of time each officer devotes to the business of the company.

Executive Compensation, page 37

37. Disclose the assumptions made in the valuation of the options, as required by the Instruction to Item 402(n)(2)(v) and (vi) of Regulation S-K.
38. According to the disclosure on page 41, Mr. Ben Yehuda receives a base salary and benefits such as executive insurance, education fund, and disability insurance. Footnote 13 to the financial statements also refers to a rental car, and mobile phone expenses. It is unclear why these benefits are not included in the summary compensation table in the column for all other compensation. Please advise or revise. In addition, we note the reduction in salary in 2006 that was treated as a loan to the company. Please explain whether this "loan" was treated as deferred

compensation and whether it was included in the summary compensation table. If not, please explain. This also applies to the consideration that accrued for Mr. Lifshitz

39. We note your disclosure regarding the employment agreements with Messrs. Youval Saly, Nimrod Ben-Yehuda, and Avi Lifshitz. Please disclose the material terms of these employment agreements in the narrative disclosure to the summary compensation table. Please see Item 402(o)(1) of Regulation S-K.
40. Please include the material terms of each grant for the option awards included in the summary compensation table. Please see Item 402(o)(4) of Regulation S-K.
41. Please provide the table and disclosure required by Item 402(p) of Regulation S-K regarding any outstanding equity awards at fiscal year-end for your named executive officers.
42. We note your disclosure on page F-11 concerning liability for employee rights upon retirement pursuant to Israeli severance pay law. Please disclose the material terms of these plans in an additional narrative disclosure as required by Item 402(q)(1) of Regulation S-K. To the extent that these plans provide for payments to named executive officers at, following, or in connection with the resignation, termination, change in control, or a change in the named executive officer's responsibilities, please also provide the disclosure required by Item 402(q)(2) of Regulation S-K.

Certain Relationships and Related Transactions, page 40

Relationship with Shareholders, page 40

43. Your discussion of the November 13, 2005 investment agreement between Nimrod Ben-Yehuda, Omdan, Mr. Carmel and JNS Capital LLC indicates Pimi Israel has issued 120,000 preferred shares to both Mr. Carmel and JNS Capital against the payment of the balance of the 'Investment Amount', and an additional 30,006 preferred shares to Mr. Carmel for his 'Additional Investment'. Please confirm these preferred shares have been converted to common shares for all financial statement periods presented and add such disclosure to your filing, or revise your financial statements accordingly.

Director Compensation, page 38

44. Please provide the table and disclosure required by Item 402(r) of Regulation S-K for the compensation of Mr. Doron Shorrer.

Selling Shareholders, page 44

45. Please indicate position, office, or other material relationship which any selling shareholder has had within the past three years with the company, any predecessors or affiliates. For example, clarify whether Ahiam Lifshitz is related to your CFO and clarify the relationship between Mr. Shorrer and Shorrer International Ltd. and the company.

Market for Common Equity and Related Stockholder Matters, page 46

46. Please provide the disclosure required by Item 201(a)(2) and the table required by Item 201(d) of Regulation S-K.

Item 26. Recent Sales of Unregistered Securities, page 48

47. Please provide the disclosure regarding sales of unregistered securities for the past three years as required by Item 701 of Regulation S-K. This would include the transactions with Pimi Israel that were later exchanged for shares of the company.

Item 28. Undertakings, page 50

48. We note that you have omitted the phrase “arising after the effective date of the registration statement (or the most recent post-effective amendment thereof)” from paragraph (1)(i) of your undertaking. Please conform to the standard language of the applicable undertakings.

General - Financial Statements

49. Please note the financial statement updating requirements of Rule 8-08 of Regulation S-X.

Note 6 – Lines of Credit, page F-15

50. We note your unutilized short-term lines of credit as of December 31, 2008 totaled \$30,773. Please revise your footnote disclosure to indicate the amounts utilized and available under your lines of credit. If applicable, disclose any covenant agreements (financial or otherwise) associated with your lines of credit and state whether you are in compliance with these agreements as of the most recent balance sheet date.

Note 8 – Share Capital, page F-15

Note 8.B. – Stock-option plan of Pimi Israel, page F-16

51. We refer to your discussion concerning the 2009 share incentive plan which upon adoption replaced all options granted under the Pimi Israel Plan on a one for one



basis. Please tell us how you applied paragraph 51 of SFAS 123R in accounting for any incremental fair value provided to the option holders in the exchange.

52. Please expand your disclosures to discuss how you determined the risk-free-rate and expected volatility assumptions underlying the estimated fair values of options granted.

#### Exhibits

53. We note the request for confidential treatment filed for exhibit 10.21. This request will be reviewed separately and comments will be provided in a separate letter.
54. Please file validly executed agreements. See for example, exhibits 10.2, 10.4, 10.5, 10.9, 10.11, 10.12, 10.14, 10.16, 10.17, 10.19, 10.21, 10.22, 10.23, 10.24, 10.25 and 10.27.
55. Please file exhibits 10.3, 10.13, 10.16, 10.17, 10.19 and 10.20 in proper format with your next amendment. We direct your attention to Item 104 of Regulation S-T for the use of unofficial PDF exhibits. Please also refer to Section 5.2.3 of the Edgar Filer Manual Volume II.
56. We note that not all filed agreements contain the exhibits referenced therein. Please file these exhibits with your next amendment pursuant to Item 601(b)(10) of Regulation S-K. In particular:
- The Pimi Agro Cleantech Ltd. 2008 Share Option Plan and Option Agreements filed as exhibit 10.9 do not include Exhibit C.
  - The Letter of Intent Agreement by and between Vegiesafe LLC and Pimi Agro Cleantech Ltd. dated January 20, 2009 filed as exhibit 10.21 does not include Exhibit E.
  - The EPA Expenses dated January 20, 2009 filed as exhibit 10.22 does not include Exhibit A.
  - Appendices A and B to Exhibit 10.23.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover

letters greatly facilitate our review. In your responses, please include the page numbers of the amendment where we can find the changes. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Mr. Youval Saly  
Pimi Agro CleanTech, Inc.  
June 4, 2009  
Page 11

Any questions regarding the accounting comments may be directed to Yolanda Guobadia at (202) 551-3562. Questions on other disclosure issues may be directed to John Dana Brown at (202) 551-3859 or Pamela Howell at (202) 551-3357.

Sincerely,

John Reynolds  
Assistant Director

cc: Marc J. Ross, Esq.  
Fax (212) 930-9725